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I am submitting herewith a dissertation written by Gary Watts Levvis entitled "A Critique of Tractarian Semantics." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for Ph.D, with a major in Philosophy.

Kathleen Bohstedt

Kathleen Bohstedt, Major Professor

We have read this dissertation and recommend its acceptance:

Accepted for the Council:

Associate Vice Chancellor
and Dean of the Graduate School

A CRITIQUE OF TRACTARIAN SEMANTICS

A Dissertation

Presented for the

Doctor of Philosophy

Degree

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Gary Watts Levvis

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This is dedicated to my parents:

Nelle Hudgens Levvis

and

Walter E. Levvis

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ABSTRACT

This is a critique of the principal claims made within Ludwig Wittgenstein's *Tractatus Logico-Philosophicus*. It traces the development of his thought from the time he dictated the pre-Tractarian "Notes on Logic" to Russell up until about 1932 when he began work on the *Philosophical Grammar*. The influence exercised upon him by Frege, Russell and Moore are considered at length. Chapter One examines Moore's relational theory of judgment which Wittgenstein apparently accepted upon his arrival at Cambridge in 1911. From Moore Wittgenstein would inherit one of the fundamental metaphysical theses of the *Tractatus*, namely, that the world consists of facts rather than things. Wittgenstein's attempt to overcome the relational theory's inability to account for falsehood, negation, and the possibility of truly ascribing false beliefs to others would herald some of the principal theses of Tractarian semantics: that propositional signs must exhibit bipolarity, that a distinction must be drawn between *Sinn* and *Bedeutung*, and that a distinction holds between what can be said and what can only be shown. Chapter Two examines how these theses are sharpened by considering the influence of Frege and the manner in which Wittgenstein disposes of Russell's Paradox. Considerable attention is given to the issue of whether Frege is to be interpreted as a semantic Platonist. It is argued that he is not, and that Tractarian semantics shores up the problematic features of Frege's philosophy which make it susceptible to the paradox. From Frege Wittgenstein derives the idea that all representation requires a *structured medium*. The chapter concludes by considering how this entails the falsehood of semantic Platonism. Chapter Three studies Wittgenstein's argument for logical atomism and gives it a favorable assessment. The influence of Russell's conception of logical analysis is considered. The chapter concludes by showing the way Wittgenstein's thesis that there must be simple subsistent objects *depends upon* the truth of his *Grundgedanke*, i.e., the claim that the logical constants are not referring terms. Chapter Four examines the argument for the *Grundgedanke*, and defends it against criticism based upon phenomenological considerations for *objectifying* negativity. It is demonstrated that Wittgenstein's view entails that a distinction must be drawn between propositions possessing sense and those that are senseless but no less a part of our language. Chapter Five examines Wittgenstein's claim that the essence of a proposition consists in a propositional sign's projective relation to the world, and it considers the Tractarian analysis of propositional attitude ascriptions. It is argued that the analysis of these sorts of sentences forms *the* principal problem with the *Tractatus*. The chapter includes a discussion of why the Color Exclusion Problem need not be considered problematic for the author of the *Tractatus*, and it defends the realistic interpretation given of the *Tractatus* throughout the dissertation against criticisms arising from a consideration of Wittgenstein's remarks on solipsism.

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NOMENCLATURE

Throughout this dissertation the following conventions will be observed:

(1) References to linguistic expressions of natural language will always appear within quotation marks. Hence, "Desdemona loves Cassio" is a linguistic expression made true by the fact that Desdemona loves Cassio.

(2) Like the expressions mentioned in (1), formulae such as P, Fa, (**E**x) Fx, (x) Fx, F(F̂b), etc., belong to the meta-language. P and "Desdemona loves Cassio" belong to the same level of language (as do "P is true" and "'Desdemona loves Cassio' is true") in that each refers to (or ranges over) sentence tokens of the object-language. Because the use of variables plays a similar role to the quotation marks in (1), I have omitted placing quotation marks around them (or outer brackets as is often the custom in logic texts). This practice is justified on the grounds that were quotation marks placed around formal expressions, consistency with (1) would produce a nearly endless number of use/mention fallacies: rather than using formulae to refer to sentences, formulae would merely be mentioned. Furthermore, this convention is designed to make the text less cumbersome to the reader.

(3) By not putting quotation marks around formal expressions, a difficulty arises regarding the manner in which to refer to what makes a formula like P true. Technically speaking, P is true if and only if the sentence it is interpreted as representing is true. But we need to be able to refer to the fact which makes a formula P *under whatever interpretation* true. **A** bold character will be used in this instance. Thus: P is true of **P**. If P is synonymous with "Desdemona loves Cassio," then **P** just is the fact that Desdemona loves Cassio. Expressions that contain a *combination* of natural and formal elements--like: "a is F"--will be treated in the same way. Thus: what makes "a is F" true is the fact that **a is F**. In Appendix I small Greek letters, α, β, χ, etc. are used in a manner similar to **a**, **b**, **c**, etc.

(4) *Italics* are reserved for foreign words which have not been assimilated into English, and they are also used for emphasis. Furthermore, italics are typically used in the translation of such sentences from Frege as, "The concept *horse* is not a concept." I have resisted the temptation to tamper with the translations so as to comply with (3) above. Nevertheless, the reader should bear in mind that they play a similar role to the boldface characters used in discussing Russell's Paradox.

(5) Wittgenstein, Moore, Russell and Frege often move from the

formal to the material mode without a change of symbolism. *Quotations* will not be modified to accord with the above conventions (except for the that mentioned in (6)). Any ambiguity which results will be dealt with in the text or in a footnote.

(6) In Chapter Three it is necessary to represent the pictorial elements of such representations as occur in pictographs, hieroglyphics, photographs, and the like, which play a role within a pictorial language Symbols such as ΩΨΔ will be used for this purpose; details of their usage will be contained in the text. A similar function is played by the circle figure in the Appendix:

O.

(7) Various logical symbols are used throughout:

(a) P, Q, R, etc. are propositional variables;
(b) (Ex) is the existential quantifier;
(c) (x) is the universal quantifier;
(d) x, y, z, etc are variables for which names or singular terms in general may be substituted;
(e) F, G, H, are variables for which predicative expressions may be substituted;
(f) ◊ is the modal operator for possibility;
(g) v, &, ~, ↔, →, and ⇒ are the symbols for disjunction, conjunction, negation, biconditionality, material implication and strict implication;
(h) ↓ is the Sheffer stroke corresponding to joint negation;
(i) The carat within $F\hat{}x$ functions as a Lambda operator, as in λ(Fx). In most books the carat appears above the variable x, but due to production problems it is here being placed between the two symbols. The presence of the carat turns the function Fx into a singular term. *What* singular term the function becomes, in a given text, depends largely on the purpose to which the symbolism shall be put and whether it is to be deployed within an intensional or extensional system. Typical candidates for intensional systems include "the function Fx" or "the class of F's." In the intensional predicate calculus developed by Chierchia and McConnell-Ginet (1990) the occurrence of any λ-operator will have within its scope a well-formed formula, ψ, such that λx[ψ] may be interpreted as "the property of being an x such that ψ" (1990, p. 319). Within an extensional system the singular term *might* be interpreted as "the members of the class of F's," provided one is prepared to argue that the embedded phrase ("...the class of F's") is to be interpreted instrumentally. Although the *Tractatus* is essentially an extensionalist work with respect to what can be *said* (which means, among other things, that it does not

countenance *properties* as belonging to the ultimate furniture of the world), its author's use of the carat differs from that just mentioned. Wittgenstein always uses $F\hat{}x$ to denote *the fact that x is F*. We should note that he does not think its use is legitimate, since it purports to be the name of a fact, and, for him, facts cannot be named. For Wittgenstein it is impossible to represent the essential semantic properties of a propositional sign by means of *another* propositional sign; it is only possible to *present* the semantic properties of a propositional sign through its use.

INTRODUCTION

The way in which language signifies
is mirrored in its use.
Notebooks 1914-1916

1. General Purposes.

This dissertation is designed to offer a critique of the principal semantic and meta-semantic claims found in Ludwig Wittgenstein's *Tractatus Logico-Philosophicus* (1922b).[1] In particular, I want to show the way in which the *Tractatus* is consistent with certain aspects of Wittgenstein's later *Philosophical Investigations* (1958). The great extent to which there is continuity between the early and later philosophies has not *generally* been appreciated by commentators. Even those scholars who do lay stress upon what continuity there is often misinterpret what is essential. Stenius (1960; 1981), for example, looks upon the *Investigations* as posing little challenge to the prospects of there being an adequate truth-functional semantics. In contrast, I hold the *Tractatus* to be commensurate with the *Philosophical Investigations* precisely because the most important thesis of the *Tractatus* is that *no purely truth-functional semantics is possible. That* is a thesis to which the later Wittgenstein would readily agree; in fact, it is one whose implications are *played out* definitively in the later Wittgenstein's philosophy. Furthermore, the *Tractatus* holds that *no such theory is possible for propositional attitude ascriptions.* Like

[1] Meta-semantic theory seeks to clarify and articulate the methods and the ultimate research goals of semantic theory. Typical meta-semantic questions are: Is a theory of reference (truth, consistency, etc.) *possible*? Must an adequate semantic theory contain an account of how communication is possible? Are the goals of theory construction in linguistics *explanatory* or merely *predictive*? Semantic theory, in contrast, seeks to answer such questions as: *How* is reference accomplished? Are meanings (or senses) entities? Is the meaning of a linguistic expression identical to its truth-conditions? And so forth.

the more general thesis, this is an idea consonant with the later philosophy. The criterial behaviorism of the *Philosophical Investigations* is a form of Instrumentalism, and, so, treats our discourse about the mind as not having a truth stating function at all. These theses are defensible ones; and, I believe, the *early* Wittgenstein offers a strong argument on their behalf, although that argument remains obscure within the pages of the *Tractatus*. To appreciate its strength, one must examine, not only the *Tractatus*, but some of the pre-Tractarian writings. This dissertation attempts to reconstruct the argument of the *Tractatus* in lieu of these other writings. It also attempts to clarify the respective influences exercised by Moore, Russell and Frege upon Wittgenstein.

We proceed in the following way. Chapter I examines Wittgenstein's pre-Tractarian views concerning the nature of judgment and the ultimate emergence of his thesis of the bipolarity of the proposition. The views he expressed during the Winter of 1911 in his conversations with Russell show the deep influence upon him of Moore's relational theory of judgment. That theory is fraught with many problems: it cannot explain the nature of negation (particularly negative existential judgments), the nature of falsehood (indeed it appears to be committed to the idea that falsehood is impossible), nor can it explain how it is possible to truly ascribe to another person a false belief. The view later becomes Wittgenstein's foil as he begins to formulate the principal semantic theses of the *Tractatus*. The first section of the chapter discusses Moore's rejection of Idealism, and his own unique attempt at resolving these problems by assimilating the conditions for existence to the conditions of individuation. The solution, we shall see, does not sufficiently resolve the problems, and Moore was not inclined to pursue the strategy in his later writings (presumably because it would have committed him to a doctrine of internal relations, something he would

have regarded as the earmark of Idealism). Little of the early theory of judgment is retained in the *Tractatus*, although I would venture to say that the Tractarian claim that "[t]he world is the totality of facts, not of things" (1922b, 1.1) stems from Moore. The absurdities to which Moore's theory of judgment lead would eventually occasion Wittgenstein's adoption of the thesis of the bipolarity of the proposition. This thesis--namely, that all propositions with a sense must be possibly true and possibly false (that is to say, *contingent*)--is the first principal thesis of Tractarian semantics to emerge in his writings. It is also the thesis that underpins his own distinction between sense (*Sinn*) and meaning (*Bedeutung*). This distinction is easily misunderstood, especially if interpreted along Fregean lines (or at least along what are *thought* to be Fregean lines). Some attention will be given toward the end of the chapter to demonstrating that such an interpretation does not enjoy the textual support often claimed for it. That it cannot do justice to what we know about the historical development of Wittgenstein's thought should become apparent throughout the course of the chapter.

Once Wittgenstein embraces the bipolarity of the proposition and the distinction between *Sinn* and *Bedeutung* the stage is set for his initial characterization of the difference between showing and saying. Chapter II is devoted to examining the way the distinction between showing and saying allows Wittgenstein to to circumvent the class and semantic paradoxes introduced against Frege by Russell. In an important way we can see Wittgenstein as shoring up elements of Frege's philosophy against Russell's threat. Russell believed that the paradoxes could only be avoided by means of a theory of types that proscribes the formation of certain sentences. Wittgenstein, in contrast, maintains that an adequate theory of types is neither possible nor necessary. Its impossibility is a result of the incompleteness engendered by introducing

such proscriptions as the Vicious Circle Principle. (These worries occur to Wittgenstein, we might note, some seventeen years prior to Gödel's famous presentation to the Vienna Circle of his *discovery* of the incompleteness of arithmetic.[2]) That a theory of types is not necessary stems from the fact that an *illogical language* (a term that will require considerable unpacking) is impossible. The very nature of language itself makes a theory of types unnecessary, and this is so partly because representation requires the sub-sentential components of any formula or propositional sign to have a *structure* which makes it impossible for the paradoxes to arise. This idea, crucial to the Picture Theory, has its origin in Frege's distinction between concept-word (or function) and name (or argument). The chapter will give us an opportunity to look at Frege's philosophy in some depth in order to determine just what Wittgenstein takes from him in the course of formulating the semantic theory of the *Tractatus*. I suggested above that it is a mistake to interpret Wittgenstein's distinction between *Sinn* and *Bedeutung* in too Fregean a manner. That usually involves treating Frege as a proponent of linguistic Platonism. But in fact Frege was no Platonist, as I go to great lengths to argue. It is a mistake to construe Fregean senses as abstract, mind-independent entities. He is rather to be understood as a systematic philosopher in the Kantian tradition for whom senses are intersubjective and binding upon all rational agents. Furthermore, Frege should be understood as advancing a *minimal* semantic theory, that is to say, one which holds that it is impossible for there to be a theory of reference or of truth (at least if truth is construed as involving a relation--e.g., correspondence--to something external to language). For Frege, semantic theory totally subserves the theory of inference.

Frege's views are extremely problematic, but not because they en-

[2] See Gödel (1931). It was Carnap who later saw the connection between Wittgenstein's and Gödel's philosophies; cf. Coffa (1993), particularly Chapter Fifteen, "The Road to Syntax," pp. 272ff.

gender Russell's Paradox. Wittgenstein does indeed circumvent the paradox. What is problematic is how a distinction between *Sinn* and *Bedeutung* can be maintained--indeed, how *objectivity* can be claimed for language and thought--once one has renounced the possibility of conducting ontology. One possibility would be to collapse the distinction in such a way as to treat the *Bedeutungen* of propositional signs as objective and make the objectivity of *Sinne* somehow parasitic upon that of the *Bedeutungen*. That is precisely what Wittgenstein's Picture Theory of the Proposition does; ultimately it overcomes Frege's problems by means of a semantic theory whose essence is summed up by saying language and world share a common logical form (1922b, 4.12). In the process, Frege's minimal semantics is replaced by a *robust* semantic theory that enjoins us to accept an ontology of simple objects, facts, and states of affairs. In the end it is the realism of Moore and Russell that wins out over the minimalism (or internalism) of Frege. The metaphysics of the *Tractatus*, however, is the topic of a later chapter.

Our examination of Frege allows us to see the advantages Tractarian semantics has over one very powerful alternative view. It enables us to see just what Wittgenstein does and does not take from Frege. In particular it lets us see just how far removed Wittgenstein's semantics is from any form of linguistic Platonism. The fact is that the distinction between showing and saying that emerges *undermines* Platonism, due to the fact that that distinction requires representation--whether in thought or language--to be conducted in a concrete medium: there can be neither meaning nor sense apart from a concrete medium containing elements whose constituents stand in contingent relations to one another.

It is at this stage of the dissertation that we begin to see the roots of what might be called a *token theory of meaning*. Such a theory is 'token' in two respects. First, the requirement that representation

must occur in a concrete, structured medium makes linguistic *tokens*--actual utterances, inscriptions, signings, etc.--the locus of meaning. At the very least it makes these tokens a necessary condition for the possibility of representation, which is a far cry from what the Platonist would be willing to accept. A Platonist, e.g., Katz (1990), would maintain that semantic properties (like meaningfulness) and semantic relations (like synonymy, antonymy, superordination, subordination and the like) are capable of existing independently of any concrete instantiation. Second, what becomes evident in the treatment of Russell's Paradox, especially in the rejection of the the possibility of a theory of types, is that the *form* (not the *structure*) of a propositional sign cannot be the subject of a discursive meta-language. One cannot *say* what the form of a propositional sign *shows*. This should not be confused with the minimal semantics advocated by Frege. In Frege's case, one *cannot* explain the relations of reference and truth that obtain between language and world, but one supposedly *can* draw inferences about one level of language by means of another. (Frege treats quantifiers, for example, as second order predicative expressions.) In contrast, Wittgenstein's semantics is robust in the sense that it does provide an ontology, but it denies the possibility of a hierarchy of forms (indeed he treats quantifiers as eliminable from a logically perspicuous language). So the Token Theory is *token* to the extent that it embodies the meta-semantic claim that nothing about the semantic properties of a language is *sayable*. In other words, the sentences that comprise the semantic theory of the *Tractatus* cannot be included within the domain of that very theory. Yhis, as we noted earlier, occasions the need to postulate *nonsensical* expressions within a language. The semantics of the *Tractatus* is only a token theory, because unlike the theories of natural science it cannot claim for itself any genuine explanatory power. Although it hardly sounds like a compliment to say so, the *Tractatus* es-

capes Frege's minimalism by virtue of the nonsense it contains. It will not be until a later chapter, Chapter V, that the nature of nonsense can be laid out in any detail.

By the end of Chapter II we have an account of the bipolarity of the proposition and an initial characterization of the distinction between showing and saying; together these comprise the general lines of the Picture Theory of the Proposition. Chapters III, IV, and V elaborate upon the Picture Theory. They bring its details into focus by considering three sorts of counter-examples to the thesis that the number of pictorial or propositional elements must be isomorphic to the number of objects thus represented. The initial theory must be augmented so as to accommodate sentences containing names of non-existent objects (Chapter III), sentences containing logical constants, i.e., sentence-forming operators and quantifiers (Chapter IV), and sentences that appear to contain an intensional or non-truth-functional element as found in propositional attitude ascriptions and *oratio obliqua* (Chapter V). In each case we find it is Russell, rather than Moore or Frege, who serves as Wittgenstein's greatest influence.

Chapter III begins by considering the problem of reference failure. We will see how Russell's Theory of Descriptions provides Wittgenstein with the tool necessary for dealing with this matter. Although Russell's Theory of Descriptions receives little explicit treatment in the *Tractatus*, Wittgenstein is clearly sympathetic with the manner in which it is used to eliminate ontological commitments to such unwanted entities as the golden mountain and the present King of France. As we will see, by distinguishing between the "apparent logical form of a proposition...[and] its real one" (1922b, 4.0031), Wittgenstein is able to expand his idea of pictorial form in such a way as to accommodate problematic cases in which the structures of sentences do not approximate the structures of pictures. This expansion requires a commit-

ment to the existence (or *subsistence*) of simple objects that constitute the substance of the world. Russell and Wittgenstein would both become *logical atomists*, but as we shall see, their respective atomisms differ in important respects.

As it turns out, Russell's argument for atomism would remain largely epistemological (based upon his distinction between knowledge by acquaintance and knowledge by description), whereas Wittgenstein's would stem purely from semantic considerations (that is, from a consideration of what makes sense possible). The two philosophers also differ with regard to the degree to which they allow themselves to be committed ontologically to the existence of simple objects. For Wittgenstein they are the substance of the world; for Russell they are *primarily* the residue of analysis, a residue that might be eliminated by means of "greater logical skill" (1924, p. 173) Finally, both differ in terms of their ontologies, although neither's discussion of the matter is unambiguous. Russell's ontology stays closely tied to his epistemology, so that he eventually identifies simple objects with particulars with which one may be acquainted. Wittgenstein, on the other hand, adopts a much more *agnostic* stance after a lengthy soliloquy (reproduced in his *Notebooks*) in which he attempts to reconcile his belief that there must be simple objects with his apparent inability to characterize them.

The strength and the real weakness of Wittgenstein's argument for simple objects has generally gone unappreciated by commentators. Most commentators view the argument as one that calls for the existence of simple objects in order to block one or another infinite regress. Black (1964, pp. 58ff), for example, suggests that Wittgenstein maintains there must be a terminus for analysis if anyone is to *know* the meaning of a proposition. Unless there were such a terminus, a person would have to know the meaning of an infinite number of propositions in order to know the meaning of even one. However, it will be demonstrated that

this sort of epistemological regress flies in the face of a considerable quantity of the text. Another possibility is that suggested by Weinberg (1935). According to Weinberg, unless simple objects serve as the terminus for analysis, propositions would never refer to an extra-linguistic reality (1935, p. 80). Propositions would be related to one another and to nothing else. This construal of his argument at least does justice to Wittgenstein's dissatisfaction with Frege's minimalist semantics in which semantic theory is reduced to the theory of inference. But, for reasons discussed below, the argument presented by Weinberg is so obviously invalid that it hardly warrants consideration. Black's and Weinberg's interpretations are now considered standard. Perhaps the greatest virtue of Chapter III lies in the fact that it exploits the texts (including those of the pre-Tractarian writings) in such a way as to provide a considerably more charitable interpretation of Wittgenstein's argument than has heretofore been offered. My interpretation construes it as a valid deductive argument that has as one of its major premises the thesis of the bipolarity of the proposition. That there is a link between bipolarity and logical atomism has not gone unnoticed, for example by White (1974), but the exact way in which one moves from premises concerning bipolarity to a conclusion concerning the existence of simple objects has never been made explicit.

The weaknesses commentators attribute to Wittgenstein's argument for atomism typically depend upon assigning him an overly weak argument. *If* one accepts the usual interpretations of the argument, one cannot help but notice their invalidity. This leaves one with the opinion that *if one must accept the argument for logical atomism in order to accept the rest of Tractarian semantics, then one may as well give the whole of Tractarian semantics up.* But this opinion is not justified. The *Tractatus* is stronger than that, as my rendition of the argument is designed to show. If the argument has any major flaw, it resides in the

unmet need to explain how complex objects could consist of objects that are not composite. I maintain that Wittgenstein has an answer to this question in his ontological distinction between facts (*Tatsachen*) and states of affairs (*Sachverhalten*). In order for the distinction between facts and states of affairs to assist in the resolution of the metaphysical problem of how complex objects can consist of non-composite objects, it is necessary to show that the *Grundgedanke* of the *Tractatus* is true. Thus the analysis the Picture Theory provides for elementary propositions *depends upon* that which can be given for molecular propositions. The defense of this thesis is what distinguishes this particular account of the semantics of the *Tractatus* from all others offered thusfar.

Chapter IV presents Wittgenstein's argument for the *Grundgedanke*. We begin in that chapter by considering Russell's position on the subject. Although Russell does not want to admit molecular facts, he is willing to countenance *negative* facts. Furthermore, we consider Sartre's phenomenological reasons for admitting negative facts (*negatites*) into *his* ontology. The argument for the *Grundgedanke* must answer to these considerations.

Normally the thesis that the logical constants do not refer is presented as an *assumption* that must be made if the account of molecular propositions is to consistent with the Picture Theory's requirement that there be an isomorphism between referring terms within language and objects within the world. Where scholars do interpret Wittgenstein as having an argument, the argument is readily seen as begging the question. Chapter IV seeks to remedy this by providing a *strong* (though not deductively valid) argument for the *Grundgedanke*. I argue that this claim can be defended on the basis of bipolarity without begging the question. To my knowledge only one scholar has noted the *historical* tie between the *Grundgedanke* and Wittgenstein's earlier thoughts concerning

the bipolarity of the proposition, namely, McGuiness (1974); but none have demonstrated the way in which the one serves as premise in an argument for the other. This I seek to do. The task requires unpacking Wittgenstein's comments concerning what he calls the *general form of the proposition*. It is argued that the general form of the proposition is to be identified with what is expressed by what *I* call the minimal truth table. That this truth table can be construed as expressively complete, whereas that countenanced by Wittgenstein's would-be adversary cannot be considered as such, establishes the truth of the *Grundgedanke*.

The *Grundgedanke* carries with it two major implications. The first is that the logical propositions--tautologies and contradictions--must be considered senseless (*sinnlos*). What chapter IV attempts to do is explain how the semantics of the *Tractatus* must be expanded to include senseless as well as sensical propositions. The other major implication is ontological. It is necessary to distinguish between facts (*Tatsachen*) and states of affairs (*Sachverhalten*) such that the former are not reducible to the latter. This sort of metaphysics displaces concerns raised in the previous chapter over the intelligibility of there being complex objects or states of affairs that have as heir constituents other objects that in no way can be considered complex.

Whereas Chapter III takes up the question of sentences containing names of non-existent objects (thereby bringing to completion the account of *sense*), and Chapter IV considers sentences containing sentence-forming operators (thus introducing the category of what is senseless), Chapter V takes up the issue of how to interpret sentences that appear to contain an intensional or non-truth-functional element as found in propositional attitude ascriptions and *oratio obliqua*, and, indeed, as found in the very sentences that make up the *Tractatus* itself.

Chapter V turns to those sentences that perhaps pose the most significant challenge to the principal theses constituting the Picture

Theory of the Proposition. Propositional attitude ascriptions, and *oratio obliqua*, attempt to say something about the *projective relation* that holds between a proposition or a propositional sign and the state of affairs of which it is true or false.[3] Considerations of the sort that led Wittgenstein to reject Russell's Paradox lead him, in the *Tractatus*, to conclude that one sentence cannot *say* what another sentence does or does not say--indeed, that a sentence cannot say *of itself* what it does or does not say. The argument is not entirely evident in the *Tractatus*, but it becomes so if the relation between the class and semantic paradoxes is born in mind. Nevertheless, it is *necessary* for there to be a projective relation between proposition and fact if the one is to be a model (*Bild*) of the other. Sentences of propositional attitude attempt to convey something about this relation. Since this relation must be a *necessary* condition for the possibility of representation, and since only propositions about what is contingent have sense, it follows that sentences of propositional attitude should have no sense. Yet clearly a sentence of the form "S believes (says, etc.) P" is neither a tautology nor a contradiction. Thus it would not be accurate to label such sentences as *senseless*. Wittgenstein's solution requires viewing all sentences of propositional attitude as containing two distinct semantic components.

Consider "S believes P." Let us distinguish between the ascriptive clause ("S believes...") which assigns a particular kind of propositional attitude to a particular subject and the content clause ("...P") which specifies *what* is believed by the subject. On Wittgenstein's view the ascriptive clause must be regarded as *nonsensical* (*unsinnig*). In a manner to be described in detail below, *it* is that aspect of the ascription which attempts to convey something of the pro-

[3] In what follows I will speak only of propositional attitude ascriptions and not of *oratio obliqua*. Clearly Wittgenstein does not draw any crucial distinction between the two.

jective relation that makes representation possible. This does not mean one cannot *say* anything about propositional attitudes and other mental states, even though Wittgenstein's sparse remarks on the subject tempt one to adopt such an interpretation. Certain remarks in the *Tractatus* suggest, in fact, that *much* can be said about psychological states, but that that is not a matter of importance to its author. What is important is that the existence of propositional attitudes presupposes that there is a metaphysical subject whose *willing* forms the ground for all representation whatsoever. Because the subject and its will constitute a necessary condition for the possibility of representation, *it* cannot be the subject matter of any proposition with sense. Instead, its presence is *shown* in the very act of believing, hoping, asserting (etc.) that a given proposition with sense is true. When one attempts to *say* something about the willing subject (or about anything that constitutes a necessary condition for the possibility of representation, as *all* the sentences of the *Tractatus* attempt to do) what results is *nonsense*. As I understand that term, a sentence can be nonsensical without its individual terms failing to refer. Sentences are nonsensical, not because they lack semantic properties like reference, but because they are systematically misleading: since all *saying* pertains to what is contingent, and since the existence of the willing subject cannot (on Wittgenstein's view) be contingent, any attempt to say something about it will inevitably distort its nature. Anyhow, it is that feature of sentences which produces such nonsense that constitutes the second major extension of Wittgenstein's conception of showing. As we shall see below, many of Wittgenstein's principal theses and the arguments upon which they are based are highly contentious.

The preceding remarks pertain only to the ascriptive clause within "S believes that P." The content clause "P" receives separate treatment. It is regarded as having the very same semantic properties it

would have if it were asserted and not merely ascribed to some subject. Thus "P" (i) can have a sense, provided it expresses a contingent truth, or (ii) can be senseless, if it corresponds to a logical proposition, i.e., a tautology or a contradiction, or (iii) it can be *in part* nonsensical, if "P" is itself a sentence of propositional attitude. As we will see, this third possibility raises serious problems for the Tractarian account of propositional attitudes as well as for Tractarian semantics in general. As mentioned earlier, the *Tractatus* can provide no adequate account for second-order propositional attitude ascriptions. Once this is acknowledged, the dominoes begin to fall. The final domino is the syntacticist or structuralist assumption concerning the roles logical structure and form play within a semantic theory. That is to say, the presumption of an isomorphism between language and world, so central to the Picture Theory, must be relinquished.

2. Limitations.

The five chapters that comprise this work are limited to a discussion of the strengths and weaknesses of Tractarian semantics. With few exceptions do I deal with any texts other than the pre-Tractarian writings, the *Tractatus* itself, and some of the material from his Cambridge lectures of 1929-1930. Nevertheless the unraveling of the *Tractatus*, as recorded in the *Philosophical Remarks* (1930) and the *Philosophical Grammar* (1932), and its ultimate replacement by what is contained in the *Philosophical Investigations* (1958), is an intriguing topic. Unfortunately, an adequate treatment of the historical development of Wittgenstein's thought following the *Tractatus* and of the adequacy and inadequacy of the arguments it contains would comprise a work many times longer than the present one. I would, however, like to conclude this Introduction by giving some indication of how the principal claims attributed to Wittgenstein in this dissertation happened to evolve in his later work.

As I mentioned above, the principal thesis of the *Tractatus* is that there can be no purely truth-functional semantic theory. A truth-functional semantic theory is one which maintains that an account of the essence of language (and perhaps of thought) is to be cashed out in terms of an account of what makes uttered sentences (and occasioned thoughts) true or false. The *Tractatus* presents three exceptions to any theory that attempts to make truth its corverstone. Each falls under the rubric of what cannot be said (i.e., evaluated as true or false) but only *shown*; there is (i) what is shown by a propositional sign that is meaningful (namely, its sense), (ii) what is shown by a senseless propositional sign that is tautologous or contradictory (viz., something Wittgenstein calls the *form* of language and the world, plus a certain kind of know-how concerning how to operate with symbols), and (iii) what is shown by nonsensical propositional signs (namely, the necessary conditions for the possibility of representation itself, including, most importantly, what Wittgenstein refers to as the *will* which effects the projective relation between propositional sign and world). Underlying each of these conceptions of showing (particularly the last two) is a view of language as a human *accomplishment*. This idea comes to fruition in the later philosophy where the *use* of linguistic tokens is deemed the most essential feature of language.

Even though the later philosophy shares none of the atomistic metaphysics of the *Tractatus*, there exists considerable continuity in the perpetuation of a semantic distinction between saying and showing. In the early philosophy, the capacity of a propositional sign to say or to show anything whatsoever is dependent upon it having both a structure and form isomorphic to actual and possible states of affairs in the world that constitute the meaning (*Bedeutung*) and sense (*Sinn*) of the sign. Both ways in which language function, by saying *and* showing, depend upon what is actual *and* possible *in the world*. Once shorn of its

metaphysical underpinnings the first of the three conceptions of showing goes by the wayside, but the shadowy dimensions of the second and third--what is expressed in the senseless and nonsensical--takes on such substance as to make them the centerpiece of the new semantics.

Nowhere is this more evident than in the case of senseless tautologies and contradictions. In the early philosophy, propositional signs that share these structures cannot be regarded as making statements capable of truth or falsehood. If they are informative at all, it is by virtue of displaying the limits of language and the world, i.e., the limits of what can be said, and said *of*, the world. Yet they do not do this by virtue of being discursive elements of a meta-language. (As we shall see in the course of the chapters below, according to Wittgenstein, a propositional sign with one structure cannot *say* what a propositional sign with another structure says.) Rather they provide speakers with prototypes or linguistic exemplars of what can be said. They serve as rules of inference or transformational rules, although referring to them as such can be misleading if one has an overly rationalistic or cognitivistic conception of rules. They are expressions of one's know-how, and one may be said to understand them without ever having *consciously* entertained them. When they *are* uttered they constitute a sort of *demonstration* (commentators often refer to them as presentations rather than representations). In the hands of the author of the *Philosophical Investigations* and the *Remarks on the Foundations of Mathematics* the so-called logical propositions become transformed into the *grammatical propositions* of the later semantics. These have a similar function to fulfill in that they determine what constitutes a meaningful utterance within a language; they are the rules of language games. Like the earlier rules they do not need to be consciously entertained. Unlike the earlier rules, no particular grammatical proposition lies implicit within the *very nature* of language itself; their status is

much more a matter of convention. Whereas the employment of the earlier rules could be said to reflect a reality having a crystalline logical structure, the grammatical propositions of the later philosophy structure what is to *count as* possibly true and real. Considered in themselves, they are neither true nor false but *antecedent* to truth. They provide their viewers with prototypical instances of linguistic behavior that can be mimicked by those who are disposed to find in them a use. Instructing someone in the use of signs by uttering a grammatical proposition can be likened to teaching a person how to shovel by pantomiming the movements one makes with a shovel.

The fate of the nonsensical expressions is no less interesting. In the *Tractatus* the semantic category of nonsense is introduced to accommodate statements, like those that make up the *Tractatus* itself, that pertain to the essence of language. This third semantic category is necessitated by the fact that these statements seem to be neither contingent (as are all sentences with a sense), nor do they seem tautologous or contradictory (as are senseless sentences). What is interesting is that sentences that express propositional attitude ascriptions--e.g., "S believes that P"--fall into this category, because the ascriptive clause ("S believes...") refers to something that essentially involves the *will*. It is the will that effects the projective relation that is essential to making the propositional *sign* into a proposition; that is to say, it is the will that accomplishes representation by means of the sign that serves as medium As I suggested above, we will see that the Tractarian account of the semantics of propositional attitude ascriptions turns out to be extremely problematic. The problems that arise here are more significant, and perhaps have more to do with why Tractarian semantics ought to be abandoned, than the traditional problems (like the supposition that the world possesses a substance of simple immutable objects or the color exclusion problem) that are attribut-

ed to the *Tractatus*. The problems are two-fold. First, the whole conception of what is nonsensical rests on an untenable account of necessity (and of law-like statements) and of what is and is not necessarily so. Indeed, the *Tractatus* cannot provide any account whatsoever of second-order propositional attitude ascriptions (like "John believes Mary loves him") without relinquishing its conception of the nonsensical. But this produces a series of irresolvable problems for the author of the *Tractatus*. Once we remove the need to see the psychological as belonging to the ineffable, one of the main threads of Tractarian semantics begins to unravel and with it the last barrier to a thorough-going naturalistic account of the ascriptive clause in which one may *say* or *state* what is essential to the projective relation itself. Here the dominoes begin to fall: the *de re* necessity that constitutes the form (but not the actual structure) of the world is lost, and with it is lost the conditions of the world which *fix* the senses of the sentences of our language. Ultimately what would have to be abandoned would be what Wittgenstein later disparagingly refers to as the conception of the world as having a crystalline logical form and of sense as determinate.

What is retained in the later philosophy is something of the Tractarian account given of the content clause of the propositional attitude ascription. The *Tractatus* gives the content clause a disquotational analysis which, as I suggested earlier, reemerges as the logical (or criterial) behaviorism of the *Philosophical Investigation*, a doctrine that I take to be compatible with instrumentalism in the philosophy of mind. Here the role played by *showing* looms large. To borrow a phrase from a contemporary advocate of the disquotational analysis, the utterance of a propositional attitude ascription constitutes a kind of "play-acting," a "skit or demonstration" (Stich, 1983, pp. 83-84). The fact is that it is difficult not to assimilate belief and other propositional attitude ascriptions to the grammatical propositions mentioned

earlier. So what we see as the later philosophy develops is the collapse of the distinction between the nonsensical and the senseless; and when the latter is stripped of its ontological underpinnings, the result is a certain form of Instrumentalism.

Instrumentalism and other forms of skepticism concerning the reification of intentional and semantic properties have recently come under attack as "pragmatically incoherent" (Baker (1987), pp. 134ff). In "The Wittgensteinian Consistency of Scepticism: An Antiseptic for the Anti-Sceptic" (Levvis, 1992) I have argued that the incoherence attributed to Instrumentalism can be avoided by wedding Instrumentalism to a Wittgensteinian account of grammatical propositions.

Although Criterial Behaviorism is a form of Instrumentalism, it should not be assimilated to the Instrumentalism currently advanced in the philosophy of mind. While its principal proponent, Dennett (1978; 1989), is correct in saying that our talk of the mental plays no *explanatory* role, he is wrong to treat it *merely* as playing a predictive role. There is much more going on when we talk about the mental. And it is, I believe, to Wittgenstein's credit that he recognized that using and understanding psychological predicates involve a hermeneutical element not required of statements that are purely predictive or hypothetical. It is in fact the distinguishing mark of Wittgenstein's hermeneutics that what we call *understanding anothers' words or deeds* requires treating others' behavior as variable and *unpredictable*. There is a threshold beyond which behavior that is *too* predictable ceases to be behavior. Levvis (1991) seeks to explain this by unpacking the seemingly obscure passage in the *Philosophical Investigations* that "[i]f a lion could talk, we could not understand him" (1958, p. 223). (Had Wittgenstein been writing in a later time period, he probably would have said that if *computers* could talk (which, of course, they can), we would

not understand them.)[4] Such a view stands in utter contrast to the structuralist or syntacticist philosophy of the *Tractatus*. It is a testimony to the genius that inspired that work that what is *best* in it should support what is most contentious in the *Philosophical Investigations*.

[4] Both of the articles referred to above were originally intended to be chapters of this dissertation. There inclusion became less practical as the task of interpreting and evaluating Tractarian semantics grew larger.

CHAPTER I

PRE-TRACTARIAN SEMANTICS (I): FROM MOORE'S THEORY OF JUDGMENT TO THE BIPOLARITY OF THE PROPOSITION

1. Historical Background.

Wittgenstein suggests in the Preface to his *Philosophical Investigations* that the ideas contained within that work are best understood in "contrast with and against the background of" the views he had espoused in the *Tractatus Logico-Philosophicus* (1958, p. vi). This chapter and the next take Wittgenstein's advice one step further by examining the development of his thought prior to writing the *Tractatus* and indeed even prior to writing the World War I *Notebooks*. The progression of Wittgenstein's views during this time period offers an invaluable backdrop for our examination of Tractarian semantics. His earliest views were expressed in conversations with Russell that took place in Cambridge during the winter of 1911. If Russell's description of these conversations is to be trusted, then it appears that Wittgenstein at the time advocated a relational theory of judgment similar to that held by G. E. Moore in "The Nature of Judgment" (1899).[5] What is most significant about such a theory is that it treats truth as a property of facts or states of affairs that are judged rather than as a property of the act or even the content of judgment. In its unwillingness to countenance the existence of mental contents the theory stands diametrically opposed to any any form of correspondence theory. As will become clearer below, the theory is fraught with numerous difficulties, not the least among which is its inability to adequately account for false propositions and negative existential judgments. During the two years

[5] Baldwin (1993, p. vii) points out that this article originally appeared as a chapter in Moore's 1898 Fellowship dissertation for Trinity College entitled, "The Metaphysical Basis of Ethics."

following these conversations with Russell we find Wittgenstein wrestling with these issues and with problems that he thinks are inherent in Russell's Theory of Types. His "Notes on Logic" (1913b), "Notes Dictated to G.E. Moore in Norway" (1914a), and various letters penned to Russell prior to 1914 show us the direction in which his thought was moving. We find him embracing the claim, for example, that there only exist true propositions, i.e., that in a certain respect there *are* no false propositions--or, as at least no false *empirical* propositions.[6] Some of the oddity of this claim goes away when it is viewed in the context of a relational theory of judgment which equates propositions and facts. Nevertheless, the theory winds up with an untenable account of false empirical judgments. Furthermore, like Moore and like the Russell of *The Principles of Mathematics* (1903), we find him willing to countenance the existence of negative facts in order to account for the possibility of negative existential judgments. Finally, and most importantly, we find in his criticism of Russell's Theory of Types and his defense of certain Fregean doctrines the Tractarian distinction between showing and saying in its embryonic form. Needless to say, the influence of Frege upon Wittgenstein during this time is enormous. In fact, in certain respects, the distinction between showing and saying (which to Wittgenstein's mind makes a theory of types unnecessary) is prefigured in that philosopher's writings.

This period of Wittgenstein's thinking comes to a close (no later than June of 1913) when he raises certain objections to Russell's multiple object theory of judgment consonant with the principal semantic themes of the *Tractatus*. As is well known, these criticisms forced Russell to abandon all work on his 1913 epistemological manuscript which

[6] For Moore, we shall see, when one asserts a false statements, one's utterance is about something (or about some set of things, namely, a group of properties that fail to be concatenated) that has Being but not existence. What is tenuous about his position is that when one makes a false statement, one is not making a statement *about* empirical reality.

would have provided an extensive explication of various theses presented all too briefly in *Problems of Philosophy* (1912).[7] It is in this year that the famous *Grundgedanke* of the *Tractatus* would occur to Wittgenstein: the idea that the logical constants do not serve as referring expressions. The *Grundgedanke*, along with his theses concerning the bipolarity of the proposition and (most importantly) the distinction between showing and saying, constitute the three principal semantic doctrines of the *Tractatus*. They are the essential doctrines of the Picture Theory of the Proposition. Of these three doctrines the distinction between showing and saying is, as mentioned earler, the most important. It would, indeed, continue to play a central role in his later writings, only in that context it would serve the interests of a deflationary semantic theory.

These first three chapters are devoted to Wittgenstein's theses concerning the bipolarity of the proposition and the distinction between showing and saying. It would be accurate to say that the principal thesis concerning the bipolarity of the proposition emerges from concerns over the inadequacy of Moore's theory of judgment, whereas the distinction between showing and saying emerges from concerns over Frege's vulnerability to Russell's Class Paradox. Section Two below examines the problems posed by Moore's theory of judgment. Section Three is concerned to show why it is necessary to countenance the bipolarity of the proposition in order to overcome these problems. One of the important features of that section is that it enables us to see the uniqueness of Wittgenstein's distinction between sense (*Sinn*) and meaning (*Bedeutung*). Contrary to many commentators, I do not construe the sense of a proposition as *a* (that is to say, *one*) possible fact or state of affairs which either obtains or fails to obtain. Rather, I view the sense of a propo-

[7] Russell's manuscript was published posthumously as *Theory of Knowledge* (1913).

sition as a *set* of possible facts or states of affairs. In contrast, the meaning of a proposition is the member of this set which *actually* makes the proposition true or false. This view of sense and meaning carries important implications for how we are to understand Wittgenstein's conception of *truth conditions* within the *Tractatus*. If one considers only the *Tractatus*, and neglects the Pre-Tractarian writings and some of the works written immediately after the *Tractatus*, one is likely to think that Wittgenstein regarded falsehood *merely* as the non-occurrence of a fact or state of affairs that is asserted by someone to be the case. One might be tempted, in other words, that Wittgenstein countenances *truth* conditions but not *falsifying* conditions. This, I shall argue, is an incorrect interpretation of Wittgenstein's *Tractatus*.

The first section of the next chapter examines Russell's Theory of Types and Wittgenstein's initial reaction to it. To fully appreciate the force of Wittgenstein's views it will be necessary to examine Frege's own views at some length. In an important respect Wittgenstein can be understood as retrieving aspects of Frege's semantic theory from the threat posed by Russell's Class Paradox; yet his view is markedly dissimilar from Frege's. Like Frege, Wittgenstein would hold that the semantic features of a language must be reflected in its syntactic or logical form; unlike Frege, Wittgenstein would not be willing to regard sentences and formulae as functioning like names. Why that cannot be the case will turn out to be the key to why he believes an illogical language is impossible, and that, in turn, is the key to why he believes a theory of types is not necessary.

It is only in this light that the distinction between showing and saying may be appreciated--not merely as a *conventional* alternative to Russell's Theory of Types--but as a *necessary* semantic distinction. An examination of the *Grundgedanke* of the *Tractatus*, which rounds out the

principal semantic theses of the *Tractatus*, will be put off until Chapter IV. It, and the Picture Theory of the proposition as a whole, will be treated as a *consequence* of the bipolarity of the proposition and the distinction between showing and saying.[8]

2. Moore's Relational Theory of Judgment.

Wittgenstein's earliest views bear the stamp of G. E. Moore. This much is evident from numerous conversations held between Wittgenstein and Russell in the early winter months of 1911. The contents of these conversations were recorded on a nearly daily basis by Russell in his letters to Lady Ottoline Morrell (reprinted in Monk, 1990, pp. 39-40):

> My German engineer very argumentative & tiresome. He wouldn't admit that it was certain that there was not a rhinoceros in the room. (1 November 1911)
>
> My German engineer, I think, is a fool. He thinks nothing empirical is knowable--I asked him to admit that there was not a rhinoceros in the room, but he wouldn't. (2 November 1911)
>
> [Wittgenstein] was refusing to admit the existence of anything except asserted propositions. (7 November 1911)
>
> My German ex-engineer, as usual, maintained his thesis that there is nothing in the world except asserted propositions... (13 November 1911)

Later in life Russell would mention that his own assessment of Wittgenstein's intelligence was made difficult by the views he espoused at the time:

> He maintained, for example, at one time that all existential propositions are meaningless... I invited him to consider the proposition: 'There is no hippopotamus in this room at present.' When he refused to believe this, I looked under all the desks without finding one; but he remained unconvinced (1951, p. 297; as quoted in McGuiness,

[8] Let me point out that the title of this chapter is somewhat a misnomer. Themes that emerge prior to, but continue to play a major role within, the *Tractatus* will be explicated with reference to passages from that text.

1988, p. 89).[9]

The set of theses to which Russell refers constitute a relational theory of judgment such as that advocated by Moore in the 1899 article, "The Nature of Judgment." This article is one of several in which Moore disputes the idealism of F. H. Bradley by calling attention to an ambiguity in that author's use of the word "idea," viz., that the word is used to denote both the *act* of consciousness or judgment, as well as the *object* of consciousness or judgment.[10] In the *Principles of Logic* (1883) Bradley had attacked the empiricist claim that an individual's ideas are reducible to collections of introspectable experiences. Against this reductivist claim Bradley had argued that the contents of consciousness or judgment must be construed as possessing an irreducibly *universal* character (1883, p. 4). In saying this he intended not only to deny the epistemological thesis that the contents of consciousness and judgment are arrived at or produced by such mental operations as association and abstraction, but to affirm the ontological thesis that the *objects* of these states just are universals, i.e., abstract entities that are mind-independent.

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[9] Although Russell attributes to Wittgenstein the view that *all* existential propositions are meaningless, his example is a negative existential proposition. I think we can say confidently that the issue between them *at least* pertained to negative existentials. That would be a supposition consistent with the letters to Ottoline Morrell. Whether the the topic concerned *all* existential judgments we are not in a position to say. One of the earlier letters does, however, assign to him the belief that *nothing* empirical is knowable. Nothing in the chapters ahead really hangs on this issue. Clearly, by the time Wittgenstein wrote the *Tractatus* he believed that existential propositions were not needed at the atomic level, since at that level of analysis all names are assumed to have reference to simple, subsistent objects. At any level other than the atomic level existential propositions are to be construed as assertions that some fact obtains.

[10] One good indication that Wittgenstein was on board with those opposed to Idealism is his 1913 review of P. Coffey's *The Science of Logic* (1913). Wittgenstein criticizes Coffey (perhaps unjustly) for believing "that reality is changed by becoming the object of our thoughts" (1913a, p. 3).

Bradley's use of the term "idea" to denote the objects of consciousness and judgment did not worry Moore. For example, Moore would have no difficulty with uses of a phrase such as "My idea of greenness..." when the phrase is construed as being *about* greenness itself. However, Bradley would also describe the meanings of signs or symbols as universal in character (1883, p. 5), and often he would use the term "idea" to denote a type of sign albeit one that is *mental* in nature (1883, p. 5). But the very idea of a sign is that of a representational medium. Thus Bradley had used the word to designate both that which is represented as well as that which represents. In this way he was committed to there being mental representations that occupy an intermediate position between subjects and the objects concerning which judgments are formed. It was this commitment to mental representations that Moore found objectionable.

The thrust of Moore's objection is epistemological. On Bradley's view the truth or falsehood of judgments is dependent upon the relations that obtain between one's ideas (construed as mental representations) and reality (1883, p. 2). The relating of the mental representation to reality, for Bradley, is an *accomplishment* on the part of the mind. In judgment a particular content is "cut off, fixed by the mind, and considered apart from the existence of the sign" (1883, p. 4). But, counters Moore, in order for the mind to fix or determine some content that is attributable to reality, it must have some idea *of* the reality to which the content shall be affixed. Forming true judgments would require of subjects a capacity to transcend the representation-world relation in order to determine whether the two correspond, indeed, in order to determine *which* mental representation corresponds to reality. From Moore's point of view, this entails an infinite regress: not only would one have to form a secondary judgment about one's primary judgment, but a tertiary judgment about one's secondary judgment, and so on. Moore

concludes,

> [t]he theory would...seem to demand the completion of an infinite number of psychological judgments before any judgment can be made at all. But such a completion is impossible; and therefore all judgment is likewise impossible. It follows, therefore, if we are to avoid this absurdity, that the 'idea used in judgment' must be something other than a part of the content of any idea of mine (1899, p. 178).

For our purposes it matters little whether the infinite regress which Moore attributes to Bradley can be blocked. (To be sure, Moore greatly underestimates the role assigned to intuition by Bradley and the extent to which reality itself *fixes* the meanings of mental representations; cf. 1883, p. 44ff.) What is important is that if, as Moore believes, one is unable to form a true judgment without first possessing both an idea of the meaning of one's mental representation as well as an idea *of the reality* thus represented, then it is superfluous to posit the existence of mental representations. Mental representations are supposed to make judgments about reality possible, yet their ability to do so presupposes (on pain of infinite regress) a direct awareness of the reality which allegedly stands in need of such representation.

For Moore, then, the immediate objects of consciousness and judgment must be mind-independent realities rather than mere representations of such realities. To think otherwise would be to confuse the object of consciousness with something subjective, that is, with something which is more appropriately viewed as belonging to the act of consciousness. Ideas (construed as contents or meanings) must not be confused with anything psychological. Attempting to avoid the ambiguities inherent in the word "idea," Moore chooses to use the word "concept" to designate the objects of consciousness. For him there is nothing psychological about concepts; they are not, for example, mere products of a mental act of conceiving. "A concept," Moore tells us, "is not a mental fact, nor

any part of a mental fact" (1899, p. 179).

Concepts, for Moore, are universals. They are abstract entities which exist independent of any mind. Moore is a metaphysical realist (or Platonist) concerning the existence of universals: being aware of a red object involves a relation to an entity which is the redness of the object, and this very same entity is a term of *any* relation involving an awareness of some particular object to which the property of redness is attributed. Moore's theory should be distinguished from nominalistic approaches which countenance the possibility of two objects possessing similar but not identical properties. Nominalistic accounts typically view the nature of a property as being contingent in some manner or other upon the *particular* object to which it is attributed. But, for Moore, concepts (properties) are in no way dependent upon the objects to which they are assigned. If they were, then it would not be possible to form awarenesses or judgments about concepts themselves. But it is possible, for example, to simply be aware of redness or to form a judgment that red is a color, and in neither case does one's mental act involve a relation to any particular object to which redness or coloredness is attributed. Such awarenesses can occur at different times and different places. Since the objects of such awarenesses are not to be identified with anything subjective, they too must persist from time to time and from place to place. Hence, like Plato's Forms, Moore's concepts are immutable and eternal.

Typically realists describe the relation between particular objects and the properties attributable to them as one of the former participating in, partaking of, exemplifying, or instantiating the latter. None of these phrases are accurate in this case, since for Moore there are no particulars truly distinguishable from universals. Moore asserts at one place that the world *consists* of nothing but concepts (1899, p. 182). A particular object, on this view, is nothing more than a combi-

nation (perhaps a unique combination) of concepts. Put another way, an object is but a certain concrescence of *immutable* (1899, p. 180) properties at a particular time and in a particular place.[11] This being so, the question we should consider is: what distinguishes concepts which appear to be instantiated in space and time from those which are not? After all, the concept of a unicorn is just as much a concept of a physical thing as is the concept of a horse. Both are complex concepts which would be analyzed in terms of their components. (It should be noted that Moore's model of analysis involves treating a complex concept as a kind of object whose *parts* are to be enumerated; it does not involve defining a concept in terms of its genus and differentia.) Since both concepts are concepts of things which have physical parts, given Moore's conception of analysis, both the concept of a unicorn and the concept of a horse must be analyzed as physical things, even though the latter exist but the former do not. Allow me to bring the problem into greater focus. Suppose one perceives an actual horse. At that instant one stands in a relation to the *concept of a horse*. But then suppose one imagines a unicorn or, better, a unicorn *that exists*.[12] In each case the *objects* of one's awareness are alike in terms of being physical. One cannot say of the unicorn that *its* physicalness merely resides "in the mind" of the person imagining it. Clearly, for Moore, no recourse

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[11] Here we must be cautious not to inadvertently *smuggle into* our account of Moore's view entities that play the role of particulars that may be instantiated. Above we spoke of the concatenation of concepts *at a particular time* and *at a particular place*. This wording is forced upon us, but it should not be taken to mean that times and places are particulars of a peculiar sort. If the universe, for Moore, consists of nothing but concepts (properties), then times and places are concepts too. As we proceed we shall see just how problematic this is for Moore. Once particulars are eliminated from an ontology, it becomes impossible to devise a relation *among* concepts that can play the same role as instantiation. The problem then becomes one of how to distinguish what merely possesses Being from what possesses existence.

[12] I presume this is no more problematic than imagining that one's great-great-great-great grandparents are still alive.

can be made to entities "in" the mind. So, how, on Moore's view, shall we distinguish what is *merely* imaginary from what is actually perceivable? If there is no way for Moore to draw this distinction, we have a *reductio* of his view. Moore's problem comes to this: how can a unicorn *be* a physical object but not be located in physical space? Or, more generally: how can there be physical objects which possess no physical properties?

As we shall see, Moore does offer a solution to this problem by assigning a special role to the concept of existence and to temporality. Before examining his solution, however, let me dispel any worry the reader might have that the problem introduced above is in some way *trite*. I want to do this because I think that although Moore may very well be able to circumvent the particular problem just posed (namely as to how there could be, *external to the mind*, something with physical properties that is not located in physical space), once his solution is on the table the very same *kind* of problem reoccurs. If the reader believes that this *kind* of problem amounts to nothing more than an attack upon a straw man, little of what follows may seem philosophically relevant.

The reason one might be *tempted* to regard this kind of problem as an attack upon a straw man is that one is inclined to think it is a mistake to regard the concept of a physical thing as, itself, a physical thing. Although it is not possible for Moore to resolve the question by treating the *concept of* a physical thing as a representational entity,[13] one might want to argue on Moore's behalf that we are failing to distinguish between concepts (or properties) and their instantiation. If con-

[13] This would resolve the problem by permitting a sentence such as "John imagines that a unicorn is eating his slippers" to be construed intensionally (i.e., by assigning a *de dicto* interpretation to the embedded noun clause). Someone could thus *conceive of* a unicorn while residing in a universe in which there are no actual unicorns, just unicorn*ness* itself.

cepts may be instantiated, then there is no reason to regard the concept of being physical as a physical thing. Furthermore, goes the objection, *if* there is no distinction between a concept and a physical thing, then given what we said earlier about objects (namely that they are immutable and eternal), it would follow that *objects* would have to be immutable and eternal. Moore, one wants to say, ought to be interpreted in a more charitable light.[14]

I will defer discussion of the would-be *reductio* until later. Moore is not the first Platonist to be saddled with the difficulty of explaining how change is possible. Suffice it here to say that he thinks he can overcome this problem by making temporality the essence of existence. Regarding the suggestion, though, that we have constructed a straw man by ignoring the possibility of instantiation, let me remind the reader that, for Moore, there are no particulars to instantiate concepts. Moore's world consists completely of concepts (properties) and nothing else (1899, p. 182). What is typically regarded as a particular object is nothing more than a concatenation of concepts or properties (1899, p. 183) or, as he sometimes says, it is nothing more than a *complex* concept (1899, p. 183). A *fact* (or, in Moore's terminology, a *proposition*) is nothing but an even more complex concept (1899, p. 180). Because Moore cannot appeal to particulars, he will have to find something that plays the same role as instantiation. To be sure, he *has* a proposal, but before examining it we should be perfectly clear on why this is a difficult goal to achieve. Part of the reason why it is difficult to imagine physicalness (external to the mind) belonging to no physical thing is that we commonly take the distinguishing mark of a physical *thing* to be the *possession of* physical properties (or the property of being physical. The point is that the external occurrence of physicalness is commonly taken to be the basis for our saying that there

[14] For this criticism I am indebted to John Nolt.

is a physical *thing* external to ourselves. What we are being asked to consider is the possibility of there being external physicalness but no external *thing* to which physicalness may be ascribed. Trying to take this possibility seriously immediately gets one into hot water with the usual philosophical distinction between universals and particulars. Ordinarily, universals are distinguished from particulars on the grounds that particulars may only have properties predicated *of them*, whereas universals may *either* be the objects of predication *or* be predicated of other objects. The classical conception of universals treats a property as *a kind of thing* in its own right. But if there are no *things* that are physical--that is, if there are no things to which physicalness may be predicated--then we cannot even consider physicalness itself as a *thing* to which physicalness may be attributed. *But how is it possible that physicalness cannot be predicated of physicalness?* If anything, we would think that physicalness is identical to physicalness.

These considerations proceed from what I referred to as an *ordinary* conception of physical things. That conception may be wrong, but it does serve as a starting point. That is, it shows us why an argument is needed here in support of the claim that there are *nothing but* properties or concepts. A major part of that burden consists in providing an account of some relation among concepts that can play the same role as instantiation. What we want from Moore is some account of how abstract entities can come together to form an *existent* object.

Moore's solution is to treat existence itself as a concept, so that existent objects are *complex concepts* composed of one or more concepts (such as physicalness) which stands in a logical relation (presumably that of inclusion) to the concept of existence. Existence itself can be a concept, since it, like redness, can be an object of awareness or judgment (1899, p. 180). Thus all properties (including the property of being a unicorn) are mind-independent and enjoy a kind of *being*, but

only some properties have existence. "An existent," Moore tells us, "is seen to be nothing but a concept or complex of concepts standing in a unique relation to the concept of existence" (1899, p. 183).

Here an implication of the utmost importance arises. Moore's view implies that there are no simple, unanalyzable existents. Since what exists necessarily involves relations among the objects of consciousness (at a bare minimum it requires a relation between the property of existence and some other property), it is really more appropriate to say that *what exist are facts or states of affairs.*[15] Or, to use Moore's terminology at the time, what exist are *propositions*. This may sound peculiar, but, as Moore explains,

> [T]he description of an existent as a proposition seems to lose its strangeness, when it is remembered that a proposition is here to be understood, not as anything subjective--an assertion or affirmation of something--but as the combination of concepts which is affirmed (1899, p. 183).

The *object* of judgment (even, as we shall see, when the judgment is false) is always a proposition or fact. Indeed, perceptual belief (as when one perceives that *this rose is red*) is defined by Moore as being the cognition of an existential proposition (1889, p. 183). This primacy given to facts as the objects of judgment serves to distinguish Moore's view from Russell's multiple object theory of judgment (1912; 1913). We will examine Russell's view extensively in a later chapter.

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[15] One of the opening remarks in the *Tractatus* is "The world is the totality of facts, not of things" (1922b, 1.1). Although Wittgenstein's ontology differs from Moore's, it is in Moore's philosophy that Wittgenstein first encountered the idea that the world consists of facts. Even though Moore's view eventually comes under criticism by Wittgenstein, this particular thesis would never be relinquished by Wittgenstein. Wittgenstein's retention of the thesis also owes much to the influence of Frege, particularly Frege's context principle, according to which a word only has meaning in the context of a sentence. We will have a chance in a later chapter to see how far the influence of Frege extends. I think it is fair to say that Wittgenstein accepts Frege's distinction between singular and predicative expressions for all analyzable propositions but not for atomic propositions.

Here suffice it to say that for Russell a judgment is the product of a set of discrete mental acts (acquaintance with a universal, another acquaintance with a particular, etc.) whose objects are *knit together* into a unified whole (that is, into a proposition) by the act of judgment. On Moore's view, in contrast, perception begins with the proposition. The facts *presented to* the perceiving subject are already *combinations* of concepts. This gives Moore's theory of judgment a certain advantage over Russell's, given the difficulty Russell has in explaining how judgment knits together the objects of awareness into a unified whole.[16]

Returning to the issue posed above, it might appear to be a mere evasion of the issue to claim that what distinguishes instantiated concepts of physical objects (like that of a horse) from uninstantiated concepts of physical objects (like that of a unicorn) is that the former do, but the latter do not, have existence. It hardly seems adequate to answer the question of how there can be physicalness external to the mind which is not itself physical by saying that some physicalness has existence and some has not. How the latter could be so is precisely the issue.

For Moore, however, the essence of existence is temporality (1899, p. 188). The possession of temporal properties is precisely what distinguishes an existent object from a non-existent one. The point may be expressed by saying that existence occurs *at times*, so that for a unicorn to exist, it would be necessary for the properties that make up a unicorn to come together with the property of existence *at some time*. What is meant in saying that a unicorn does not exist is that the properties that make up a unicorn do not *now* form a union with the property of existence.

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[16] Russell (1913) even goes so far as to regard logical forms as being among the objects of acquaintance. This, we will see in Chapter Five, simply multiplies the problem. By giving metaphysical primacy to facts and states of affairs, Wittgenstein, like Moore, avoids Russell's problem.

He arrives at this conclusion through a consideration of Kant's distinction between *a priori* and *a posteriori* knowledge. Moore desires very much to preserve Kant's distinction between *a priori* and *a posteriori* judgments, and to preserve it in such a way that the former but not latter might be characterized as necessarily true or false. Consistent with his criticism of Bradley, Moore objects to Kant's way of drawing the distinction in terms of the mental acts required. Rather, such judgments must be individuated in terms of the types of concepts which occur in them. Since the objects of consciousness, concepts, are immutable (and thus lay claim to a certain kind of necessary existence), it must be possible for there to be contingent *relations* among concepts; and this, he believes, is possible only if these relations are not themselves immutable.[17] These relations must therefore have a temporal quality. Thus, while all propositions consist in a certain concatenation of concepts, those which are *a posteriori* in nature involve relations which, conceivably, might not obtain. For Moore, this means that empirical propositions must relate concatenations of concepts to *times*. (This should not be taken to mean that the *sentences* speakers use for stating propositions must contain an explicitly temporal element; relations to times must here be regarded as belonging to the ontology of empirical judgments. Nor should the presence of tense within a sentence be regarded as any sort of evidence that the sentence somehow expresses

[17] Like many philosophers, the most notable perhaps being Aquinas and Plato, Moore conflates immutability and necessity. This is not to say that such a view is unwarranted, but only that it stands in need of an argument. (It has been remarked to me by Mary Sirridge in conversation that this commits Moore to the modal language S4; of this I am dubious, but this is not the place to pursue the issue.)

On the question of the relations among concepts, Moore is not consistent. Clearly if he is to account for change and consistency, he cannot exclude the possibility that the relation among concepts change from time to time. Yet he says, "[a] proposition is a synthesis of concepts; and just as concepts are themselves immutably what they are, so they stand in finite relations to one another equally immutable" (1899, p. 180).

an empirical judgment.) What makes a judgment empirical is that it is *about* objects with temporal properties.

One might suspect that the question which nagged Moore earlier (namely, the question of how there could be physicalness external to the mind that is not physical) might reappear in new garb: *is it not possible to have a thought about some particular object with certain temporal qualities which nevertheless does not exist*? Are we to be committed to the existence of the Martians who, according to the Orson Wells' broadcast, invaded the Earth in 1938? Clearly here is a case in which something which never existed is given a temporal characterization. Is it not possible to imagine a unicorn that exists at a given place and time? As noted earlier, this would seem to be no less possible than imagining having a conversation (now) with one's currently deceased ancestors. How does a relation to the concept of existence (now understood as having an essentially temporal character) accomplish the passage from mere Being to existence? The role played by instantiation has not been captured in the process.

I believe Moore has a better solution to this problem. But before we can bring it into focus, it will be necessary to consider his account of truth and falsehood.

Consistent with his disavowal of mental representations, we find Moore shunning any form of correspondence theory of truth. Truth, for Moore, is a property of the propositions towards which judgments are directed. Since propositions, on this view, are facts, truth is a *property* of facts. But what kind of property? Is it a property of a fact in the sense that it is one of its constituents (so that truth is internally related to the proposition as a whole), or shall we say that propositions can occur independently of their truth (so that truth is externally related, i.e., an accidental property of) a proposition? Moore's answer is ambiguous. Indeed, the ambiguity may be traced to his

vacillation over whether truth is an analyzable property or an unanalyzable property. If it turns out that truth is analyzable, then it is internally related to the proposition to which it is ascribed and, as such, is one of its components. If truth is a simple, unanalyzable property, then it is only externally related to the proposition to which it is ascribed and is, therefore, not one of its components.

On the one hand, Moore tells us that the truth of a proposition is a simple, unanalyzable property which "cannot be further defined, but must be immediately recognized" (1899, p. 180). He even goes so far as to suggest that knowledge of the existence of a particular state of affairs is *inferred from* an awareness of the truth of a proposition. Thus he maintains, "existence is logically subordinate to truth; that truth cannot be defined by a reference to existence, but existence only by a reference to truth" (1899, p. 180). In this respect his account of truth in "The Nature of Judgment" appears to parallel the sort of account he gave of goodness in *Principia Ethica*. In that work goodness is defined as a non-natural property; that is to say, it is a property which has Being but not existence (1903, p. 110). In the scanty remarks concerning truth as simple and unanalyzable in "The Nature of Judgment" we have the first traces of a conception of truth to emerge more fully in *Principia Ethica* where Moore asserts, "[n]o truth does, in fact, exist" (1903, p. 111). This view of truth is largely motivated by a concern for accommodating the possibility of truth for *a priori* propositions--particularly, mathematical propositions which refer to non-existent entities such as Two (1899, p. 180; 1903, p. 111).[18]

On this view, truth is that self-same property whether it is ascribed to *a priori* or *a posteriori* propositions. It is *unique* in the sense that there is only one such property, but it can belong to diverse

[18] In Moore (1903) existent objects are again distinguished from non-existent ones by virtue of existing in time (1903, p. 111).

propositions. This rules out the possibility of truth being the component of any proposition. Since the fact that this rose is red shares none of the components of the fact that two plus two is four, yet truth may be ascribed to both, it follows that truth cannot be a component of these facts. "It is...impossible," we are told, "that truth should depend on a relation to existents, or to an existent..." (1899, p. 181).

On this view, falsehood consists in the non-obtaining of the fact that is asserted. That is to say, it consists in the failure of the properties in question to come together with the property of existence at some time. He says,

> [i]f the judgment is false, that is not because my *ideas* do not correspond to reality, but because such a conjunction of concepts is not to be found among existents (1899, p. 179).[19]

But falsehood on this view (and indeed even on the alternative view which we will examine below) is *more than* the mere failure of a certain concatenation of concepts to occur. Just as truth requires a relation of inclusion or union with the concept of existence, so too does falsehood require *some* sort of relation among the non-existent concepts:

> A proposition is constituted by any number of concepts, together with a specific relation between them; and according to the nature of this relation the proposition may be either true or false. What kind of relation makes a proposition true, what false, cannot be further defined, but must be immediately recognized (1899, p. 180).

Although he maintains that truth and falsehood cannot be further defined, he is willing to characterize these relations as logical relations (1899, p. 183), and he *suggests* at least that these relations are objective (in that they have Being) even though they do not exist. The

[19] Moore's reference to judgments rather than propositions as false should not be taken to indicate that he regarded falsehood as the obtaining of a special kind of judging *relation*. Judgment (whether true or false) always involves the very same kind of relation to whatever happens to be its object. Two mental acts of the same mode (judging, believing, perceiving, etc.) can only be differentiated in terms of their objects. In any event the objects are propositions.

particular passage with which we are concerned pertains primarily to the nature of inference; the relation of a premise to a conclusion validly drawn from it is an objective though non-existent relation. However, existence, too, requires that concepts "stand in a certain logical relation" (1899, p. 183). Earlier I suggested this might be the logical relation of inclusion (relative to a time) or that of union. (As a heuristic it is useful to imagine Moore's view in terms of Venn Diagrams; an existent would be represented by the *region* that is the union of the class symbols; when the proposition is false this region is darkened.) I can think of no other way to characterize the falsehood of a proposition (i.e., the disunion of its properties) other than my saying that the concepts are *excluded from* the concept of existence (relative to a time).

This view is, however, very problematic. For one thing, it appears to imply that there can be no such thing as a false empirical proposition. Whenever one forms a judgment there will be some fact (proposition) that is the *object* of one's judgment. Recall that for Moore a proposition is *made* true or false *by* the kind of relation that holds between the concepts in question (1899, p. 180). To judge falsely that unicorns exist involves a relation to the concepts of existence, unicorn, and the relation of exclusion. The fact that unicorns are excluded from existence (at a given time) *makes* the judgment false. This is of the utmost importance, and it is a point that one may easily overlook if one thinks that falsehood for Moore is *merely* the non-concatenation of concepts. In point of fact, he says:

> [t]ruth...would certainly seem to involve at least two terms, and some relation between them; falsehood involves the same; and hence it would seem to remain, that we regard truth and falsehood as properties of certain concepts, together with their relations--a whole to which we give the name proposition (1899, p. 181).

Moore is clearly asserting that there is some fact (albeit a non-exis-

tent one) that *makes* one one's judgment false.

But now what is the *object* of one's belief when one believes falsely that unicorns exist? What is the fact *to which* one is related when one believes that unicorns exist? The only fact there is here is the one that makes the judgment false, namely, the fact that unicorns are excluded from existence (at a given time).[20] But that fact is *so*! The proposition that unicorns are excluded from existence (at a given time) is *true*! The point is that all false empirical propositions must be construed as *true* non-empirical propositions. The implication is that judgment can never be related to anything but what is true. The notion of a false empirical judgment collapses under the weight of Being. Moore acknowledges this implication (although not without trepidation). If there cannot be false empirical propositions, then all empirical propositions *must* be true: "[t]he simplest existential propositions are then to be regarded as necessary propositions of a peculiar sort" (1899, p. 191). To be sure, his article closes on just this note.

> Our result then is as follows: That a judgment is universally a necessary combination of concepts, equally necessary whether it be true or false.

At bottom, Moore's problem comes down to the fact that the act of judgment effects a relation between a subject and *something*, but once this object is identified, nothing remains that can *be* false. Therefore, Moore's theory cannot explain the nature of falsehood.[21]

It is tempting to try to get Moore off the hook by finding *something else* besides the object of Moore's belief to be false. One is tempted to say that the *act* of judgment is untrue, like an arrow that strays from its true course. But this will not suffice, as the arrow

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[20] He proceeds to say, "...existential propositions which are false, as well as those which are true, involve the same propositions about space and time" (1899, p. 191).

[21] Passmore (1966, p. 205) notes that a concern for this very issue forced Moore to abandon his position by 1911. His lectures at that time are reprinted in Moore (1953).

simile, when thought through, suggests: for the arrow lands *somewhere* even if it does not land at its intended target. *That* is the object it strikes. Notice indeed that the analogy requires drawing a distinction between the arrow's actual mark and its intended one. I suspect this attempt to get Moore off the hook owes its initially compelling appearance to the fact that it covertly introduces mental contents (the intended mark). If one is willing to countenance mental contents, the problem will not arise in the first place; of course, this is not a strategy open to Moore. Nor, we should note, was Moore ever tempted to employ it as a strategy: he always refers to truth and falsehood as properties of concepts or propositions, never as properties of mental acts.

In the end Moore's only suggestion, consistent with the idea that one cannot *form* false empirical judgments, is to say that *were* it possible for false empirical propostions to occur, they would be the sorts of things in which one could take no interest (1899, pp. 180-181). It would be a little like hybridizing a rose to smell like a skunk; not many persons would want to buy one. He seems to think no one would be interested in asserting what is not true. (This may be the key to Wittgenstein's claim, reported in Moore's letters to Ottoline Morrell, that only *asserted* propositions exist.) But Moore is mistaken here. False beliefs can be immensely important. That it is false that water boils at 50c is an important fact, particularly if one is cooking pasta. And if it *were* false that water boils at 100c, that would be important too, particularly to persons who design coolant for engines. Moore's strategy of trying to playdown the importance of falsehood simply does not ring true. We can also take an interest in the false beliefs of other persons, which brings us to the next criticism.

Not only does his theory of judgment fail to account for falsehood and for the contingency of (some) empirical propositions, it leaves ut-

terly mysterious how we could ever truly ascribe a false belief to another person. Suppose I assert "S believes P, but P is false." This would have to be regarded as a certain kind of nonsense. If P is false, then it (i.e., P) cannot be that to which S is related. Rather, the object of S's belief would have to be ~P. Since the verb "believes" is logically transparent according to a relational theory of judgment (so that its subordinate clause is interpreted *de re*), I would be required to characterize what S believes as ~P. That is to say, the object of the believing relation would be the true but non-existent proposition ~P. Hence, the occurrence of P in the first conjunct of "S believes P, but P is false" is illegitimate. This is something that just cannot be said.

The problems we have examined up to this point stem from Moore's conception of truth as a simple, unanalyzable property that is not a component of the facts to which it is ascribed.[22] Yet there is an alternative account hinted at in "The Nature of Judgment." The fact is that immediately upon pronouncing truth to be an unanalyzable property, Moore provides us with just such an analysis. The analysis *does* require truth and falsehood to be components of facts, and it involves a strategy that requires the distinction between identity and existence to be collapsed.

Consider what he says concerning the judgment that a particular rose is red (expressed by the sentence, "This rose is red"):

> What I am asserting is a specific connexion of certain concepts forming the total concept "rose" with the concepts "this" and "now" and "red"; and the judgment is true if such a connexion is existent (1899, p. 179).

This passage *can* be interpreted in accordance with the interpretation of Moore's view described above. But bear in mind that, even though truth was presented as unanalyzable, it was still capable of being character-

[22] Here I say *conception of truth* rather than *of truth and falsehood*, since on this view there is little room left for a conception of falsehood.

ized to some extent. The characterization of truth in terms of one or more concepts standing in a logical relation to the concept of existence is not intended to define truth; it is only intended to be an account of the conditions under which truth may be ascribed to a proposition. Nevertheless, once the problem of accounting for falsehood is exposed, it is difficult to distinguish this sort of characterization of the truth of empirical propositions from a definition in terms of the occurrence of such a relation. It begins to look as if being an empirical proposition and being a *true* empirical proposition amount to the same thing--namely, being a proposition in which there occurs some relation between one or more concepts and the concept of truth. If empirical truth always involves that very relation, then it would have to be regarded as a component of any fact to which it is predicated. *Against* this suggestion one would want to argue that, for Moore, truth remains the very same thing regardless of the specific proposition to which it is ascribed; thus the view under proposal is incompatible with Moore's view, provided we accept the assumption that the fact that this rose is red shares no common components with the fact that that water is boiling.

We will not concern ourselves with the latter assumption. However, doubts can be raised concerning the claim that truth is the *very same* property when ascribed to different true propositions. If the distinction between being an empirical proposition and being a *true* empirical proposition collapses, such that the property of being true amounts (in the case of empirical propositions) to nothing other than a relation between a set of concepts and the concept of existence, then what is referred to as the property of truth *will* vary among distinct propositions. This is because the particular relation to the concept of existence will vary for distinct propositions.

It appears that the temporal nature of existence effects for any

particular existent a certain *uniqueness*. In the following passages note the use of words like "specific" and "unique." Consider:

> When I say "This paper exists,"...the concepts, which are combined in specific relations in the concept of this paper, are also combined in a specific manner with the concept of existence. *That specific manner* is something immediately known, like red or two....All that exists is thus composed of concepts related to one another in specific manners, and likewise to the concept of existence (1899, pp. 180-181; emphasis added).

> [A]n existent is seen to be nothing but a concept or complex of concepts standing in a *unique* relation to the concept of existence (1899, p. 183; emphasis added).

When we consider that being an existent involves a relation among concepts to *specific* times, it becomes apparent that being an existent and being individuated from all other entities (i.e., all other Beings and existents) amounts to the very same thing. By the time all of the properties of an existent object have been enumerated, one has an account of what distinguishes the object from all other objects as well as an account of what makes the object an existent. This is obviously consistent with Leibniz Law that no two individuals can share all of their properties in common. By the time one has stated that a given kind of object occupies a certain location at a particular time, one has stated, in effect, the conditions which *actually* exclude other entities from that location at that time.

Any existent must possess a unique combination of properties. The uniqueness of an object (which would have to be specified through a complete enumeration of the object's properties and the relations among them) is itself a property, one which no other object has. What distinguishes things which are real but non-existent (like Goodness and Two) from things which are both real and existent is that the latter have a *unique* set of relational properties which cannot be predicated of any other particular object, whereas the former consists of one or more

properties which *can* be predicated of others. The point here is not merely that it is impossible for two existents to share all their properties in common (though that is true), rather that the possibility of them not sharing all their properties in common is precisely what *makes* them existents. This fact has not been fully appreciated by Moore scholars. Ryle (1970), for example, recognizes that the earmark of existence is temporality for Moore, but he fails to see how having temporal properties engenders uniqueness and thus particularity among the objects of awareness; and so he fails to recognize that *being particular* in precisely this way is just what makes an object existent.

To be aware of an existent horse, then, is to stand in relation to a unique concatenation of properties: no other object could have *this* combination of properties (including spatial location) at *this* particular time. *It* is unique in this respect. And this just is the solution to how a relation among concepts can serve the same function as instantiation.

Indeed the *identity* of an object over time would be accommodated by extending the time-particularization of the object as well as the enumeration of properties and the relations among them. It should be remembered that existent objects for Moore are always *facts*, so to form a judgment about a given horse which exists (or has existed) *over a period of time* is simply to stand in relation to a *more* complex fact than when one has, for example, an instantaneous awareness of a horse; the latter fact would simply be a constituent of the former.

To be aware of a non-existent object, like a unicorn, is to stand in relation to a set of properties which are indeed mind-independent, but which do not coalesce into a unique combination of properties: there are no particular unicorns. This does not mean that it is impossible for unicorns to exist, since their existence remains a possibility of the properties which *would* be their constituents; it *does* mean that

the relations requisite for making this possibility an actuality do not obtain. That, though, is the answer to the question concerning how there could *be* non-existent objects: such objects remain possibilities of real, mind-independent properties. Just as it belongs to the very nature of the property of redness that it be combinable with the property of squareness in particular red squares, so too the property of being a horse is, by its very nature, combinable with the property of having a horn. It is, therefore, to the combinatorial possibilities of concepts that one must turn in seeking an account of awarenesses of and judgments about non-existent objects.

Before we turn to the account of truth and falsehood engendered by this view, let us consider what recommends our attributing this interpretation to Moore. Certainly the passages cited above, in which Moore speaks of *specific relations*, *specific manners of being related*, *unique properties*, and so forth, provide little more than a thumbnail upon which to hang our interpretation. That by itself is hardly convincing, since these terms--particularly *unique*--arise within the context of what would become the central strain of Moore's thinking over the next five years. (Most obvious is the characterization of the property of truth as a unique property in *Principia Ethica*, where truth remains the self-same property regardless of the proposition to which it is ascribed.[23]) Nevertheless, I have three reasons for thinking this view, undeveloped as it is, is implicit within the early relational theory of judgment.

First, it *is* implied by the theory. The relation of concepts to times does indeed effect a unique concatenation of objects.

Second, when Moore's view is described in this manner, it accomplishes precisely what it is supposed to accomplish: it explains how a relation among concepts can play the same role as instantiation.

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[23] Yet consider the pluralism of goods introduced in (1903), pp. 147. Each of these is said to be uniquely good.

Finally, this interpretation of Moore's view comports well with his account of perception. Perception, you will recall, is nothing more than the cognition of an existential proposition (1899, p. 183). If the relation between a set of concepts and the concept of existence were not in each instance a *unique* relation (individuated by its terms, of which one is a *time*), we would expect Moore to characterize perception in a much more Russellian manner. That is, we would expect him to distinguish between various mental acts *within* the perceptual judgment in accordance with the different *kinds* of components within the proposition. For example, perceiving that a red rose exists would need to be regarded as consisting (at least) of an act of sensing (for which redness is an object) and (presumably) an act of intuiting (for which the unique logical relation is an object.) Yet Moore does not do this. He presents perception as a unified act *to which is made known* the specific manner in which objects are related (vis a vis) the proposition (1899, p. 180-181).

We may now ask whether the concept of truth implied by this interpretation fares any better than its alternative with respect to the semantic puzzles mentioned earlier. According to this interpretation, how must truth be conceived? The account of perception just given provides the key. It was said that perception, for Moore, is a unified act *to which is made known* the specific manner in which objects are related (vis a vis) the proposition (1899, p. 180-181). The italicized phrase bears consideration. Even though Moore says, "...existence is logically subordinated to truth; that truth cannot be defined by a reference to existence, but existence only by a reference to truth" (1899, p. 180), such a claim does not square with his account of perception. Clearly Moore wants existence to presuppose truth, because he holds that the class of true propositions is greater than the class of true empirical propositions. Hence, truth would have to be construed as a non-natural

property. But in that case, once again, we would expect perception to contain an intuitive component. But it does not. The full passage reads:

> When I say "This paper exists," I must require that this proposition is true. If it is not true, it is unimportant and I can have no interest in it. But if it is true, it means only that the concepts, which are combined in specific relations in the concept of this paper, are also combined in a specific manner with the concept of existence. That specific manner is something immediately known, like red or two (1899, pp. 180-181).

It is through perception that the truth of these propositions can be known; indeed, by means of perception they can be known *immediately* (1899, p. 181). We would not expect Moore to use this terminology if truth happened to be an unanalyzable property. In that case we would expect Moore to say that intuition (or some other mental act), in addition to perception, is needed to judge whether an existential proposition is true. Instead, he says that *perception* affords us such knowledge. So, like the pluralism of goods (of *Principia Ethica*) which are uniquely good (and which stand in contrast to the unique property of Goodness), we arrive at a pluralism of truths. That is to say, the truth of any empirical proposition will differ from the truth of another, because the specific relations that constitute the existence of the complex object or fact to which truth is ascribed will differ.

The truth of a proposition amounts to nothing more than the obtaining of the fact in question. What makes the judgment that this rose is red true is that a particular rose *is* red, and what makes a *particular* rose red is a unique concatenation of properties at a particular time and place. By this account, the truth of an empirical proposition is indeed to be analyzed in terms of the existence of a particular state of affairs, where *existence* (or the property of being existent) is to be analyzed as the obtaining of a unique set of relational properties. So,

while Moore explicitly denies that truth is a component of propositions (1899, p. 181), it is difficult to see how he could fail to be committed to just such a view.

As we noted earlier, the interpretation which runs in the direction of treating truth as a *component* of propositions fares much better than its alternative with respect to the metaphysical issue with which we opened. The earlier view was simply unable to explain how relations among concepts can play the same role as instantiation. Our second approach, in contrast, deals with that problem handily by collapsing the distinction between having existence and having an identity. In that way it explains what a particular is. The question before us now is whether it can also avoid the undesirable semantic puzzles with which the earlier view was frought.

Although the second approach contains considerable resilience in dealing with the metaphysical issue, its facility with the semantic issues is worse!

First of all, it fares no better in accounting for the possibility of false empirical propositions. If a proposition is false, then the unique relationship among the constituents will not obtain, and the *object* of consciousness will be something (or a set of things) that have Being but not existence. There will be no particular which is the object of consciousness, at least for those classes of empirical propositions with which Moore is mainly concerned (viz., existential propositions and propositions in which the grammatical subject fails to

refer).[24]

Will it fare any better when it comes to our capacity to truly ascribe false beliefs to others? I do not see how it could. If I assert that "S believes P, but P is false," I have still uttered a nonsensical construction. If P is "Unicorns exist," then I am asserting that no relation (*a fortiori* no unique relation) between unicorns and existence obtains at a given time. So, if my use of "believes" is transparent, I cannot assert of S any relation (of believing) to the proposition (or fact) that unicorns exist.

But things get worse. Consider what happens when someone believes that a proposition of the form ~P is true. Suppose, for example, that someone believes that horses (currently) do not exist.

The question concerns how the negation sign is to be interpreted. Does it represent something that is in some way the *object* of a mental act, or does it characterize the mental act itself? If the latter is the case, then "S believes ~P" is more perspicuously rendered "S disbelieves (or denies) P." This is problematic, however, since it represents S as standing in the disbelieving (or denying) relation *to the proposition P*. Since the verb ("believing" or "denying") is logically transparent for adherents of relational theories of judgment, if it is true that S believes P, it follows that P is true. But *that* just is what S denies. Here our problem is not the earlier one in which we were

[24] It seems to this writer that certain empirical propositions do escape the criticism presented above. Suppose I believe "This cow is blue" is true, and there happens to exist a cow of whom I falsely believe that it is blue. In this instance the grammatical subject of my sentence would manage to refer to an existent, but the predicate would refer to what merely has Being. I suspect that Moore did not consider these cases problematic precisely because he equated propositions with complex concepts. This in effect turns any proposition into a kind of definition, so that it does not matter whether the subject or predicate happens to fail to occur. To entertain the proposition *that* this cow is blue is indistinguishable, on Moore's view, from conceiving *of* some object that is this blue cow. The idea that a proposition is a name for a complex would eventually come under attack by Wittgenstein.

unable to truly ascribe a false belief to another person; rather, the problem is one of not being able to truly ascribe a disbelief. If the negation sign does not represent something on the object side of the believing relation, this problem is unavoidable.

In fact, Moore is committed to the objectivity of negation, since negativity, like existence and truth, is something of which we can conceive. So the question is how ~P is to be interpreted, when the negation sign designates something objective. Here everything hangs on whether ~P is true, and upon what makes it true when it is true. Assume, first, that ~P is false. In that case S stands in a believing relation to P. So, here we have a case, like that discussed earlier, where we cannot truly ascribe a false belief to S. Assume, though, that ~P is true. What makes it true? It cannot simply be made true by the fact that the set of constituent properties of P (e.g., the constituent properties of an existent horse) have Being but not existence, since presumably S's belief is about *more* than merely a set of objects. S is not merely asserting the Being of a set of properties. This construal of the object of S's belief does not do justice to the fact that negation sign refers to some component of S's belief; that is, it does not do justice to the *relation* among the members of the set to which Being but not existence is ascribed. If P is "Horses do not exist," then it consists in the properties typically assigned to horses standing in the negative relation of exclusion to one another.

Is this an adequate solution? The fact is that it remains problematic. According to our newer version of the relational theory of judgment, one of the constituent concepts of P is *the truth of P*. There is indeed something right about this. In a certain manner of speaking, when one believes ~P, one believes *something* about P. One affirms that the existence or truth of P does not occur. Needless to say it is this fact that the act of affirming ~P is really the act of denying or disbe-

lieving P. (This particular phenomenological feature of the act of affirming ~P is manifest in the propositional or sentential logic by the fact that the negation sign serves as an operator for propositions or sentences as a whole.) But once the truth of P is admitted to the object side of the believing relation, the cat is out of the bag. To believe ~P (when ~P is true) involves believing something about the truth of P. But even if one believes that the truth of P does not occur, the fact remains that the truth of P is among the *objects* of one's belief. How, then, can it not be so? Short of positing mental representations, how are we to avoid the inevitable conclusion that believing ~P requires the objectivity of P?[25] Hence, believing ~P entails believing (or standing in some relation to) P. Given the logical transparency of the verbs, this entails both ~P and P are true. The reasoning is as follows. Assume the following sentence is true:

(1) "S believes ~P"

Given the logical transparency of the verb (and consistent with our inability to truly ascribe a false belief), this entails the truth of:

(2) ~P

However, (1), in some manner or other presupposes a relation to (believing that..., countenancing the objectivity of...) P; hence the truth of:

(3) "S believes (etc.) P"

However, again given the logical transparency of the verb, this entails the truth of:

(4) P

The particular relational theory of truth which treats truth as a component of a fact thereby commits its adherents to the truth of:

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[25] It will not suffice to respond that S stands in *some* relation to P, only not one of believing or affirming. That strategy, as we saw before, still requires P as as a term of the relation.

(5) "P and ~P"[26]

The augmented relational theory of judgment can only resolve the metaphysical problem (of instantiation) at great cost. Surely the undesirable implications of *either* form of relational theory considered so far call for their complete and utter rejection.

When Wittgenstein arrived on the scene at Cambridge in 1911 Moore had already abandoned his earlier theory. Nevertheless it is precisely such a theory that we hear Wittgenstein expressing (according to Russell's letters to Ottoline Morrell). If Wittgenstein did in fact say that only *asserted* propositions exist, then we are given a picture of him embracing, not only the thesis that propositions are facts, but Moore's attempt to play down the *relevance* of false believe. As we noted earlier, for Moore, a false belief (if one *could* occur) would be something in which no one would take an interest. Why would one want to assert a false proposition? We saw that this is a ludicrous position, but it is easy to see why Wittgenstein might have found it compelling, given his particular personality. Wittgenstein exhibited complete and open honesty with all those with whom he was intimate. This led to the break-up of his friendship with Russell, and it laid great stress upon anyone with whom he was associated. Needless to say this does not justify the position that only asserted propositions exists; it only suggests a possible explanation of why he held it.

It is curious that Russell would express such dismay over Wittgenstein's views, since they are views which he himself had vehemently defended only ten years earlier in *The Principles of Mathematics* (1903). Russell's letters to Lady Ottoline speak, not of Wittgenstein's

[26] It will not suffice for the proponent of this view to respond by saying what is represented on line (5) has Being but not existence, since the conjunct P asserts the existence of something. Nor can the problem be avoided by saying that a use/mention fallacy is involved by treating P as being *asserted*; at least that is not an avenue available to the *proponent* of this theory, since even conceiving of P requires P's objectivity.

views as simply being false, but as being rather absurd. Yet in *The Principles of Mathematics* he acknowledges his own indebtedness to Moore. In the Preface to that work he says:

> On fundamental questions of philosophy, my position, in all its chief features, is derived from Mr. G. E. Moore. I have accepted from him the non-existential nature of propositions...and their independence of any knowing mind; also the pluralism which regards the world, both that of existents and that of entities, as composed of an infinite number of mutually independent entities, with relations which are ultimate, and not reducible to adjectives of their terms or of the whole which these compose (1903, p. xviii).

> *Being* is that which belongs to every conceivable term, to every possible object of thought--in short to everything that can possibly occur in any proposition, true or false, and to all such propositions themselves. Being belongs to whatever can be counted. If A be any term that can be counted as one, it is plain that A is something, and therefore that A is. "A is not" must always be either false or meaningless. For if A were nothing, it would not be said to be; "A is not" implies there is a term A whose being is denied, and hence that A is. Thus unless "A is not" be an empty sound, it must be false--whatever A may be, it certainly is. Numbers, the Homeric gods, relations, chimeras, and four-dimensional spaces all have being, for if they were not entities of a kind, we could make no propositions about them. Thus being is a general attribute of everything, and to mention anything is to show that it is (1903, p. 449; cited in Urmson, 1969, pp. 2-3).

> *Existence*...is the prerogative of some only amongst beings. To exist is to have a specific relation to existence... (1903, p. 449).

Although Russell would adopt his multiple object theory of judgment by 1911, in this earlier work he stands behind the objective and irreducible status of propositions. Furthermore, the relations which obtain among the constituents of propositions are not reducible to the constituents which are their terms. In other words, such relations as obtain among the constituents of propositions (i.e., among the concepts or properties which are their constituents) are themselves genuine properties. So, for example, if one is aware that red is different from blue,

then the *difference* of which one is aware is as much a genuine object of awareness as the redness and blueness which are its terms. Like Moore, Russell avoids any sort of nominalism with respect to properties or relations. The pluralism to which he refers is the consequence of there being infinitely many *kinds* of entities, due to the fact that each entity possesses a unique set of relations. Clearly Russell adopts a distinction between Being and existence, and he holds (as the last passage indicates) that a relation to the concept of existence is precisely what makes a mere being into an existent being.

What makes Russell's comments to Lady Ottoline all the more peculiar, from a historical standpoint, is that even in the Autumn of 1911 Russell had not traveled *very* far from his earlier views. In October of 1911 he had read his "On the Relations of Universals and Particulars" (reprinted in Russell, 1971) before the Aristotelian Society, and in January of 1912 his *The Problems of Philosophy* (Russell, 1912) was published. While it is true that by this time he had adopted his multiple-object theory of judgment, he still adhered to a relational theory of judgment. Although Russell's ontology at the time allows for acquaintance with particulars, he remains a realist concerning properties as well as relations (1912, p. 98). In fact, he even refers to properties or universals in a rather Moore-like fashion as concepts (1912, p. 52). There is nothing in Russell's view at the time which would lead him to reject Moore's claim that concepts are among the constituents of the world, even if he would reject the view that they are the *only* constituents of the world. Nevertheless, as we have already had the opportunity to note, by 1911 Russell does part company with Moore, and presumably Wittgenstein, over whether the objects of judgment are propositions.

If I may speculate, the source of Russell's dismay over Wittgenstein's remarks--and perhaps the source of his misunderstanding

of Wittgenstein's character--resides in the latter's *unwillingness to assert* that there is no rhinoceros (or hippopotamus, according to the later account) in the room. Wittgenstein was *refraining* from asserting the negative existential. We are seeing a tendency to which he would eventually give expression at *Tractatus*, 7:

> Whereof one cannot speak, thereof one must be silent (1922a, 7).

I believe this is the precursor of Wittgenstein's conception of nonsense. We have already noted the semantic puzzles faced by relational theories of judgment such as those held by Moore (or possibly held by Moore). We saw how the attempt to ascribe a false belief to another person results in something somewhat nonsensical: one cannot *say* "S believes P," if one also wants to *say* "P is false." Given the logical transparency of the verb, it would be illegitimate to insert "...P" after "S believes...". Negative existential judgments turn out to be problematic for a somewhat different reason: the attempt to assert ~P (or to deny P) leads invariably to paradox (i.e., to the claim that one cannot believe ~P without believing or countenancing the objectivity of P) and to contradiction (in that if "S believes P" is true, then "P and ~P" is true). Although the *Tractatus* does not regard contradictions as nonsensical, it does hold that they are senseless and, so, among the *unsayable*.

Wittgenstein's writings, from 1913 on, would always exhibit a distinction between what can and cannot be said. When we examine these early writings we find Wittgenstein wrestling with the problems inherent in the relational theories of judgment. We find him in search of a theory of judgment that would escape the semantic puzzles described. In particular, we find him engaged in the task of defining the nature of a proposition (*Satz*) such that believing a proposition does not entail believing its logical opposite as well. Wittgenstein's solution, as we

are about to see, is to countenance the bipolarity of the proposition. From the thesis concerning bipolarity there follows a number of crucial distinctions that lie at the heart of Tractarian semantics: structure and form, meaning and sense, the sayable and the unsayable (or what can be said and what can only be shown). Although Wittgenstein would fall under Russell's influence, that final distinction--between what can be said and what can only be shown--would always remain the focal point of their greatest philosophical differences.

3. The Bipolarity of the Proposition.

It does not matter which interpretation we are willing accept of Moore's theory--the one which construes truth as a simple unanalyzable property that is in no way a component of the proposition to which it is ascribed *or* the one which construes truth as capable of analysis and as a component within propositions--*both* views are incapable of accounting for the possibility of falsehood. Although Moore does provide a definition of falsehood in terms of the failure of a group of concepts to form a certain concatenation or conjunction, when the theory is thought through to its logical consequences it becomes evident that it leaves no room for falsehood at all. A proposition that is empirically false winds up being a proposition true within the realm of Being: the concepts that comprise the proposition stand in a certain logical relation to one another (presumably exclusion) in that very realm. It is *that* that is the object of S's (*supposedly* false) belief, but *it* is not in any way false. So, the concept of falsehood collapses.

As of 1913 Wittgenstein was prepared to war against this kind of view. Against Moore (and his own earlier view) Wittgenstein defends what we now call the Thesis of the Bipolarity of the Proposition. This is the thesis that all sentences (or propositional signs) having the potential to be used in a truth-stating manner must be capable of being possibly true *and* possibly false. In other words, all sentences capable

of *stating* or *saying or picturing* anything at all must be contingent.[27]

In the 1913 "Notes on Logic" we are told:

> ...a proposition has two *poles*, corresponding to the case of its truth and the case of its falsehood (1913b, pp. 98-99).

This point is expressed in the *Tractatus* most clearly on those occasions where Wittgenstein denies that significant propositions can ever be *a priori* true:

> In order to tell whether a picture is true or false we must compare it with reality (1922b, 2.223).
>
> It is impossible to tell from the picture alone whether it is true or false (1922b, 2.224).
>
> There are no pictures that are true *a priori* (1922b, 2.225).[28]

Whether a proposition is true depends on *how things are* within what Wittgenstein refers to above as *reality*. This immediately serves to distinguish the position under construction from that held by Moore. In a certain sense, for Moore, all propositions are *a priori* true. This follows from the fact that, for the particular relational theories of judgment that we considered, the concept of falsehood collapses. All propositions are true by virtue of being existing facts or facts within the realm of Being.[29] Against this, Wittgenstein urges that truth must always be contingent. This point is readily acknowledged by commentators. Von Wright, for example, mentions:

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[27] Throughout this dissertation I will refer to sentences or propositional signs that fulfill this function as *statements* or *propositions*. Wittgenstein's own preference was to use the latter term. Genuine propositions may be described as *stating* or *saying* something. Sentences that have this property may be called *significant*. Significant sentences are also *meaningful* and *sensical*. The nature of this last distinction will be explained in the text.

[28] This claim is also made at *Tractatus*, 4.05.

[29] I am here using the term *a priori* solely in an epistemological fashion. Nothing is meant to be implied concerning the ontological status of what is known a priori, i.e., *whether* it belongs to existence or merely to Being.

> In the *Tractatus*...every significant proposition has a characteristic bipolarity in relation to truth and falsehood. A significant proposition *can be* true and it *can be* false (cf. 2.21, 2.23, and 2.24). Whether it is the one or the other has to be determined on the basis of a comparison between the proposition and reality (2.223, 4.05). There are no significant propositions that are true (or false) *a priori* (1982b, p. 192).[30]

We must take care to distinguish bipolarity from bivalence. For a proposition to be bivalent, it must either be true or false. Consequently, tautologies and contradictions, which are true and false respectively under all occasions, are bivalent but lack bipolarity. According to Wittgenstein, tautologies and propositions *say* nothing; they are senseless (*sinnlos*), even though they are an important part of our language. We will postpone our discussion of them until after considering the *Grundgedanke* in Chapter Four, where their role as rules of inference (or as syntactic transformation rules) will be considered. Here it will suffice to make the reader aware of the fact that we are concerned with only a particular class of sentences within language, namely, those which are significant.

If significant sentences must exhibit bipolarity (we have yet to consider the argument *for* this claim), a major implication may immediately be noted: since one and the same *fact* cannot be both possibly true and possibly false (facts just being what they are), a proposition must be some sort of entity *other than* the fact which may be the *object* of the judgment in question. The bipolarity of the proposition is incompatible with the kind of direct realism advanced by Moore's relational theory of judgment. However, this does not mean that propositions are mental contents. As we shall see, one of the most interesting things about Wittgenstein's view is that it posits a representational *medium*, but this medium does not become, as it were, the immediate ob-

[30] Von Wright's first set of citations is mistaken, since there is no 2.23, and 2.24. Presumably he means 2.223 and 2.224.

ject of awareness and judgment. The medium turns out to be that *through which* sense and meaning is accomplished. Thus Wittgenstein's view retains an element of realism and avoids Idealism or phenomenalism. It thereby accomplishes Moore's and Russell's goal of countering Bradley's idealism without the *direct* realism of the relational theories. These are topics for a later chapter.[31]

What argument can be given in favor of bipolarity? Why should we not simply accept Moore's view, and bite the bullet with respect to its rotten implications? Wittgenstein's argument revolves around our very idea of what it is for something to be a *proposition* and around our idea of what it is to *understand* a proposition. Before proceeding to the argument it is worth noting that the argument is an *a priori* one. It's conclusion, like all of the statements that make up the *Tractatus* (and the body of philosophy in general, according to Wittgenstein) share in an *a priori* status. This, in effect, excludes them from significant or sensical discourse. This does not mean that they are not a part of language, just that they (like senseless tautologies and contradictions) have a different semantic status. In this case, the sentences in question are said to be *nonsensical*. This is not intended in any way to be perjorative. In Chapter Five we shall consider the nature of nonsense in great detail, and we will introduce a distinction between good nonsense and bad nonsense (or gibberish).

The argument for bipolarity may be called the Argument from the Priority of Understanding over Knowledge. Whatever else a proposition is, it is something with the potential to be *understood*. This fact is

[31] It is important to note that what has been asserted up to this point remains entirely neutral concerning the nature of propositions. It is an open question whether propositions are to be identified with Platonic, psychological, linguistic or quasi-linguistic entities, at least nothing along these lines is being presupposed with regards to the argument which follows. It also remains an open question whether falsehood can be accommodated by some other relational theory of judgment besides Moore's.

manifest in the language we use every day. We say we *understand* a sentence that has been uttered or a proposition that has been asserted or a statement that has been made. This is a trivial observation concerning the language we use. This is evidence to the effect that we conceive of propositions as the sorts of things that get understood (or fail to get understood).

Now what is it to *understand* a proposition? In order to understand a proposition it does not suffice simply to know what would be the case if the proposition were to be true. One must also be able to say under what conditions the proposition would be false. If Othello is able to ascertain that it is true that Desdemona loves Cassio under the appropriate conditions but unable to ascertain the falsehood of that proposition under other conditions (for example, when Desdemona's words and deeds speak to the contrary), then we would not say that Othello *understands* (or perhaps that he does not completely understand) the proposition in question. Understanding a proposition is, therefore, independent of, and in an important respect epistemologically prior to, knowledge of *whether* the proposition is true. Thus Wittgenstein urges against Moore, for whom it is only possible to assert true propositions:

> What corresponds in reality to a proposition depends on whether it is true or false. But we must be able to understand a proposition without knowing whether it is true or false.
>
> What we know when we understand a proposition is this: We know what is the case if the proposition is true, and what is the case if it is false. But we do not know (necessarily) whether it is true or false (1913b, p. 98).

Wittgenstein reiterates this point on numerous occasions:

> Every proposition is essentially true-false: to understand it, we must know both what is the case if it is true, and what must be the case if it is false (1913b, p. 98).
>
> Strictly speaking, it is incorrect to say: we understand the proposition P when we know that 'P is true' = P; for this would naturally always be the case if accidentally the

> propositions to right and left of the symbol '≡' were both true or both false (1913b, p. 104).

The point is also made in his letters to Russell during this time:

> ...What I mean to say is that we *only* then understand a proposition if we know *both* what would be the case if it was false *and* what if it was true (1912, p. 124).

The World War II *Notebooks* also take note of the fact that if something is to be called a proposition, then it must be the sort of thing of which we may ask: under what conditions is it true and under what conditions is it false?

> In connexion with any proposition it could really be asked: what does it come to for it to be true? What does it come to for it to be false?" (1914b, p. 59).

I believe the most significant of these passages is that from the "Notes on Logic" which asserts "it is incorrect to say: we understand the proposition P when we know that 'P is true' ≡ P" (1913b, p. 113). His point is that we do not ascribe understanding to someone *merely* because they utter P when (or even *when and only when*) P is true. That is not sufficient for ascribing understanding, because it may accidentally be the case that the two events, i.e., the uttering of P and P's being true, occur. A child, never having been exposed to snow, may mimic an adult's speech by uttering "Snow is white," but that is no indication that the child understands the sentence. *A fortiori*, a child who has grasped the concepts of *sentence* and *truth* who utters "'Snow is white' is true if and only if snow is white" has not provided evidence of understanding the sentence at all. What counts as evidence of someone's being able to understand a sentence is that the person in question uses the sentence in the appropriate way. At the very least this involves being able to assert that it is true under the appropriate conditions and being able to assert that it is false under the appropriate conditions. The point is that understanding involves a capacity to discriminate between those

conditions that make the sentence true and those conditions that make it false.[32] In other words one must be able to identify the truth conditions for the sentence in question.

Before we turn to the metaphysical issue concerning the *nature* of truth conditions, let me point out two things. First this argument is quite convincing and is subject to empirical verification. If we examine the conditions under which we ascribe an understanding of declarative sentences to others, we find matters pretty much as Wittgenstein says. We do not say that a person understands a sentence merely on the basis of that person being able to mimic or parrot the utterance of another person.[33] The reader is invited to look for counter-examples.

Second, this argument nowhere appears in the *Tractatus*. The *Tractatus* is a condensation of the many remarks that make up the pre-tractarian writings. Nevertheless, this argument is introduced to justify the thesis of bipolarity, and that thesis is introduced in the "Notes on Logic" and the "Notes Dictated to Moore" to *explain* the nature of Wittgenstein's special *ab*-notation. This *ab*-notation is retained in the *Tractatus* (at 6.1203), and it presupposes that bipolarity holds for

[32] This argument parallels epistemological arguments for treating *knowledge* as more than merely true belief. One may believe, for example, that a felon is guilty of a crime, and it may be true that the felon is guilty of the crime, but one's reason for believing so may be inadequate (for example, the felon's worst enemy tells you he is guilty). In this instance we would not *say* one possesses knowledge. This sort of argument has been offered by philosophers as diverse as Plato, Russell, Gettier, etc. It is interesting that at bottom such *a priori* arguments always depend on the purportedly *common* conception of knowledge. That raises the question of whether such *a priori* arguments are really nothing more than *ad populum* arguments. This question can be raised with regard to Wittgenstein's argument regarding *understanding* as well. I suppose Wittgenstein would have to respond: but this is the only language I understand; if you understand something else by the word "understanding," what is it? How is one to take this question seriously without accepting the very view Wittgenstein is advancing?

[33] An exception might be someone who has been 'coached' to respond a certain way on a game show. If we are tempted to ascribe understanding under those conditions, the person's actions (including her utterances) in a larger context serve a corrective function.

all significant sentences. Thus I find no problem whatsoever in attributing this view to the author of the *Tractatus*.

Our next concern is with the nature of truth conditions. It would be a mistake to interpret Wittgenstein as advancing the thesis, for example, that there are conditions that make a sentence true, but that there are *no* conditions that make it false. Such would be the case if the falsehood of a proposition were to consist *merely* in the non-obtaining of some fact or state of affairs that would make the proposition true. One might be *tempted* to misinterpret Wittgenstein this way by a cursory reading of *Tractatus* 4.25:

> If an elementary proposition is true, the state of affairs exists; if an elementary proposition is false, the state of affairs does not exist (1922b, 4.24).

We can ignore for the time being what Wittgenstein means by *elementary* proposition and *state of affairs*. The important thing is that one might take the second half of this passage to indicate that Wittgenstein adhered to a conception of falsehood *similar* to that advocated by Moore. It sounds as if falsehood consists in some fact's not occurring *and nothing else*. This interpretation involves 'reading into' the passage the "*and nothing else*" clause. Such a reading is unjustified however. The pre-tractarian writings make it abundantly clear that there must *be* something that makes a proposition false. Wittgenstein refers to these falsifying condition as *negative facts*. That falsifying conditions are said to be *negative*, turns out to be problematic given the *Grundgedanke* of the *Tractatus*; but that is a topic that will be taken up later. Here what is important is that Wittgenstein makes reference to *facts* (of some sort or another) that makes a sentence true. Thus, we read:

> There are positive and negative facts: if the proposition "this rose is not red" is true, then what it signifies is negative (1913b, p. 97).

> Positive and negative facts there are, but not *true* or *false* facts (1913b, p. 97).

This terminology is retained, as I noted above, in the *Tractatus*:

> The existence and non-existence of states of affairs is reality.
> (We also call the existence of states of affairs a positive fact, and their non-existence a negative fact (1922b, 2.06).

> An analogy to illustrate the concept of truth: imagine a black spot on white paper: you can describe the shape of the spot by saying, for each point on the sheet, whether it is black or white. To the fact that a point is black there corresponds a positive fact, and to the fact that a point is white, a negative fact. If I designate a point on the sheet...then this corresponds to the supposition that is put forward for judgement, etc. etc. (1922b, 4.063).

I do not believe he would have used the term "fact" in either the pre-tractarian writings or in the *Tractatus*, had he meant to identify the conditions under which an elementary proposition is false with the mere occurrence or existence of objects that are unrelated to one another. In fact, *Tractatus* 2.013 denies the possibility of conceiving of objects apart from their capacity for being related to other objects, i.e., as being in some relation or other. There he says,

> Each thing is, as it were, in a space of possible states of affairs. This space I can imagine empty, but I cannot imagine the thing without the space (1922b, 2.013).

> A spatial object must be situated in infinite space. (a spatial point is an argument-place.)
> A speck in the visual field, though it need not be red, must have some colour: it is, so to speak, surrounded by colour-space. Notes must have *some* pitch, objects of the sense *some* degree of hardness, and so on (1922b, 2.0131).

To say that a space can be imagined empty means that it is possible to conceive of a property or relation as uninstantiated. To say that the thing cannot be imagined without the space means that it is impossible to imagine an object apart from imagining it as having one or another property or as being involved in one or another relation. Nothing can be *said* about an object in isolation, even though, as *Tractatus* 2.0232 maintains, objects in themselves are propertyless and relationless (a

claim I take to be consistent with the thesis that whatever can be said of an object is contingent).

Nevertheless, we should consider is whether *Tractatus* 2.06 and 4.063 raise anew the possibility that a proposition's falsehood consists in the nonoccurrence of a fact or state of affairs rather than the occurrence of some *other* fact incompatible with that asserted in the proposition. After all, *Tractatus* 2.06 appears to *define* negative facts in precisely those terms. And 4.063 does not present the white field as another *object which* excludes and takes the place of the black object; rather it is presented as the *absence* of blackness.[34] There is, in fact, a very good reason for holding such a view, and it is an epistemological one. Often one may know *that* a proposition is false without knowing why it is false. Suppose I believe that I am about to buy a particular car on a dealer's lot. The dealer tells me that I will not be able to purchase it, and I come to believe that what the dealer says is true. In this case I know (or can presume) my former belief was false, but I do not know why it is false. The fact that this is an epistemological matter also plays into the hands of a *conceptual analysis* of the concept of falsehood, for one may use it as a basis for saying that *under these conditions one says one's belief is false* or *this is how we conceive of falsehood*.

I believe that if Wittgenstein thought (in writing the *Tractatus*) that he was committed to nothing more than the nonoccurrence of a state of affairs when it comes to explaining falsehood, that he was gravely mistaken. (I am fairly certain that he did not think this, as I shall explain momentarily.) The fact is that semantic theory, no less than nature, deplores a vacuum (and for pretty much the same reason). When we set aside the epistemological issue in order to consider the *metaphysical* basis for falsehood, we find that even if we do not know why a

[34] I am indebted to John Nolt for raising this criticism.

belief we happened to hold is false, we know *that* there is a reason it is false. I may not know why I am not to buy that car, but *there is something* about that car that precludes its being bought by me: it has already been sold, it requires repair before it is placed on the market, the owner of the dealership wants to use it for a while and sell it later, etc.[35] If my belief was false, I may not know which proposition it is that happens to be incompatible with what I believed is true (that is to say, I may not know what alternative fact ruled out the possibility of my buying that car), and, so, I speak of the negative fact that I am not going to buy the car or of the nonoccurrence of my buying the car. But surely that is just a manner of speaking! Assuming there is an object of my belief (a car), that object is in *some* state other than that of being owned by me at the time at which I thought I would own it. This is what *makes* my belief false. The mere nonoccurence of something--a nothing--cannot *make* anything. In regards to *Tractatus* 4.063, I would suggest we take the metaphor more literally than Wittgenstein perhaps may have intended (or more literally than Wittgenstein is *thought* to have intended), since obviously the background is not colorless; it is white, and being white excludes the possibility of *being* black. If Wittgenstein did not believe this in the *Tractatus*, it is fairly ludicrous that he did not, since it is indeed a fact that the actual physical world does not *contain* nonoccurrences of states of affair: the actual physical world is a plenum. I know of no counter-examples to this claim, except those which introduce suspicious phenomenal or phenomenological factors, and, so, provide for an alternative explanation. For

[35] The assumption here is that there is at least some object that *is* the object of my false belief. If my belief is about something non-existent the issue changes dramatically. We will see in a later chapter that in those cases where the object of belief is non-existent, Wittgenstein employs Russell's Theory of Descriptions to replace the non-referring terms with one or more referring terms. The argument above really pertains to atomic propositions where reference is guaranteed for all terms. That will be the topic of Chapter Three.

example, the fact that I discover that Pierre is not in the cafe can be explained in terms of my expectations; the physical description of the cafe from which Pierre is absent will not *contain* this negative fact. The sentence that makes apparent reference to a negative fact simply goes proxy for some other state description.[36]

As I said before, *if* Wittgenstein really did believe that the full story concerning falsehood is that it consists merely in the nonoccurrence of a state of affairs, then this would be fairly ludicrous. I do, in fact, believe that Wittgenstein can and must be interpreted in a more charitable light. It happens that in the writings authored prior to the *Tractatus,* as well as in those written immediately afterwards, he does explicitly assert the alternative view (of which I have only given a thumbnail sketch so far). We have already noted it somewhat in the passages already cited. For example, when Wittgenstein talks about the understanding of a proposition he talks about what *would* be the case if the proposition is false (1912, p. 124). More explicitly yet is his claim that:

> [a]t a pinch, one is tempted to interpret "not-P" as "everything else only not P" (1913b, p. 100).

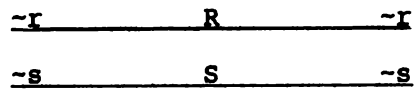
This remains for him only a temptation here, because he is still willing to countenance negative facts; but the point here is just that there is *something*--either a negative fact or something else--that would be the case in the event that a proposition is false.

The most convincing evidence comes from a 5 June 1915 entry in the *Notebooks*:

> ...There are certainly propositions that *allow* P as well as ~P but *none* that *assert* P as well as ~P.

~p	P	~p
~q	Q	~q

[36] A greater consideration will be given to phenomenological data, including this example from Sartre, in Chapter Four.



> The possibility of "P v Q" when "P" is given, is a possibility in a different dimension from the impossibility of "~P".
>
> "P v ~P" is A QUITE SPECIAL CASE of "P v Q" (1914b, p. 56).

The point here is that *if* a sentence of the form P v ~P could be used as an assertion, then it would have to be the case that ~P goes proxy for some other alternative sentence that is incompatible with P. In fact, P v ~P cannot be used to make an assertion due to its tautologous form. (It is actually a rule, and its actual form, according to Wittgenstein, is (P) P v ~P--which, in effect, makes it *about* possible utterances of sentences.)

After Wittgenstein wrote the *Tractatus* he met with members of the Vienna Circle to try to explain its key ideas. At that time he tells the members that he was confused in the *Tractatus* over what should be called the *sense* of a proposition. (As we shall shortly see, the issue of the nature of falsehood bears greatly upon how Wittgenstein's distinction between sense and meaning is to be understood.) In these discussions he attempts to articulate what he should have said in the *Tractatus*:

> I once wrote: 'A proposition is laid like a yardstick against reality. Only the outermost tips of the graduation marks touch the object to be measured.' I should now prefer to say: *a system of propositions* is laid like a yardstick against reality. What I mean by this is: when I lay a yardstick against a spatial object, I apply *all the graduation marks simultaneously*. It's not the individual graduation marks that are applied, it's the whole scale. If I know that the object reaches up to the tenth graduation mark, I also know immediately that it doesn't reach the eleventh, twelfth, etc. The assertions telling me the length of an object form a system, a system of propositions. It's such a whole system which is compared with reality, not a single proposition. If, for instance, such and such a point in the visual field is *blue*, I not only know that the

> point isn't green, isn't red, isn't yellow etc. I have simultaneously applied the whole colour scale. This is also the reason why a point can't have different colours simultaneously; why there is a syntactical rule against *fx* being true for more than one value of *x*. For if I apply a *system* of propositions to reality, that of itself already implies--as in the spatial case--that in every case only *one* state of affairs can obtain, never several.
>
> When I was working on my book I was still unaware of all this and thought then that every inference depended on the form of a tautology (1930, p. 317).

> Syntax prohibits a construction such as 'A is green and A is red' (one's first feeling is that it's almost as if this proposition had been done an injustice; as though it had been cheated of its rights as a proposition), but for 'A is green', the proposition 'A is red' is not, so to speak, *an other* proposition--and that strictly is what the syntax fixes--but another [aspect of the] form of the same proposition (1930, p. 86).

> You could say that the colors have an elementary affinity with one another (1930, p. 105).[37]

The references in these passages to *sense* shall be discussed below. Here what is important is that being of one color is precisely what excludes the possibility of being another color. Thus, the falsification conditions for "This is red" include the truth conditions for "This is green," "This is yellow," "This is blue," etc.

I think that view does not contradict anything of importance in the *Tractatus*. In fact, it is the only view compatible with some of the central claims of that work. One might, however, be tempted to point to *Tractatus* 2.061, which appears altogether incompatible with the views expressed here:

> States of affairs are independent of one another (1922b, 2.061).

Before we hastily interpret this to be incompatible with what I have argued above, it should be born in mind that a corollary of 2.061 is:

> ...Two elementary propositions cannot contradict one another (1930, p. 109).

[37] These passages provide the key to the so-called Color Exclusion Problem. We shall return to them in Chapter Five.

The latter passage, however, hails directly from the *Philosophical Remarks*. (In fact it occurs in close proximity to one of the passages cited above.) This should raise suspicions as to the meaning of *Tractatus* 2.061. How could it be compatible with both views? I suspect that the word "independent" in 2.061 is vague: whereas the truth and sense of two simultaneously assertable elementary propositional signs is independent of one another (e.g., "This is red" and "This is round"), there are elementary propositional signs that cannot be asserted simultaneously (e.g., "This is red" and "This is blue") due to their shared sense. I think, too, that the wrong thing is made of 2.061 and related passages (e.g., 1922b, 2.062 and 4.211), due to a failure to distinguish between a sentence or propositional sign (which may be described thoroughly in terms of its syntax) and a proposition or statement (which must be characterized in terms of its function). One of the principal theses of the Tractatus, I take it, is that concrete utterances and inscriptions (linguistic tokens that are actually used for stating what is true or false) are the basic semantic units of a language. One cannot *assert* both P and Q at the same time if they are incompatible and one refers to the falsification condition of the other. Yet both are signs, i.e., sentences that could be used separately:

> "Not-P" and "P" contradict each other, both cannot be true; but I can surely express both, *both pictures exist*. They are to be found side by side (1914b, p. 28).

I also said that the view I have expressed concerning falsification conditions is the only view compatible with certain key theses of the *Tractatus*. Here I will mention only one; others will become apparent in subsequent chapters. The idea that falsehood consists merely in the non-obtaining of a state of affairs is incompatible with the *Grundgedanke* of the *Tractatus*. Wittgenstein maintains that his most fundamental idea is that the logical constants (including the negation

sign) do not serve as referring terms, that there are no logical objects. What is the *non*occurrence of a state of affairs? It cannot consist in the non-existence of the object(s) to which a sentence does refer; remember that we are assuming there is some object about which one has a belief. Are we to say that some sort of negative relation holds among the constituents of the would-be state of affairs? One of the implications of Wittgenstein's *Grundgedanke* just is that there is no such thing as a *non*occurrence of a state of affairs. So, how *is* one to characterize the relation among the elements of the would-be state of affairs? I conclude that if Wittgenstein did not hold the view I am attributing to him, he should have. Perhaps there is some confusion about this point in the *Tractatus*; the Pre-Tractatus and the Post-Tractatus Wittgenstein knew better.

In the end, the view of falsehood that I am attributing to him produces a very charitable interpretation of the *Tractatus*; it certainly produces one according to which the arguments of the *Tractatus* take on greater force than is usually attributed to them. The arguments against Russell's Theory of Descriptions, for logical atomism and for the *Grundgedanke*, for example, can be seen in a much stronger light than is customary among commentators. Furthermore, the distinctions between sense and meaning, form and structure, and showing and saying can be brought into alignment in such a way as to produce a consistent and powerful set of core concepts for a semantic theory.

4. *Sinn and Bedeutung*.

We shall assume the view of falsehood defended above is correct. It carries with it a major implication: namely, that a distinction must be drawn between the sense (*Sinn*) and meaning (*Bedeutung*) of a propositional sign. The distinction comes to this. The *Sinn* of a propositional sign consists in its truth conditions (interpreted broadly so as to include its falsification conditions). The sense is thus a set of pos-

sible facts or states of affairs. The *Bedeutung* of a propositional sign consists in the member of this set that actually obtains, and which renders the propositional sign true or false. It is to note that both the *Sinn* and the *Bedeutung* are independent of what the speaker asserts. Consider the following passages:

> The *Bedeutung* of a proposition is the fact that corresponds to it, e.g., if our proposition be 'aRb', if it's true, the corresponding fact would be the fact aRb, if false, the fact ~aRb (1913b, p. 112).
>
> That a proposition has a relation (in [a] wide sense) to Reality, other than that of *Bedeutung*, is shown by the fact that you can understand it when you don't know its *Bedeutung*, i.e., don't know whether it is true or false. Let us express this by saying 'It has sense' (*Sinn*) (1913b, p. 112).
>
> Every proposition is essentially true-false: to understand it, we must know both what must be the case if it is true, and what must be the case if it is false. Thus a proposition has two *poles*, corresponding to the case of its truth and the case of its falsehood. We call this the *sense* of a proposition (1913b, p. 99).
>
> It is clear that we understand propositions without knowing whether they are true or false. But we can only know the *meaning* (*Bedeutung*) of a proposition when we know if it is true or false. What we understand is the *sense* (*Sinn*) of the proposition (1913b, p. 103).
>
> ...In analysing *Bedeutung*, you come upon *Sinn* as follows: We want to explain the relation of propositions to reality. The relation is as follows: Its simples have meaning = are names of simples; and its relations have a quite different relation to relations; and these two facts already establish a sort of correspondence between a proposition that contains these and only these, and reality: i.e., if all the simples of a proposition are known, we already know that we *CAN* describe reality by saying that it *behaves* in a certain way to the whole proposition. (This amounts to saying that we can *compare* reality with the proposition. In the case of two lines we can *compare* them with respect of their length without any convention: the comparison is automatic. But in our case the possibility of comparison depends upon the conventions by which we have given meanings to our simples (names and relations).
>
> It only remains to fix the method of comparison by saying *what* about our simples is to *say* what about reality. E.g.,

> suppose we take two lines of unequal length; and say that the fact that the shorter is of the length it is is to mean that the longer is of the length *it* is. We should then have established a convention as to the meaning of the shorter, of the sort we are now to give.
>
> From this it results that 'True' and 'False' are not accidental properties of a proposition, such that, when it has meaning, we can say it is also true or false: on the contrary, to have meaning *means* to be true or false: the being true or false actually constitutes the relation of the proposition to reality, which we mean by saying that it has meaning (*Sinn*) (1913b, pp. 112-113).

The first two passages are definitions of *Bedeutung* and *Sinn* respectively. The reference to *Reality* in the wide sense in the first bears noticing. Reality, for Wittgenstein, is more than any one actual fact, and it is more than the sum of all actual facts (past, present, and future). Rather, Reality is the set of *all possible worlds*. In the case of an individual propositional sign, the sign stands in relation to the complete set of truth conditions that comprises the sense of a proposition. This carries a significant implication concerning language and thought. It means that language and thought are to be regarded as always being *about* more than just actual states of affairs. The implication is not simply that what an individual says or thinks may or may not *happen* to be about actual states of affairs. Rather, it is that language and thought necessarily always involve more than a relation to what is actual, and this is so regardless of whether what one says is true or what one says is false. This means that when one believes or asserts the proposition P, even if P is true, the sense of P must contain the possibility of ~P. Or if one believes or asserts the proposition ~P, even if ~P is true, the sense of the proposition must contain the possibility of ~~P (or P). (This point will be articulated in greater detail when we consider the argument for the *Grundgedanke*.) When one's belief or assertion that P *is true*, then the positive fact that makes P true is the *Bedeutung* of the propositional sign. When

one's belief or assertion that P *is false*, then the negative fact (to use Wittgenstein's terminology) that makes P false (i.e., that makes the propositional sign P false) is the *Bedeutung* of the propositional sign.

The distinction between *Sinn* and *Bedeutung* enables us to speak of two very different ways in which propositions (or propositional signs) may be *about* something.[38] This is particularly important in the case of false propositions. When S judges (falsely) that P, we want to say that in one respect S's judgment is about *P*, since that is what S believes to be true; yet we want to say that in another respect S's judgment is about ~P (or some fact which is incompatible with P), since ~P is the *object* , i.e., the actual fact, *about which* S has a false opinion. For this reason Wittgenstein maintains: "[i]n my theory P has the same meaning as not-P" (1913b, p. 95). Although the distinction between the ways a proposition may be about something may not be felt to be as urgent in those cases where one's belief is true, nevertheless it is. On pain of committing ourselves to the absurd idea that we do not (ever) understand those with whom we disagree, such *must* be the case. If communication is to be possible (hence, if genuine disagreement is to be possible), then S's true belief that P must be related in some way to the falsehood of ~P. In other words, in some respect S's belief must be *about* ~P (viz., about its being false), and *that* does require a distinction between *Sinn* and *Bedeutung*.

Let it be perfectly clear that nothing said up to this point concerns what propositions must be like in order for them to exhibit bipolarity and for there to be a distinction between *Sinn* and *Bedeutung*. Wittgenstein's answer to the question of what propositions must be like

[38] These correspond to the distinction between showing and saying which we shall examine in greater detail in the next two chapters. Briefly, a propositional sign has both a structure and a form; the structure represents (says or depicts) what would be the case if it is true, whereas the form represents (shows) the sense of the proposition. Wittgenstein is not always consistent in his use of the terms *form* and *structure*, but this is the view that shines through.

would be the Picture Theory of the Proposition. What has been said thus far, however, is not neutral with respect to the nature of the *senses* of propositions. The sense of a proposition is a set of possible facts of which only one will be actual. The senses of *all* propositions, taken collectively, would be the set of all possible worlds. This is what Wittgenstein refers to as *reality* (1914a, p. 112), and it is to be distinguished from the actual world which is to be identified with the *Bedeutungen* of all propositions taken collectively. Thus the relation between the *Sinn* and *Bedeutung* of a proposition is to be understood as that of a set to one of its members.

We have been discussing the first two passages from "Notes on Logic" cited at the beginning of this section. The next two passages (1913b, pp. 99 and 103) draw out the relation between sense and understanding. What is understood is the sense of a proposition. These passages are significant because they tie the views that Wittgenstein held in 1913 to those (quoted from the *Philosophical Remarks* earlier) that he held in 1929. To understand a proposition and to understand its sense amounts to one and the same thing. In the later writings we see Wittgenstein maintaining that a proposition is more than a propositional sign in relation to the actual fact that makes it true or false. The whole *set* of sentences that describe the truth conditions (for a given sentence within that set) is more accurately regarded as representing the proposition. This leaves little doubt that the Wittgenstein of 1929 was retrieving some of his fundamental insights of 1913.

The final, lengthy, passage with which we began (1913b, pp. 112-113) begins the business of explaining what features a sentence must possess if it is to have both a sense and a meaning. The most striking thing is that a sentence's singular terms must refer. We noted this earlier. On those occasions when an apparent singular term does not refer (as when one speaks of the present King of France), the term in

question is to be subjected to an analysis similar to that contained in Russell's Theory of Descriptions. We shall see in Chapter Three the extent to which Wittgenstein accepts Russell's view.

The next crucial point that is made concerns the fact that these singular terms must be the subject of syntactic rules that permit them to enter into various constructions in such a way as to be able to assert various relations among their referents. (This provides, by the way, further abductive confirmation that Wittgenstein held the views I have attributed to him concerning sense and meaning.) This lays the groundwork for the distinction between structure and form. Any sentence that someone utters has an actual structure; it can be described syntactically. But other possible sentences may be constructed using the very same terms. The set of structures that results (which of course cannot be asserted at once) is the *form* of a propositional sign. This thesis is stated more fully in the *Tractatus:*

> Form is the possibility of structure (1922b, 2.033).
>
> The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.
>
> Let us call this connexion of its elements the structure of the picture, and let us call the possibility of this structure the pictorial form of the picture (1922b, 2.15).
>
> Pictorial form is the possibility that things are related to one another in the same way as the elements of the picture (1922b, 2.151).

Form and structure will be taken up in greater detail in the next chapter. What I want to emphasize here is simply the fact that rules for the construction of particular structures play an essential role in representation. At the end of the next chapter we shall see that this entails the falsehood of semantic Platonism.

Let me close this section by briefly considering a misinterpretation of the distinction between meaning and sense. The distinction is

easily misunderstood; indeed it is easily ignored. In one recent work Carruthers (1989) appears unwilling to acknowledge any significant distinction at all. He argues that the *Sinn* of a proposition (or of a propositional sign) is a *type* of *Bedeutung*. This does not mean, as one might think, that he takes the sense of a proposition to be an actual, mind-independent fact; on the contrary, he holds that the *Bedeutung* of a proposition (or even of a name) need not involve any existent object or fact at all. So, when he collapses the distinction, he collapses it *into* what we have been calling "sense". He then reserves the word "sense" to talk about the *Bedeutung* of sentences. We shall digress long enough to unravel this confusion, since if Carruthers is correct, then our own interpretation of the distinction would be radically mistaken.

Carruthers correctly maintains that the sense of a propositional sign is that which is understood and communicated by speakers of a language. He also correctly holds that the sense of a sign is not to be limited to the fact that determines its truth value. He is incorrect, however, in believing that its *Bedeutung* need not exist in the actual world as well. His argument is based on the fact that Wittgenstein speaks of various items besides propositional signs as having a *Bedeutung*, some of which can lay no claim to being about anything in the world. He appears to suggest that scholars have reached this misunderstanding by placing too much emphasis on *Tractatus* 3.203 where Wittgenstein tells us that a name *bedeutet* (means) some object.[39] Carruthers objects to reading "*bedeutet*" here as "refers to" and thus to regarding the *Bedeutung* of a name as its referent. That would indeed entail that the *Bedeutung* of any propositional sign consists at least in part in some existent object, for while a name can only refer within the context of such a sign (for example, within the context of a sentence),

[39] The Pears and McGuinness translation of the noun "*Bedeutung*" as "meaning" and of the verb "*bedeuten*" as "to mean" can be misleading, since the nouns "meaning" and "sense" are often synonymous in English.

each propositional sign must contain names. Against this view Carruthers cites *Tractatus* 5.02 where Wittgenstein discusses Frege's failure to distinguish between the argument of a function and an affix of a name. In Carruthers' own words:

> [B]oth the argument 'P' in '~P', and the affix 'c' in '$+_c$', enable us to recognize the *Bedeutungen* of '~P' and '$+_c$' respectively. Yet it is extremely doubtful, to say the least, whether Wittgenstein would regard either a sentence or a plus sign as having reference (1989, p. 26).

Obviously, though, it does not follow from the fact that these items help us *recognize* the *Bedeutung* of the respective propositional signs to which they belong, that they themselves have a *Bedeutung*. Indeed the passage cited by Carruthers nowhere attributes *Bedeutung* to these items but rather to the propositional signs containing them.

Carruthers is on a more solid footing, however, in citing *Tractatus* 5.451 where Wittgenstein apparently refers to the *Bedeutung* of the negation sign, since the logical constants clearly play no referential role according to Wittgenstein (1989, pp. 26-27). In this passage Wittgenstein is concerned with Russell and Whitehead's (1910) practice of introducing logical primitives in a piecemeal fashion, such that the negation sign as it is used in the propositional logic might not *have the same meaning* as it has when used in the predicate logic. This does not appear to be consistent with the idea that the *Bedeutung* of some item is an existent object or fact. Nevertheless, the rest of the text makes it clear that he is really concerned with whether one and the same proposition could be expressed with different propositional signs, so that, for example, ~(**E**x) ~Fx and (x) Fx may be *about* (*bedeutet*) the same fact (cf. 1922b, 5.4-5.441). So again, even though his wording is misleading, Wittgenstein's principal concern seems to be the *Bedeutungen* of sentences. In fact *Tractatus* 5.451 does hail, almost verbatim, from the "Notes on Logic" (1913, p. 105). At that time the

non-referential character of the logical constants was as yet unclear to him. When the passage was incorporated into the *Tractatus* it was probably a mere oversight on Wittgenstein's part that prevented him from not changing the wording in light of his new ideas.

Carruthers' final counter-example stems from an analysis of *Tractatus* 6.232 where Wittgenstein asserts, contra Frege, that in a logically perspicuous notation the equality sign of mathematics would be rendered superfluous, because it would be apparent from the notation alone that the propositions on either side of the equality sign *share the same meaning* (*Bedeutung*). But, as Carruthers points out, "it is surely part of the import of 6.02-6.03 and 6.2-6.241 that Frege is wrong to believe numbers to be objects, and...that numerals...refer to them" (1989, p. 27).

According to the *Tractatus*, mathematical equations, like the tautologies of logic, are senseless (*sinnlos*) and, therefore, they are to be regarded as pseudo-propositions incapable even of expressing a thought (1922b, 6.2-6.21).[40] When Wittgenstein does speak of "mathematical propositions" (as in 6.21, 6.211, and 6.2321), it must always be remembered that he is speaking the language of his principal adversary in the philosophy of mathematics, Frege. The same holds true when he speaks of the sides of an equation as having meaning (*Bedeutung*), and indeed *Tractatus* 6.232, which Carruthers cites, is explicitly about Frege's doctrines. But in this and the surrounding passages Wittgenstein is interested in discovering the source of the confusion that leads persons to speak (erroneously) of "the meanings of mathematical propositions". His answer is to be found at 6.211 in a passage reminiscent of his later philosophy in more than one way:

> Indeed in real life a mathematical proposition is never

[40] The distinction between what is senseless and what is nonsensical will receive greater treatment in Chapter IV. In a word, what is senseless serves as a prototype (*Urbild*) for what has sense, whereas what is nonsensical lacks even this potential.

> what we want. Rather, we make use of mathematical propositions *only* in inferences from propositions that do not belong to mathematics to others that likewise do not belong to mathematics. (In philosophy the question, 'What do we actually use this word or proposition for?' repeatedly leads to valuable insights)(1922b, 6.211).[41]

Mathematical equations, like logical tautologies, *function* as inferential or transformational rules for pairs of sentences that possess the forms of the respective sides of the equation. Equations are neither true nor false, rather they simply "mark the point of view from which I consider...two expressions" (1922b, 6.2323). The confusion concerning their meaningfulness arises from the fact that they are applied to propositions that *are* genuinely meaningful. Our talk of *their* meaningfulness is, as it were, borrowed from our talk of the meaningfulness of the sentences of which they are the forms. Unlike the propositions to which they are applied, however, they are *mere* forms devoid of empirical content. Thus they lack both *Bedeutung* and *Sinn*. So it is a bit surprising to find Carruthers attributing to Wittgenstein the view that these expressions have any kind of *Bedeutung*, regardless of whether *Bedeutung* is to be understood as an existent object or fact or simply as the sense (*Sinn*) of a sentence, as Carruthers thinks.

We may conclude that Carruthers' attempt to collapse the *Sinn/Bedeutung* distinction does not enjoy the kind of textual support that he claims. Nevertheless he is prepared to argue that his view of *Bedeutung* as something other than an actual object or fact is the only view compatible with the *Tractarian* account of the semantics of names. Here let it be noted that for Carruthers the *Bedeutung* of an expression

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[41] The passage cited is reminiscent of Wittgenstein's later philosophy in a couple of ways. The emphasis placed upon examining the function of an expression would later become part of the methodology of the *Philosophical Investigations*. That mathematical equations function as nothing more than transformational or inferential rules is consonant with the content of the *Remarks on the Philosophy of Mathematics* where mathematical equations are described as grammatical propositions belonging to our frame of reference.

(whether the expression is a name, a sentence, a logical connective, etc.) is to be identified with its semantic content or its contribution to the semantic content of an expression of which it is a constituent. The semantic content of an expression is *whatever it is* that speakers of a language share in common in virtue of which they understand the expression in question (1989, pp. 28-29). Semantic content is that which is communicated by speakers of a language. As Carruthers sees matters, the dispute is over whether only names may be said to have *Bedeutung* (1989, p. 23). Obviously if this is taken merely as a question concerning whether anything besides names contribute to the sense of sentences, there can be no dispute (in that case this would appear almost to be a verbal dispute), since for Wittgenstein a sentence cannot be said to be composed only of names (the exception in the *Tractatus* being elementary propositions), nor can it be considered a kind of name itself. But this is not merely a verbal dispute. What is at stake is whether the *Tractatus* is to be interpreted in a quasi-Fregean light (as Carruthers would have it) where the senses of propositions are to be construed as representations of possible facts in the world, or whether it should be interpreted in a more Russellian and Moorean light (as I would have it) where senses do not stop short of being actual possibilities within the world. When Carruthers says that only his reading of *Bedeutung* can accommodate Wittgenstein's views concerning the semantics of names, he has in mind the fact that sentences containing singular expressions that do not refer will, on Wittgenstein's view, be nonsensical rather than false. For example, an atomic proposition containing a name for which there is no simple object as referent will be said, not merely to lack any sense, but to lack even the potential for sense and, therefore, meaning. This suggests to Carruthers that to speak of a sub-sentential expression as having a "*Bedeutung*" is to speak of nothing more than its having some role to play in the composition of a sentence's sense. But

surely what this suggests, especially in the absence of adequate counter-examples, is that the *referent* of the name (which must be an existent object) *is* what contributes to the sense of the sentence as a whole. So, what sense is there to be made out of Carruther's claim that the *Bedeutung* of a expression need not be some actual entity in the world?

Aside from Carruther's difficulties, one further problem must be entertained. In a variety of places, Wittgenstein speaks of P and ~P as having the same meaning but *opposite senses* (1913b, p. 93; 1922b, 4.0621), and he mentions that the introduction of the negation sign *reverses* the sense of a proposition 1922b, 5.2341). My thoughts on this are that a propositional sign is not neutral with respect to the set of possible facts that comprise its sense. In lieu of its structure, it asserts that one of the members of the set obtains. To speak of the negation sign as reversing the sense of a proposition means just that ~P asserts the disjunction of P's falsification conditions. The set of disjuncts refers to the members of P's sense that are the complement to that member asserted to obtain. Reversing the sense means affirming one or more members of the complement. To speak of *opposite* senses is not to speak of *different* senses; again, the opposites are the complements within a set. Wittgenstein could have expressed this point better.

My interpretation of these difficult passages is not uncommon among Wittgenstein scholars. For all our differences on other topics, McDonough (1986) views the matter in a similar light. McDonough's view of sense differs from my own in that he accepts the idea that sense is to be identified with *a* possible fact. This he refers to as the sense_1 of a proposition. To account for the passages in which Wittgenstein speaks of negation as changing the direction of the sense, he countenances what he refers to as a proposition's sense_2. This he defines (1986, p. 28) as an *attitude toward* the sense_1. Thus he resolves the

problem by saying P and ~P have the same sense$_1$'s but different sense-$_2$'s. This comes close to what I have in mind in saying that the structure of a proposition is not neutral with regard to the members of the set of truth conditions. The structure that is actually used expresses the speaker's preference to assert *this* rather than *that*.

In closing, let me just point out that what has been introduced in this chapter really constitutes little more than a thumbnail sketch of of semantic theory to emerge in full in the *Tractatus*. Most of what we have examined stems from Wittgenstein's desire to extricate himself from the problems associated with Moore's relational theory(-ies) of judgment, while yet retaining an element of realism. This he has done. To proceed now to the particular way in which the distinction between showing and saying is developed, we must turn to the influences exerted upon him by Russell and Frege. The distinction between showing and saying receives its greatest impetus from his desire to resolve the logico-linguistic difficulties confronting Frege in the face of Russell's Paradox. The focus of his attention is Russell's theory of types that was introduced to resolve the logical and semantic paradoxes that arise when language is used self-referentially. However, whereas Russell's Theory of Types seeks to secure the possibility of making assertions about language without becoming entangled in the paradoxes, Wittgenstein's distinction between showing and saying is an attempt to demonstrate that it is not only impossible but *unnecessary* to make assertions about language.[42]

[42] Upon the completion of this dissertation I became aware of a serious flaw with the conception *Sinn* presented in this chapter. The reader is asked to turn to Appendix I for a full account of the objection and its significance.

CHAPTER II

PRE-TRACTARIAN SEMANTICS (II):

THE INITIAL DISTINCTION BETWEEN SHOWING AND SAYING

1. Russell's Paradox.

Wittgenstein's distinction between showing and saying emerges as an alternative to Russell's theory of types. The theory of types is offered as a remedy to Russell's Class Paradox and the Liar Paradox. Russell's Paradox is engendered by the fairly commonplace belief that a class may consist of any kind of combination of objects whatsoever. Members of a class need not belong to the same genus: {dogs, cats}. Nor do they need to be of the same level of abstraction: {Fido, cats}. Some classes can be members of themselves; others cannot. For example, the class consisting of all objects that are not cats is not a cat, and so it is a member of itself. On the other hand, the class that consists of all cats is not a cat, and so it is not a member of itself. What shall we say, though, about the class of all classes that are not members of themselves? Is it a member of itself, or not? Suppose it is a member of itself. In that case it would have to satisfy the condition of class membership, namely, that it not be a member of itself. So, on the supposition that it is a member of itself, it is not a member of itself. This in itself need not be construed as paradoxical, as one might simply conclude, *consequentia mirabilis*, that the class in question is not a member of itself.[43] Suppose, however, that the class in question is not a member of itself. That would be sufficient for belonging to the class. Hence, if it is not a member of itself, then it is a member of itself. Again we might infer, *consequentia mirabilis*, that it is a member of itself. But this conclusion conjoined to the earlier one gen-

[43] This point parallels a similar one made by Sainsbury (1989, p. 115) concerning the Liar Paradox. We need not proceed all the way to the contradiction for the situation to be unacceptable.

erates the contradiction that it both is and is not a member of itself.

Consider next the Liar Paradox. The Liar may occur in a variety of forms. The simplest version arises out of a consideration of a claim such as "This sentence is false" that involves reference to itself. Is this claim true, or false? Suppose it is true. In that case, *what* it asserts to hold true will be the case, but what it asserts is that *it* is false. So if it is true, then it is false. On the other hand, assume the claim in question is false. In that case, what it asserts as true will *not* be the case, but again, what it asserts is that it is false. So if it is false, then it is not false. Once again, a pair of inferences analogous to those in the class paradox enables us to derive the two conjuncts of a contradiction. Consequently, the claim with which we began is both false and not false.

Although it may be argued that the two paradoxes are essentially different in nature since the former employs the logical concept of a set, and the latter the semantic concept of truth (cf. Ramsey, 1925, pp. 171-172), there are marked similarities between them; so much so that Russell regards them as springing from a common source.[44] The Class Paradox, it will be noted, can be reconstrued as a paradox about properties. We may speak of the *conditions* of class membership as the properties an object must possess in order to belong to that class. Thus being a cat is a necessary and sufficient condition for being a member of the class which consists of all and only cats. Earlier it was said that classes may or may not be members of themselves. Similarly, properties may or may not be ascribed to themselves. For example, the

[44] The discussion which follows is based primarily upon a reading of Russell (1910) and certain sections of Russell and Whitehead (1910). The terminology and the examples used by Wittgenstein in his 1913 "Notes on Logic" indicate an acquaintance with both. The account given of the Theory of Types, particularly its Vicious Circle Principle, borrows heavily from Sainsbury (1989) and Chihara (1973).

property of being a cat is not itself *a* cat.[45] That is to say, being a cat is not ascribable to the property of being a cat. On the other hand, the property of being a non-cat (that is, of being anything that is not a cat) is itself not a cat. Thus being something other than a cat can be ascribed to the property of not being a cat. The Class Paradox can be restated as a paradox about properties, then, by substituting "the class of all classes that are not members of themselves" with "the property of being a property that cannot be ascribed to itself", and by asking whether *this* property can, or cannot, be ascribed to itself. In turn, the Liar Paradox appears to be analogous to (if not a version of) this paradox about properties. In order for this to be seen, we will have to modify the original Liar so as to use the predicate "is not true" in place of "is false". This is not problematic, since neither Russell nor Wittgenstein would have regarded sentences (propositional signs) as capable of being neither true nor false. (Indeed we could have begun with a consideration of "This sentence is not true" which would led us to the contradiction both that it is the case that it is not true and that it is not the case that it is not true.) Next, it should be born in mind that sentences like "This sentence is false" and "This sentence is not true" attribute to themselves certain properties; in the latter case it is the property of not being true (or, better, of not being true *of* something). While an object-language sentence like "This paper is white", if true, is true *of* an object to which it attributes the properties of being white and being made of paper, so the Liar, *if true*, is true *of* some object to which it ascribes the property of not being true, and that object happens to be itself. So if the Liar possesses the property of being true (or belongs to the class of objects that are true), then it must possess the property of

[45] Recall our earlier difficulty with Moore's apparent commitment to the the property (or concept of) physicalness itself being physical. The statement made above might not be acceptable to a bundle theorist.

being not true (or it must belong to the class of objects that are not true). So, it can possess the property of being not true, only if it possesses the property of being true (cf. Sainsbury, 1988, p. 133).

Notice that both the Class Paradox and the Liar Paradox involve a reflexive element: the former involves self-inclusion or self-membership within a class, whereas the latter involves self-reference. Their assimilation to a property paradox demonstrates that the sentence which in each case gives rise to the paradox involves self-predication in some manner or other. Here is where Russell locates the source of the paradoxes. In each case the sentence that gives rise to the paradox violates what he refers to as the Vicious Circle Principle. Russell formulates the principle in a variety of ways (cf. Russell, (1908, pp. 63 and 75), and (1910, pp. 215 and 219); Russell and Whitehead, (1910, pp. 31 and 37)), but its guiding idea is that no finite set of objects can contain members that would be defined in terms of the set itself.[46] The matter can be put formally as follows. Let Fx be a propositional function that takes Fa, Fb, Fc,..., etc. as values, so that (x)Fx implies Fa & Fb & Fc..., etc. According to Russell, the expression Fx *ambiguously denotes* **Fa**, **Fb**, **Fc**,..., etc (1910, p. 217). That is to say, the function denotes *some* one of {**a**, **b**, **c**,..., etc.} as being **F**, but not any definite one. The Vicious Circle Principle prohibits a function from being its own argument; consequently Fx could not have as one of its arguments $\hat{F}x$, which supposedly denotes the function itself (however, as a later discussion shall make clear, this is not unproblematic, and it would be more appropriate to say that it denotes the *fact* that **x** is **F**,

[46] This way of expressing the matter is closest to Russell (1910, p. 215).

if it denotes anything at all).[47] Russell's argument stems from a consideration of the fact that while Fx is indefinite in terms of its denotation, it is nevertheless a *determinate* function (1910, p. 219) with a *well-defined meaning* (1910, p. 217). To say that Fx is a determinate function is to say, for some set of objects {**a**, **b**, **c**,..., etc.}, that **Fa** or **Fb** or **Fc**..., etc. In order for a function to be determinate, its set of possible values {Fa, Fb, Fc,..., etc.} must be determinate. This does not mean that in order to understand a function it is necessary to know each of its values. It is possible to understand the function "x is human" (or the sentence "Someone is human") without knowing that "Socrates is human" is one of its values (1910, p. 218). If such were not the case, it would be impossible to understand a function at all, since its values are potentially infinite in number. What it does mean, however, is that the arguments for Fx must fall determinately inside the range of its variable, so that each of the values of Fx (whether true or false) will be, as Russell says, *definite* or *well-defined* (1910, pp. 217-218). What Russell has in mind is that the values for Fx, i.e., the members of the set consisting of {Fa, Fb, Fc,..., etc.}, must be determinately true or false, if Fx (and sentences like "Someone is a human") are to be considered meaningful at all, that is to say, if they are to be considered capable of being true *of*, or false *of*, anything whatsoever.

This requirement can only be met, Russell supposes, by observing a hierarchy of types or orders and by restricting quantification to the

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[47] Russell and Wittgenstein place the carat directly over the variable; here I place it immediately to the variable's left. The carat might be described as an abstraction operator somewhat similar to the more contemporary Lamda-operator inasmuch as it provides a way to definitely denote that which denotes indefinitely. Russell describes the symbol, F$\hat{}$x, as a *function*; this is misleading because the symbol is actually the *name* of a function, as is evident from the fact that it serves as argument for Fx. For Wittgenstein, it appararently designates a fact; specifically, it designates the fact of which some propositional sign consists upon substitution of the variable.

order below that of the predicate. The lowest order would consist of names of objects. These and only these would serve as the arguments for first-order predicates. Second-order predicates may then take the names of first-order predicates as arguments. Third-order predicates may take the names of second-order predicates as arguments, etc. A function is termed *predicative* if it belongs to the order immediately above that of its argument (1910, 237). The principal violations of the Vicious Circle Principle occur when the argument is of an order equal to or higher than the function. For example, the subject of "The color green is square" is the name of a first-order predicate and is at the same level in the hierarchy of types as the sentence's predicate. The sentence "The property of being an uninstantiated property is blue" would likewise violate the rule, since its subject belongs (at least) to the third order, whereas its predicate belongs to the first: we may say that the property of being an uninstantiated property is many things, but we cannot say it is blue. To violate the Vicious Circle Principle is to fail to adhere to the Theory of Types in a very specific way. It was mentioned that this principle is violated when a function takes itself as argument. Less formally, the Vicious Circle Principle is violated when the subject of a sentence, not only operates at the same level as the predicate, but refers to the very property predicated by the predicate. The sorts of claims generated by the ontological commitments of Moore's theory of judgment (claims like "The physicalness of a unicorn is a physical thing") serve as prime examples. Moore, we have seen, affords an objective status to all properties, including, for example, the property of being a unicorn. Since to conceive of a unicorn is to conceive of a physical thing, the physicalness of a unicorn must be afforded an objective status. As we saw, this gave rise to the problem of how there could be physicalness external to the mind that is not itself physical, and it launched Moore on an attempt to extricate him-

self from such claims as that the physicalness of a unicorn is itself a physical thing. By forcing a distinction between a property and the object of which it is predicated, the Theory of Types avoids this problem. While the Theory of Types would permit the ascription of physicalness to a particular thing, it would deem as meaningless the ascription of physicalness to the *property* physicalness itself. Here the vicious circle is generated: to attribute physicalness to physicalness is not to provide information *about* anything at all. When subject and predicate (function and argument) are one and the same there is, at it were, no escape from the circle of language.

The form of argument leading to the Class Paradox violates the Vicious Circle Principle precisely at that point at which it defines membership in the problematic class in terms of its not being a member of itself. Let **C** be the class of all classes that are not members of themselves. The question is whether **C** can be a member of itself. Since nothing can be a member of **C** unless it is a class that is not a member of itself, class membership in **C** may be defined thus: **x** is a member of **C** if and only if **x** is not a member of **x**. In consideration of whether **C** is a member of itself, we are given the paradoxical result that **C** is a member of **C** if and only if **C** is not a member of itself. This paradox can be avoided, according to Russell, if we do not permit Cx (which corresponds to the function "x is a member of the class of all classes that are not members of themselves") to have as one of its values $C(\hat{C}x)$. If we do not regard $C(\hat{C}x)$ as a possible value of the function, then no sense can be attached to the supposition that **C** is a member of itself or to its denial.

The reasoning that leads to the Liar Paradox violates the Vicious Circle Principle in its assumption that it makes sense for a sentence to ascribe falsehood or the property of not being true to *itself*. Let s be

the sentence "This sentence is not true." When we consider whether s is true, we are led to the paradoxical claim that s is true if and only if s is not true. Here let Fx be the function corresponding to "x is not true". The paradox arises as a result of regarding Fs as a legitimate construction; whereas, in fact, it is illegitimate insofar as s names a value of that very function. That is to say, it presupposes F(Fx) which says, in effect, that "the function 'is not true' is not true" (or in Wittgenstein's terminology "something that is not true is not true"). But "no function," says Russell, "can have among its values anything which *presupposes* the function" (1910, p. 217, italics added). Just as classification and predication are essentially classification and predication *of* something other than the very act (or class or predicate) which does the classifying or predicating, so too the ascription of truth or falsehood essentially involves its ascription to something other than very act (or sentence token) that does the ascribing. The vicious circle can only be avoided by observing a semantic hierarchy comparable to the hierarchy of classes. Russell, to be sure, believes that the tendency to infringe upon the Vicious Circle Principle is, in this instance, largely due to the systematic ambiguity of the concepts of truth and falsehood as expressed in ordinary language (1910, p. 222), and he seeks to remedy the situation, in a manner similar to Tarski (1937; 1969), by countenancing *orders* of truth and falsehood and by restricting the sorts of entities to which they may be ascribed. Accordingly, sentences like "Socrates is a philosopher," "Desdemona loves Cassio," etc. comprise an object language that, when true, are true of certain facts. Such sentences possess what Russell refers to as *first truth* (1910, p. 222). Sentences that are used to assert the truth or falsehood of these sentences, like "The sentence 'Socrates is a philosopher' is true" or The sentence "'Desdemona loves Cassio' is false" comprise the first level of a meta-language, and have what

Russell calls *second truth*."[48] A second level of meta-language would consist of sentences--such as "The sentence 'The sentence *Socrates is a philosopher* is true' is true"--that ascribe some semantic property (in this case the property of *second truth*) to a sentence of the first level of meta-language. Its own truth will be truth of the third order. Each of these sentences may be symbolized used the appropriate level of predicative function. By allowing T_1x, T_2x, T_3x,..., T_nx to be predicative functions of an ascending order, and p to be the object language sentence "Socrates is a philosopher," we may symbolize the sentence described above as $T_2(T_1p)$. Problems such as those associated with the Liar Paradox result from attempts to to ascribe a semantic property to an argument that does not belong to the order immediately below that of the function. The sentences "This sentence is false" and "This sentence is not true" (which we will here regard as synonymous) ascribe to themselves a second-order semantic property, viz., *second falsehood*."[49] Although the latter was rendered earlier as Fs, it may be more perspicuously rendered as F_2s. Accordingly, the exact way in which the Vicious Circle Principle is violated can now be seen. Since s refers to something (namely itself) that ascribes second falsehood, F_2s presupposes $F_2(F_2x)$. However, in order to be meaningful at all, F_2s would have to be a value of $F_2(F_1x)$. Only thus, with the variable ranging over object language sentences, is it possible to escape the circle of language.

Wittgenstein's reaction to the Theory of Types forms the basis for his distinction between showing and saying. It is that distinction which he regarded as the cornerstone of his semantics; it is also that which drew the most fire from his critics (among the most stalwart of whom would be Russell). Wittgenstein's views on what cannot be said but

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[48] Russell does not employ the terms "object language" and "meta-language" but it is only natural to use them in describing his position. Here I follow the practice of Brockhaus (1991), p. 182.

[49] It must be a second-order semantic property which is being assigned, because neither is an object language sentence.

only shown are of the utmost importance given our own ultimate goal, outlined earlier, of demonstrating the manner in which criterial behaviorism is a form of instrumentalism. The early and later Wittgenstein differ in many respects, but that there is a distinction between what can be said and what can only be shown is not one of them. Although the status of what cannot be said would undergo a major transition, *that* certain things cannot be meaningfully asserted would remain constant from his earliest days (recall Russell's attribution to him that all existential claims are meaningless) until the days of the *Philosophical Investigations* and *On Certainty*. In either event the effects upon the analysis of propositional attitude sentences are profound. As we shall see below, the doctrine of showing which emerges from the criticism of the Theory of Types forms the basis of an attack upon Russell's theory of judgment, an attack which leaves the subject of judgment incapable of being a *term* of a relation (as Russell's theory requires). Like our earlier examination of the bipolarity of the proposition, an examination of the distinction between showing and saying will carry us far into the heart of the *Tractatus*. It is worth noting that both the argument for the bipolarity of the proposition with its commitment to a particular *Sinn/Bedeutung* distinction, as well as the argument for a distinction between showing and saying are independent of the arguments for the *Grundgedanke* and the Picture Theory of the Proposition.

According to Wittgenstein, it is neither possible nor necessary to construct a Theory of Types. The impossibility of a Theory of Types is related to the fact that it is necessary to introduce sentences of *English* (in the form of rules like the Vicious Circle Principle) into the supposedly logically perspicuous language of *Principia*. The introduction of these rules makes English a meta-language for the language of *Principia*. But *Principia*, like Frege's *Begriffsschrift* (1879), is a work that seeks to escape the vagueness and inconsistency inherent in

natural language. How is this goal to be achieved, if a logic must contain a natural language as its meta-language? "Logic," Wittgenstein declares, "must take care of itself" (1914b, p. 2; 1922b, 5.473). Just as an adequate theory of judgment must make it impossible to judge nonsense (1918, p. 95; 1922b, 5.5422), so too in logic it must be "impossible for us to go wrong" (1914b, p. 2; 1922b, 5.473). The symbolism *itself* must exclude the possibility of error; it cannot be the case that restrictions are imposed upon logic from without. In this instance the introduction of English sentences is particularly grievous, because the rule *says* precisely what supposedly cannot be said. Whatever else a logically perspicuous language should be, it should be expressively complete. That is to say, it should be capable of expressing all and *only* those propositions that may be true or false. (That Wittgenstein is concerned with expressive completeness becomes most apparent in the "Notes Dictated to G. E. Moore in Norway" in 1914; see, for example, 1914a, p.108.) If some sense can be assigned the rule itself, that is, if it is possible to say *what* the rule proscribes, then the language for which it is a rule will have already exceeded its expressive capabilities by containing in its meta-language a proposition (i.e., a propositional sign) to which no sense may be attached. In effect, when the Vicious Circle Principle says that no function may take itself as argument it is saying the unsayable. It is impossible to either assert or deny that a function may be its own argument. Urging reticence in such matters, Wittgenstein says, "[i]f logic can be completed without answering certain questions, then it *must* be completed *without* answering them" (1914b, p. 3).

Similar problems beleaguer any attempt to speak of the semantic properties of a propositional sign. As Brockhaus (1991, p. 185) points out, any attempt to *state* the meaning of an atomic proposition (i.e., one whose truth is not a function of the truth of other propositions and

whose singular expressions do not refer to composite objects) will, like the proscription contained within the Vicious Circle Principle, simply generate another proposition to be accounted for (if it can be accounted for). Assuming that the meaning (*Bedeutung*) of a proposition is the fact to which it corresponds, how could the relation between proposition and fact be conveyed by means of another proposition without generating a regress? If "a is F" is a true atomic proposition, how would we go about describing the relation between it and the fact that makes it true? We might say "'a is F' is true of the fact that b is G", but this contains a noun clause that is, at most, a translation of the original propositional sign. Rather than revealing an interesting semantic fact about the sign "a is F", we have merely demonstrated the rather pedestrian fact that the conventions we use for saying what "a is F" says might have been different.

This argument, which Brockhaus attributes to Wittgenstein, is not to be found in any explicit form in either the *Tractatus* or any of the pre-Tractarian writings. Nevertheless, the claim that such a regress would occur does follow from the Picture Theory's thesis that propositional signs and the facts they represent share a common logical form. The noun clause in "'a is F' is true of the fact that (or means that) b is G" replicates the form common to "a is F" and the fact corresponding to it without saying anything about that form. The point is that any attempt to *say* what that form is will require another token of the very same form. (Of course, the same could not be said for non-elementary propositions that are susceptible to analysis; it is worth repeating that here we are concerned solely with elementary or atomic propositions.) Any attempt to get outside of the nexus of propositional sign and fact to represent the relation of one to the other will be futile.

Since we are concerned principally with pre-Tractarian semantic doctrines, it might be objected that it is improper to attribute to

be its own argument. The point is first made in a letter to Russell dated January of 1913 and is expanded upon in the "Notes on Logic" of the very same year.

> [T]here cannot be different Types of things! In other words whatever can be symbolized by a simple proper name must belong to one type. And further: every theory of types must be rendered superfluous by a proper theory of symbolism...What I am *most* certain of is not...the correctness of my present way of analysis, but of the fact that all theory of types must be done away with by a theory of symbolism showing that what seem to be *different kinds of things* are symbolized by different kinds of symbols which *cannot* be substituted in one another's places (1912, p. 122).

> No proposition can say anything about itself, because the symbol of the proposition cannot be contained in itself; this must be the basis of the theory of logical types (1913, p. 107; cf. 1913, p. 96 and 1922b, 3.332).

Most striking about these passages is the fact that the *symbolism* of the language makes a Theory of Types unnecessary: a function cannot be its own argument, because a symbol cannot contain itself. The idea is fairly simple actually. Symbols or signs are physical objects. Some symbols are simple, like a, b, c, etc. which function as names; others are complex, like Fa, Fb, Fc, etc. which function as propositional signs. Inasmuch as propositional signs are complex, they may be regarded as facts of a certain sort. It is impossible for a function to be its own argument, because it is impossible for a fact (the propositional sign) to contain *itself* as one of its constituents. But what sense can be attached to the idea of a fact being one of its own constituents? A fact that *per impossibile* is its own constituent would not be the fact it is. Suppose it is a fact that Desdemona loves Cassio. In that case we would have a fact whose constituents consist, at the very least, of Desdemona, Cassio, and the relation of loving. How could the fact that Desdemona loves Cassio be a constituent of that fact? If Desdemona's love for Cassio *were to be* a constituent of a fact, for example, of the fact that

Desdemona's love for Cassio is fleeting or the fact that Othello believes that Desdemona loves Cassio, then the fact of which it would be a constituent would have to be some fact other than itself. To be a constituent of a fact just is to be something that possesses a property or that stands in relation to other things. Facts are essentially complex.

The same is true of propositional signs, for they are facts (1913, p. 97). Each contains two necessary constituents: a subject and a predicate (1913, pp. 96, 107.) That *these* are what Wittgenstein identifies as the constituents of a propositional sign is extremely important. In contrast to a view he attributes to Russell (1912, pp. 121-122), a propositional sign cannot be a mere concatenation of names. If, for example, "Socrates is mortal" were to be analyzed merely as affirming the existence of a particular set of objects whose constituents happen to be Socrates and mortality, then nothing would prohibit the nonsensical construction "mortality is Socrates" from being admissible. Wittgenstein explains,

> [I]f I treat 'mortality' as a proper name, there is nothing to prevent me to make the substitution the wrong way round. *But* if I analyse [it] into Socrates and (**E**x) . x is mortal it becomes impossible to substitute the wrong way round because the two symbols are of a different *kind* themselves (1912, p. 122).

The view expressed here is reminiscent of Frege and may well have been inspired by conversations the two had had only weeks before. For Frege, it is of the utmost importance not to treat the predicate of a sentence (in particular, the *concept-words* contained within the predicate) as having the same kind of meaning as (or as contributing to the meaning of the sentence as a whole in the same manner as) proper names. Although Wittgenstein would not accept Frege's conception of senses (Wittgenstein's own conception of senses as possible states of affairs *belonging to* the actual world makes them contingent upon the actual world), he would accept that the infrastructure of a sentence or of any

propositional sign plays an integral role in the representation of facts. A fact, he maintains, cannot be represented merely with a name (1913, pp. 96, 107), since names lack the structure required for saying *how* things are. To be a description of a fact, a propositional sign must not be a name, nor must its constituents merely be names; which is why neither "Othello" nor "Othello Desdemona" are capable of being propositional signs. Rather, sentences must have constituents that stand in relation to one another as subject and predicate. The subject and predicate (what Wittgenstein sometimes calls a form) function in essentially different ways: names *name* objects, predicates *predicate* of objects certain properties or relations. It is thus the *relation* of subject to predicate that effects the representation (i.e., the description) of a fact. The precise physical arrangement of the symbols within a propositional sign is conventional and arbitrary (1913, pp. 97, 101). It matters not whether a one-place predicate occurs to the left or right of a proper name, nor whether a two-place predicate occurs to the left, to the right or between two proper names. What is not arbitrary is that there should be two kinds of symbols (ignoring for now sentences involving variables or sentence-forming operators) and that they should be related in some form or other to one another. "In 'aRb' it is not the complex that symbolises," explains Wittgenstein, "but the fact that the symbol 'a' stands in a certain relation to the symbol 'b'" (1913, p. 96). The same will hold true for sentences of ordinary language with the myriad conventions governing their alternate forms and orders (as with "Desdemona loves Cassio" and "Cassio is loved by Desdemona"). In each case it must be possible to distinguish subject and predicate.

What makes a theory of types unnecessary is the fact that the symbols that serve as the constituents of sentences are different *kinds* of symbols. By this token we are able to recognize meaningful sentences for what they are. Provided we adopt such conventions as (i) letting F,

G, H, etc. function as predicates, (ii) letting a, b, c, etc. function as names, and (iii) allowing the positioning of a predicate letter immediately to the left of a name to predicate of the bearer of that name a particular property, we should be able to tell straightaway whether a sentence (or formula) is well-formed and meaningful. Provided meanings have been assigned to the logical constants, all and only those sentences that are well-formed will be meaningful. *What* a sentence says depends upon the meanings assigned to its constituents; *that* a sentence says something is shown by the fact that it possesses the type of constituents it does. As Wittgenstein declares in the passage which was cited above, "*different kinds of things* are symbolized by different kinds of symbols which *cannot* possibly be substituted in one another's places" (1912, p. 122).

Consider, then, the function Fx. Russell regards such expressions as having indefinite reference to some unspecified member of a class. In contrast, Wittgenstein denies that the variable plays any referential role at all. Taking up a position to which even the much later *Remarks on the Foundations of Mathematics* (1937) would remain loyal, Wittgenstein declares that it is the role of the variable to serve as an *Urbild* or linguistic prototype (1914b, p. 33; 1922b, 3.333 and 5.522). Its function can be compared to that of a model home used by realtors: the model is not used as a home, but it is used to show prospective buyers the physical characteristics and functional capabilities of a home they might purchase. Similarly, the character of the variable *shows* what sort of symbol may appear to the right of the predicate as a value. If it is our convention to let lower case letters from the alphabet serve as names, then that choice is reflected by the fact that Fx and x are not formally identical; it is that fact which shows that it is not possible for the former to replace the latter so as to be its own argument. The result would be a piece of nonsense. Just why it would be nonsensi-

cal turns upon the interpretation to be assigned to $F(\hat{F}x)$.

Wittgenstein is not explicit concerning this matter. Ishiguro (1981, pp. 50-51) suggests that the alternatives amount either to treating the inner and outer F's as names (yielding, e.g., "Desdemona Desdemona") or as predicates (hence, "is green is green"). In neither case would the result be a well-formed sentence. Another interpretation is offered by Brockhaus (1991, p 187) who suggests that F(Fx) says precisely the same thing as Fx, thereby sharing the redundancy found in "That which is green is green". This interpretation is appealing in light of our earlier consideration of the kind of regress that is generated in attempting to state the semantic properties of one proposition by means of another. However, neither analysis does justice to the fact that Russell employs a device (the carat above the variable) that, when embedded within Fx, turns the function expression into a singular term. Ishiguro's two-predicate account contains no singular term at all. On the other hand, although the interpretation offered by Brockhaus contains a singular term, it contains the wrong one. If $F(\hat{F}x)$ may be said to refer at all, it refers to the property (or function) of something being **F**; whereas if F(Fx) refers to anything, it refers to some indefinite thing which is **F**. The expressions $F(\hat{F}x)$ and F(Fx) are not synonymous. Strictly speaking, the issue is not whether a *function* can be its own argument, but whether the singular term $\hat{F}x$ (which stands for the property of something being an **F**) may legitimately be a value of Fx. Unfortunately, this misunderstanding is facilitated by Wittgenstein's own misstatement of the problem at *Tractatus* 3.333 where he, too, neglects the singular expression which plays such a crucial role in Russell's formulation of the paradox. Technically speaking, the passage from the *Tractatus* is an attack upon a straw man.

However, similar arguments that do happen to hit their target are to be found within such Pre-Tractarian writings as the "Notes on Logic" and the "Notes Dictated to G. E. Moore in Norway" in which the distinction between showing and saying emerges in full force. There it becomes obvious that he is not concerned to show that the form suffers from a harmless redundancy; rather he is out to show that the form is nonsensical, i.e., that it is *incapable* of being true or false at all. He is not concerned with sentences like "That which is green is green" as might be suggested by the passage in the *Tractatus*. Instead he is concerned to show the nonsense contained in sentences such as "The property of being green is green" and "The property of not being green is not green" which are in an important respect analogous to "The property of being physical is physical" or "The physicalness of a unicorn is itself something physical" that we described earlier as posing difficulties for Moore. The real issue is why are *these* sentences inadmissible?

In a passage similar in spirit both to the 1913 letter to Russell (quoted above) and *Tractatus* 3.333 we read:

> The reason why "The property of not being green is not green" is *nonsense*, is because we have only given meaning to the fact that "green" stands to the right of a name; and "the property of not being green" is obviously not *that*.
>
> F cannot possibly stand to the left of (or in any relation to) the symbol of a property. For the symbol of a property, e.g., Gx is that G stands to the left of a name form, and another symbol F cannot possibly stand to the left of such a *fact*: if it could, we should have an illogical language, which is impossible (1914a, p. 116).

Wittgenstein argues that expressions like "the property of not being green," "something's not being green," "being green," etc. cannot possibly serve as the subject of a propositional sign. This is a major break from the tradition in which Russell and Moore were operating, according to which expressions that refer to properties may occur either as predicates or as subjects. Such a practice is thought to be legitimate in

light of the fact that properties can both be predicated of objects as well as be the objects of predication. If this is not possible, if expressions that refer to properties can *only* occur in the predicate position, then Russell's Paradox cannot even be formulated. But what justification can be given for this claim? If the answer is simply that the *conventions* governing the symbolism do not permit it (i.e., "we have only given meaning to the fact "green" stands to the right of a name"), then those conventions are in need of justification.

I suspect that the answer lies in the very last remark concerning a notation in which a function is its own argument being an illogical language. Our examination of Wittgenstein's Pre-Tractarian views clearly suggests that he meant two things by an illogical language. First, an illogical language would be one that admits nonsense, i.e., one that permits the formulation of sentences incapable of having a sense. An adequate semantic theory, like a theory of judgment makes it impossible to judge nonsense, must restrict meaningful sentences to those that may possess a sense. Second, an illogical language would be one that permits illegitimate inferences. We already know that Wittgenstein accepted the bipolarity of the proposition and the thesis that logic must be concerned with unasserted propositions, because he thought that an adequate account of language and judgment must sanction inferences from "P is true" to "P is not false" and so forth. Clearly, too, the *Tractatus* requires of any adequate theory of meaning that it provide an account of the nature and limits of inference (1922b, 4.023, 5.13-5.14). Indeed, in the end it would be the inability of the *Tractatus* to provide a coherent account of the *limits* of inference (the so-called color exclusion problem) that would prove its undoing according to many scholars. (We

will have an occasion to examine that claim in the next chapter.[50]) Although Wittgenstein would remain preoccupied with the nature of inference and proof throughout his career (indeed the greater portion of the *Remarks on the Foundations of Mathematics* (1937) pertains to this subject), his concern with the subject first appears in letters written to Russell between January and July of 1913.

The fact that Wittgenstein imposes these two conditions upon an adequate semantic theory and theory of judgment, when considered in the context of his claim that "*different kinds of things* are symbolized by different kinds of symbols which *cannot* possibly be substituted in one another's places" (1912, p. 122), suggests that Wittgenstein was deeply influenced by Frege in these matters. If we are to understand why Wittgenstein thinks that sentences like "The property of being green is not green" are nonsensical, we must consider both his debt to Frege as well as the way in which his views diverge from those of Frege. Only then will the full argument for a distinction between showing and saying emerge. I would go so far as to suggest that Wittgenstein's distinction between showing and saying is introduced, in part, to shore up elements of Frege's philosophy against Russell's Paradox without appealing to the Vicious Circle Principle or, in the end, to Frege's own ontology.

2. The Genesis of the Paradox and The Shape of Its Solution.

In this section we continue to examine the development of Wittgenstein's views--but with special consideration to the influence of Frege: with those elements of his philosophy that give rise to the paradox and with the shape its solution might take were one inclined to accept some of Frege's basic insights into the nature of language. Wittgenstein was so inclined. Frege's thesis that a sentence's sub-sen-

[50] It is my view that the color exclusion problem does not pose any sort of serious problem for the author of the *Tractatus* at all. The problem can be reconciled by bearing in mind the sense/meaning and form/structure (or form/content) distinctions Wittgenstein draws.

tential components perform distinct logical and semantic roles, as well as his thesis that quantifiers function as second-order predicative expressions, are acknowledged by Wittgenstein as among the greatest advances of modern logic. To preserve these insights it would be necessary for Wittgenstein to launch an attack along both a logical front as well as a metaphysical front. The logical front Frege would well acknowledge; the metaphysical front (in spite of his own ontological assumptions) he would not. Along the logical front Wittgenstein would launch his defense of the claim that an illogical language is impossible. The very nature of representation requires that a semantic distinction be drawn between what can be said and what can only be shown; such a distinction makes a theory of types neither necessary nor possible. Along the metaphysical front we are given the ontology of the Picture Theory. That ontology begins to emerge quite early in consideration of the requirement (inherited from Frege but also derivable from the bipolarity of the proposition) that sense be determinate. The two lines of development in Wittgenstein's thought will be examined in the next section of this chapter and in the following chapter. Here I am concerned to show how those lines of development are shaped by Frege's influence.

It is fair to say that Frege would be wholly unsympathetic to the direction taken by Wittgenstein's thought. His own initial response to Russell's Paradox, like his responses to so many other problems (for example, the problem arising over the fact that the expression "the concept *horse*" does not denote a concept) would remain one-dimensional in its attempt to discern logically relevant features of syntax that might both resolve his own problems as well as deflate the claims of his critics. It is for this reason that Frege so often appears to be quibbling over the terminology used by his adversaries. Nevertheless, that feature of his philosophical style, along with his reasons for regarding

truth as an indefinable and primitive term, plus the influence upon him of Lotze's conception of objectivity, all point to the fact that for Frege a semantic theory is wholly subservient to the theory of inference. This, in turn, creates a serious tension within Frege's philosophy that cannot be reconciled within that philosopher's own terms. If the only function of a semantic theory is to provide an account of the *preservation* of truth, then such a theory can say nothing informative concerning the nature of extra-linguistic entities (such as the *Bedeutungen* and *Sinne* of signs). Yet Frege's writings are replete with what appear to be ontological distinctions. Not only must the *Bedeutung* of a linguistic expression be distinguished from its *Sinn*, among the *Bedeutungen* of expressions one must distinguish between concepts, objects, relations and truth-values (which are a kind of object). Thus the principal task facing any student of Frege is to find an adequate ontological interpretation of his remarks pertaining to those entities (including senses) that are *said* to exist independent of the linguistic expressions that either express them or refer to them. As I shall argue below, Frege's commitment to the Lotzean conception of objectivity and his own view concerning the function of a semantic theory *preclude* any possibility of interpreting his remarks about *Sinn* along customary Platonistic lines. However not being able to do so raises serious problems concerning the objectivity of senses. Their objectivity could be secured, I suggest, if it were somehow dependent upon the *Bedeutungen* of expressions. In spite of Frege's unwillingness to offer a substantive metaphysics, his writings contain numerous suggestions that the logical properties of language reflect logical features of the world. It would be left to Wittgenstein to unearth this potential and declare that language and world share the same logical form. That form cannot be described, but only *shown* by the structure of the signs which serve as representatives. So in an important respect both the Picture

Theory of the proposition as well as certain aspects of its ontology are foreshadowed in Frege's works. Since Frege would be amenable neither to a distinction between showing and saying nor to the prospect of developing a substantive ontology, it is not surprising to discover that philosopher's utter dismay over Wittgenstein's ideas upon being presented with a manuscript of the *Tractatus* in 1919. That would be an event which would forever mark the divergence between these two philosophers' views.[51]

Russell's Paradox has its origin in the distinction between function (or concept) and argument (or object) when no restriction (such as the Vicious Circle Principle) is placed upon the arguments for a given function. Here I would like to show that the liberal nature of the function/argument distinction, especially when conjoined with the linguistic criteria introduced by Frege for calling something an *object*, produces a critical problem concerning the nature of truth. This problem Frege treats as irresolvable, but it is one that must be resolved if Russell's Paradox is not to be insurmountable.

It was Frege (1891a; 1892a; 1892b) who had originally insisted upon applying the distinction between function and argument to sentences of natural language. Although Frege cannot be grouped with Moore, the very early Wittgenstein, Meinong and Russell as adhering to a relational theory of judgment (given his account of a sign's *Sinn* as its mode of presentation), he does belong to the Late Nineteenth and Early Twentieth-Century reaction to Idealism and the subjectivism thought to be entailed by it. In *The Foundations of Arithmetic* (1884) he insists that sentences, rather than words, should be regarded as the fundamental

[51] An excellent discussion of Frege's reaction and how it affected Wittgenstein can be found in Monk (1990), pp. 163-165, 174-176, 189-191.

loci of meaning or sense.[52] If one considers it possible for a word to have a meaning apart from its context within a sentence, then "one is almost forced to take as the meanings of words mental pictures or acts of the individual mind" (1884, p. x). This, in turn, fails to do justice to the fact that the meaning (sense) of an expression is something objective and constant. The sense of an expression is what is *grasped* by all those who understand it. Since two individuals can apprehend the sense of an expression even though they differ in terms of the images or feelings they associate with its use, that which is merely psychological cannot constitute its sense (1892a, pp. 159-160). Frege thought that by treating the sentence as the locus of sense logic could avoid psychologism. The assumption, not unreasonable, underlying Frege's move is that connotation primarily attaches to words rather than sentences. By identifying the sense of a word with its contribution to the sense of a sentence as a whole, one gains some measure of objectivity. Ultimately, though, Frege is motivated by his concern for logic, for whatever else the sense of an expression may be, besides that which is grasped by all those who understand it, it must be the sort of thing that supports valid inferences (1890, p. 5). Connotation fails to support valid inference. Therefore, the sense of an expression cannot be identified with its connotation. Rather it is the cognitive content--the proposition or thought (*Gedanke*) expressed by a sentence--that serves as its "logical kernel" (1890, p. 6; 1897 p. 142) and thus as its sense. This way of construing Frege's argument is suggested by conjoining elements from "Logic" (1890), in which Frege claims that an account of sense must subserve a theory of inference by expunging all references to the psychological, with elements from "On Sense and Meaning" (1892a) where the

[52] In this early work Frege used the terms meaning (*Bedeutung*) and sense (*Sinn*) interchangeably. It is clear from the context that here the word *Bedeutung* in this case refers to what he would later call *Sinn* or sense. He remarks upon his inconsistency in using these words in "Concept and Object" (1892b, p. 187).

connotations of expressions (i.e., the images and feelings associated with their use) are presented as the culprits to be expunged. A recent version of this argument has been presented by Jerrold Katz, who defends a Fregean account of senses (construed as Platonic entities) in *The Metaphysics of Meaning* (1990, pp. 40-41). As Katz points out, a token of the sentence "There is pee-pee on the floor" entails there is some kind of liquid on the floor, given the meaning or sense of the word "pee-pee" within the context of that sentence. The sentence *connotes*, but does not entail, that a child is speaking or that a child is being spoken to.

The necessity of treating sentences as the loci of meaning or sense nevertheless poses a significant difficulty for Frege. For while sentences secure an element of objectivity and form the basis for valid inferences, traditional subject-predicate analyses fall short on both counts. That approach, prevalent among logicians as diverse as Aristotle and Leibniz, construes *whatever* happens to be the grammatical subject of a sentence as a kind of thing to which some property or characteristic is assigned. Among its proponents we find Russell who argues in *The Principles of Mathematics* (1903, p. 77) that expressions such as "a man", "every man", "some man" and "any man" denote different *kinds* of entities.[53] Frege argues that in most instances such analyses are misleading, since what counts as the grammatical subject (as opposed to the grammatical predicate) is merely a subjective matter. Criticizing a view reminiscent of Bradley, according to which a sentence is merely the expression of something "cut off [and] fixed by the mind" (1883, p. 3), Frege maintains,

> [W]e can only say: "The subject is the concept with which the judgement is chiefly concerned." In [ordinary] language, the subject-place has the significance in the word-order of a *special* place where one puts what he wishes the listener to heed (1879b, p. 113.).

[53] Russell (1903) is not consistent on these matters; compare p. 90. For a discussion of these inconsistencies, see Coffa (1993), p. 106-107.

That thoughts are expressed in a medium involving a subject and a predicate thus belongs to those "aspects of [ordinary] language which result...from the interaction of speaker and listener" (1879b, p. 113). Consider, for example, the sentences "Desdemona loves Cassio" and "Cassio is loved by Desdemona" which differ in grammatical form but possess the same conceptual content. The traditional account would treat the first sentence as ascribing to Desdemona a particular property, namely, the property of loving Cassio. On the other hand, the second sentence ascribes to a different subject a quite different property, inasmuch as it attributes to Cassio the property of being loved by Desdemona. Even if we allow ourselves symbols for each of the subjects and predicates, we will not be able to find in their formalization any clue as to their semantic similarity. By laying too much stress upon the grammatical form, upon what is merely psychological according to Frege, what is essential to the semantics of the two sentences is lost. The examples drawn from Russell are even more severe. If any grammatical difference entails a difference in semantics, then "a man" and "some man" can not be considered synonymous when used as subjects; yet, they certainly appear to be so. Whatever differences attach to the uses of these expressions, Frege would say, can be accounted for in terms of individuals' linguistic preferences, which is a purely subjective matter. Their differences, therefore, cannot be regarded as semantic.

I should point out that there is a certain ambiguity in my saying that the differences between these expressions cannot be *semantic*, given Frege's distinction between the *Sinn* and the *Bedeutung* of an expression. That ambiguity is matched in Frege's writings prior to the 1890's when the distinction was explicitly drawn. In lieu of the theory that would emerge in that decade, it would be more appropriate to say that such expressions cannot differ in terms of their *Bedeutung*, i.e., their extension or (more accurately) their role in determining a truth-value. It

seems that Frege's later writings are ambivalent on whether these expressions could differ in terms of their *Sinne*. Clearly Frege would translate both "a" and "some" using the existential quantifier which, for him, symbolizes a second-order function. Since formalization aims to reveal the thought (*Gedanke*) that is the sense of the sentence, one would expect the senses to be identical. Nevertheless, Frege (1892a, p. 158) does suggest that differences in *grammatical* form betoken differences of sense. "Tom and Jerry" differs in sense from "Jerry and Tom" apparently solely in virtue of the grammatical ordering of the names. Their order would be relevant within the context of a function expressing an assymmetrical relation; in the passage cited such is not the case. There the terms appear as components within definite descriptions, viz., "the intersection of a and b" and" the intersection of b and a" which Frege claims have different senses.

As discussed above, for Frege, an adequate account of sense must not only avoid psychologism, it must provide the basis for an adequate theory of inference. The two conditions are closely related. Because traditional subject-predicate analyses of sentences cannot represent the sameness of sense shared, e.g., by "Desdemona loves Cassio" and "Cassio is loved by Desdemona," they cannot do justice to the fact that the one may be logically inferred from the other. Similarly, one would expect the inferential roles of sentences whose only difference is the use of "a" rather than "some" to be identical, in spite of their possible connotative differences. For example, "Some man approached the door" may evoke an air of mystery which is not evoked by "A man approached the door"; nevertheless, neither entails that the situation is a mysterious one. These problems could, of course, be reconciled if the the sense of the sentences in question could be expressed in a common symbolism.

Replacing overly restrictive subject-predicate analyses with more liberal analyses based upon the distinction between function and argu-

ment offered Frege a way out of the dilemma with which he was faced. In mathematics, from which the distinction is drawn, a function effects a correlation anong members of diverse sets. For example, supposing numbers to be objects of a certain sort, multiplication would be a function by means of which 2 and 3 would be correlated with the number 6. We express this by saying that the function of multiplication yields a value of 6 for arguments 2 and 3. Frege believed that in any scientifically respectable language the predicates of sentences would behave logically like functions of mathematical formulae for which proper names and other singular terms serve as arguments. More accurately, *any* concept-word, whether it belongs to the grammatical subject or the grammatical predicate, should be treated as such. A concept-word is any expression that serves a predicative function, that is, one that is not itself a singular term but which takes singular terms as arguments. The set of syntactic criteria Frege offers for distinguishing between singular terms and concept-words provides the single most valuable clue as to why he felt a function could not be its *own* argument. Before turning to that topic, let me point out that the utility of function-argument analyses for semantic theory lies in the fact that different functions may share the same value ranges. For example, multiplication of 2 and 3, addition of 3 and 3, and the subtraction of 3 from 9 all yield the same value of 6. The expressions "2 x 3", "3 + 3", "9 - 3" and "6", Frege tells us, "all mean [*bedeuten*] the same thing" (1891, p. 139). When applied to sentences of natural language, Frege's analysis has an *extensionalizing* effect. By individuating the contents of judgments along grammatical lines traditional analyses in terms of subject, copula and predicate remained intensional to such a degree that they could not accommodate the fact that "Desdemona loves Cassio" and "Cassio is loved by Desdemona" entail each other. However, function-argument analyses can accommodate this fact precisely because different formulae can designate, i.e., can

be *about*, the very same thing. In such cases the different functions simply constitute different "modes of determination" (1879b, p.125).

Precisely *what* is designated by a sentence (construed in this manner) is controversial. In arithmetic the value range of a given function is comprised of numbers. For Frege, sentences refer to (*bedeutet*) a truth-value: when combined into sentences, concept-words and singular terms yield either the True or the False. What the True and the False *are* are objects named by sentences. That sentences are names of objects is a consequence of Frege's criteria for distinguishing singular terms and concept-words. One such criterion, the importance of which will be discussed below, is that singular terms (and only singular terms) may flank identity (or equality) signs. That sentences meet this criterion is a direct result of the set-theoretic model applied to them, inasmuch as a function that takes an argument occurs within the context of an equation. Thus, the "is" of sentences of the form "Fx is true" must be construed as expressing identity. And the word "true" in such contexts must be regarded as the name of an object (hence Frege's preference for "the True") rather than one that expresses or refers to a concept or property. But what kinds of objects are the True and the False, and is it not an unhappy consequence of this theory that all true sentences are about the very same thing?

The issues here are immensely complex and cannot be adequately dealt with apart from a consideration of, among other things, Frege's views on second-order functions and his arguments for treating universal categorical statements as conditionals (cf. Sluga, 1980, p. 87ff; Baker and Hacker, 1984, pp. 181ff), as well as his changing views on the relation between sentences of the form "Fx" and "Fx is true"(cf. Grossmann, 1969, pp. 181ff). To do this would carry us much too far away from our central concern, which is to describe the manner in which Wittgenstein's doctrine of showing arises out of concerns over Frege's problems with

Russell's Paradox. Consequently, only enough of Frege's view as will suffice to draw the requisite contrast with Wittgenstein will be presented here. Much of the controversy concerns the need for abandoning one or more of the axioms of the *Grundlagen* (1884) or of their supplementation, and whether Frege himself abandoned his so-called context principle, i.e., the thesis that a word has a meaning only within the context of a sentence (for a comparison of views cf. Dummett, 1978, pp. 110-115; Sluga, 1980, pp. 133-134; Baker and Hacker, 1984, pp. 194ff) Attention will primarily be given here to the views that he expressed prior to the late 1890's, that is, the period running from *Begriffsschrift* (1879a) to "Logic" (1897). (Later writings will be considered when we try to come to grips with the ontological status of Frege's senses.)

Anyhow, Frege's answer to the first question is that "the True" and "the False" are primitive terms that cannot be defined (1897, p. 126). He was led to this conclusion by considerations analogous to those which, as we saw earlier, led Moore (1889, p. 178) to reject correspondence theories of truth:

> [I]t would be futile to employ a definition in order to make it clearer what is to be understood as 'true'. If, for example, we wished to say 'an idea is true if it agrees with reality' nothing would have been achieved, since in order to apply this definition we should have to decide whether some idea or other did agree with reality. Thus we would have to presuppose the very thing that is being defined. The same would hold for any definition of the form 'A is true if and only if it has such-and-such properties or stands in such-and-such a relation to such-and-such a thing' (1897, pp. 128-129).

Against Bradley Moore had argued that correspondence theories of truth require an infinite number of mental acts to fix or determine the content of any one true judgment. Earlier it was suggested that Moore may not have done justice to the role afforded by Bradley to intuition in the determination of mental content. Frege's objection circumvents

questions concerning the determination of content. For him the problem lies in the fact that any attempt to define truth will necessarily require applying the very concept under consideration or at least one very much like it. This makes any attempt to define truth hopelessly circular. As in Moore's case, a regress is generated. To know whether p is true, one would have to know whether it is true that p corresponds with reality, that is, one would have to know whether it is true that that relation holds between p and the fact of which it is true. That, though, would require knowing whether the proposition expressed by "It is true that p corresponds with reality" is true, and so on. Frege concludes that it is not possible to define truth and, *a fortiori*, that it is not possible to define truth as correspondence.[54]

The argument is not particularly strong, especially if taken as an argument against the correspondence theory. One could hold that it is possible for one's thoughts to correspond with reality even if it is not possible to define what it is for them to correspond as such. Contemporary advocates of reliability theories of knowledge, for whom knowing p does not require that one know that one know that p, would argue as much.[55] Indeed, Wittgenstein's own Picture Theory of the proposition just is a form of correspondence theory that consigns the semantic properties of a language to the *unsayable*. Nevertheless these properties may be exhibited in a certain manner; and they may be recognized by speakers, even if they cannot be explicitly defined.[56] Wittgenstein's own distinction between showing and saying entails that speakers' knowl-

[54] This argument does not originate with Frege. Versions can be found in Spinoza and even Aristotle. Sluga (1980, p. 114) suggests that Frege inherited this argument from Kant via Lotze.

[55] On reliability theories of knowledge, see Armstrong (1973), Dretske (1981) and Goldman (1967).

[56] The fact that the *Tractatus* says a great deal concerning what supposedly can only be shown is, as Russell remarked in his Introduction to that work, a source of "intellectual discomfort" (1922b, p. xxi). This problem shall be discussed in greater detail below.

edge of the semantic properties of a language is a form of *know-how*, i.e., as a kind of ability, rather than as a form of propositional knowledge.

Even if Frege's argument does not undermine the possibility of a correspondence theory of truth, it should be recognized as posing a particular challenge to such theories. The challenge is to provide an account of what it is for speakers to be aware of the truth or falsehood of propositions if that does not involve applying a definition and categorizing propositions as belonging to one or the other class. It is at this juncture that we find one of the most striking differences between Frege and Wittgenstein. Frege admits the undefinability of the True and the False but then provides *procedures* (the axioms of the *Begriffsschrift*) by means of which one or the other value may be assigned to propositions. Wittgenstein, on the other hand, would not regard as adequate a semantic theory that only accounts for the *preservation* of truth. An adequate semantic theory cannot be merely a theory of inference. Thus Wittgenstein writes to Russell around the time of his conversation with Frege in 1912, "I believe that our problems can be traced down to the *atomic* propositions" (1912, p. 121). For Wittgenstein, but not for Frege, it is essential to provide an account of the original truth that is preserved by means of valid inference.

Now even if the True and the False are undefinable for Frege, is it not an undesirable consequence of the theory that all true propositions would have to be about the very same thing (just as all false propositions would have to be about the very same thing)? The propositions expressed, for example, by "Snow is white" and "The sky is blue" would have to be regarded as designating the same thing. The problem becomes even more acute when viewed in terms of the vocabulary of the *Begriffsschrift*, for there it is maintained that the assertion sign that precedes each judgment corresponds to the predicate "is a fact" (1879b,

p. 113). So it would seem that these propositions would have to designate the very same facts that, of course, they do not.

There appear to be two possible ways to get Frege off the hook. One is for Frege to relinquish the idea that the relation of identity holds between a function which takes an argument and its value. Propositions regarded as functions need not be considered analogous to equations. Indeed, even within mathematics it is not clear that the equality sign should be taken to express identity. As Wittgenstein remarks in his 1914 *Notebook*, "if 2 x 2 were really the *same* as 4, then this proposition would say no more than a = a" (1914b, p. 4). We know that it was just such a concern that led Frege ultimately to distinguish between the sense and reference of sentences. That distinction nevertheless preserves the identity that obtains between a function taking an argument and a truth value, all of which happen to be *Bedeutungen* of expressions. One alternative would have been for Frege to regard the yielding of a truth value as something other than the establishing of an identity; perhaps the yielding of a truth value could be viewed as the assigning of a property. This manner of dealing with the problem would not run up against Frege's contention that truth is indefinable. One could, like Moore, regard truth as an indefinable property (even if, as I have argued, there is a sense in which Moore does provide an analysis of truth). What seems to prevent Frege from adopting this strategy is his adherence to certain linguistic criteria that determine when an expression functions as a singular term.

A second way to get Frege off the hook is to interpret his work as a precursor to the semantic conception of truth advocated by Tarski (1937) and Davidson (1969). I intimated as much earlier in saying that, for Frege, nothing could be said about the True or the False over and above what is already said to the left of the equality sign. To say "'The sky is blue' is (identical to the) True" amounts to an *explica-*

tion of what is meant by the term "true." An adequate theory of inference provides a tool for the further explication of that term. If being blue entails having a color, then "'The sky has a color' is (identical to the) True" offers a further explication of *what* is meant by "true." The similarity to the semantic conception of truth follows from the fact that if the sky is blue is (identical to the) True, then the sky is blue is (identical to the) True if and only if the sky is blue. Put in the formal mode what is named by "The sky is blue" is (identical to the) True if and only if the sky is blue. The fact that a proposition of the form "p is true" entails a sentence of the same form as that required by the semantic conception's Convention T--viz., "P is true if and only if P"--is not so remarkable, since the semantic conception is supposedly consistent with any *theory* of truth. What is remarkable is that for Frege, as for Tarski and Davidson, what appears on the right side of the biconditional (and what *entails* and is *entailed by* what is on the right side of the biconditional) serves to elucidate the concept of truth (or, in Frege's case, what is named by "the True") within a language.[57] This is not to say that there are not significant differences between Frege's view and the views of Tarski and Davidson. For the latter philosophers, what appears within quotation marks on the left side of the biconditional serves as the name of a sentence to which truth is *predicated*. For Frege, what appears within the quotation marks is a name as well, but it

[57] For an interesting comparison of Frege's and Wittgenstein's use of explications or elucidations (*Erläuterungen*), see P. M. S. Hacker (1975). Hacker maintains that the explication of primitive terms, which often requires the use of simile and metaphor (as when, for example, an object is said to "satisfy," "fall under," or " saturate" a concept) constitutes a necessary but unfortunate concession to ordinary language for Frege. Explications, accordingly, belong to the preamble or propaedeutic of a science (1975, p. 603). I disagree with Hacker that explication serves *only* this role for Frege, since the explication of the True by means of *Begriffsschrift*-sanctioned inferences just is a part of science. What is essential to the explication of a concept is its goal of locating the concept within a network or family of concepts. Designating a concept's inferential role, then, would be a form of explication.

is not the name of a sentence; rather the sentence itself is the name of some thing that happens to be identical to the True. In spite of these differences, Frege can be helped out of the difficulty described above by means of a device peculiar to the semantic conception of truth. Each T-sentence is said to constitute only a *partial* analysis of the concept of truth within a language. A complete analysis of the concept of truth, if such were possible, would correspond to the entire *set* of T-sentences, and the right side of the biconditional for each member of the set would have to contain every proposition (or sentence) that entails or is entailed by that which is named the left side. Whether or not there could be such an analysis for a language would depend upon whether the language is expressively incomplete, that is to say, on whether there can be novel meanings, and not merely novel notations for expressing meanings, within the language. If a language is expressively complete, then it would in principle be possible for such an account to be given. We do not have to decide whether Frege's distinction between sense and reference, and particularly his views concerning the nature of thoughts (*Gedanken*) support this thesis; certainly contemporary linguistic Platonists, like Katz (1990), construe Frege in this light. However, on the assumption that Frege's views on sense are compatible with the possibility of language being expressively complete, we might say that "the True" designates the *Bedeutungen* of the entire *set* of sentences which comprise a science in accordance with the *Begriffsschrift*.[58]

[58]Most relevant for the purposes of comparison is Davidson's statement in "Truth and Meaning" that

> If sentences depend for their meaning on their structure, and we understand the meaning of each item in the structure only as an abstraction from the totality of sentences in which it features, then we can give the meaning of any sentence (or word) only by giving the meaning of every sentence (and word) in the language. Frege said that only in the context of a sentence does a word have meaning; in the same vein he might have added that only in the context of the language does a sentence (and therefore a word) have meaning (1967, p. 22).

On this view "Snow is white" and "The sky is blue" and, indeed, even "2 + 2 = 4" do designate the very same thing: they designate the entirety of that which Frege refers to as objective (1890, p. 7; 1897, pp. 137-148; 1906a, p.198) Objectivity may be ascribed to, and only to, those things that are not the products of an inner, psychological processes but which may be apprehended by ("is exactly the same for") all rational beings (1890, p. 7). That which is objective includes that which is *wirklich* or capable of entering into causal relations but also whatever truths there may be concerning mathematical, logical and semantic objects and properties.[59] All *a priori* as well as all *a posteriori* truths are thus to be included under the heading of what is objective. In spite of specific differences in ontology, Frege's idea of what is objective is similar to what Moore refers to as reality that includes not only what is actual (or *wirklich*) but what has Being. The point is that true sentences *are* about something that is "exactly the same" for all rational beings, namely, reality itself. It is all of reality which is identical to the True. This solution to the problem encompasses the earlier one to the extent that if "Snow is white" and "The sky is blue" do in fact have *Bedeutungen* of their own, then their relation to them must be other than identity: what is designated by "The sky is blue" must be *constitutive* of the True, and nothing more. In other words, "'The sky is blue' is (identical to the) True" tells us that "The sky is blue" manages to be about some aspect or constituent of what is True.

We have here the basis for a form of linguistic holism. It is language as a whole that refers to the True. Whether the individual components of the language take individual referents remains an open question, as well it should, since Frege's semantic theory, as mentioned

[59] Concerning Frege's use of the term *wirklich*, cf. Sluga (1980), pp. 118 and 195.

earlier, is wholly subservient to the theory of inference and provides no account of original truth.

The view described here is identical to what Sluga (1980, pp. 117ff) refers to as Frege's Lotzean notion of objectivity. Apparently, Lotze's *Logik* (1843) provides the source for three theses accepted by Frege: (i) that what is objective must be capable of being grasped by more than one rational being, i.e., it must be intersubjective; (ii) that what is objective is not the product of some psychological process (thus mere intersubjectivity is not sufficient for objectivity, a point that will become important below); and (iii) that what is objective must be distinguished from that which is *wirklich* (since the psychological is itself *wirklich*) (Sluga, 1980, pp. 117-118). There can be little question of Lotze's influence on Frege; indeed, an examination of the texts reveals that Frege's argument against the correspondence theory occurs nearly *verbatim* in the former's *Logik* (Sluga, p. 114). The historical connection between Frege and Lotze interests us because the Lotzean concept of an object is an epistemological, rather than ontological one. This means that there is a certain pragmatic necessity that attaches to the notion of an object: one must assume that there is *something* that one's beliefs are about, if one's beliefs are *about* anything at all. Unless there were truths valid (Lotze's term) for all rational beings, it would not be possible to form any judgment whatsoever. It is important to realize that Frege and Lotze do not provide any sort of *proof* that there is objective truth. It cannot even be said that objective truth is a necessary *condition* for the possibility of inference. All that can be said is that it is necessary to talk about (talk as if there is) objective truth if it is possible to speak in any informative way about inference. This does not mean that what is counted as objectively true is merely psychological: the True *is* conceived of as having objective, mind-independent existence. It simply means (and again this in-

volves viewing Frege as a precursor to Tarski and Davidson) that there is no way to get outside of language to describe its relation to the world. This is not to say that language cannot be self-referential. Quantified expressions and propositional attitude ascriptions are construed as forms of *oratio obliqua*. In the case of the former, a sentence like "Dogs exist" is said to be synonymous with "There is something that *falls under* the concept *dog*" or "The concept *dog* is *satisfied by* at least one object" or "The concept *dog* is *saturated by* an object." However, *falling under*, *satisfying*, and *being saturated by* are metaphors belonging to the elucidation of Frege's primitive terms. In spite of belonging to Frege's meta-language, they play no part within a semantic explanation, i.e., within a *theory* of reference and predication. We will see this theme played out in Wittgenstein's unwillingness to assign any explanatory status to a meta-language and, more particularly, in his disavowal of a theory of types and his own distinction between what can be said and what can only be shown.

What makes this interpretation of Frege philosophically significant is that it minimizes his ontological commitments and allows us to make sense out of the fact that he offers merely *linguistic* criteria for something's being an object rather than a concept. One would not expect a philosopher who intends to draw a distinction between two broad metaphysical categories to draw that distinction in syntactic sand. Yet, the distinction between an object on the one hand and a concept (or function) on the other is drawn by means of the distinction between a proper name and concept word. An expression counts as a proper name (and therefore takes an object as its *Bedeutung*) if and only if

(1) The expression does not begin with an indefinite article;
(2) The expression contains no free variables;
(3) The expression cannot occur as the predicate of a sentence;
(4) The expression can occur on the left and right of an identity sign (Sluga, 1980, 122).

Dummett makes a similar point in reference to an objection raised by Marshall "that 'Frege has taken a linguistic difference to be a rift in nature," (1955, p. 74). He claims that Marshall has overlooked the fact that Frege's principle goal was to lay out the logical *roles* of proper names, concept-words, and quantifiers. That Frege slipped from the formal to the material mode makes it appear that he was engaged in a metaphysical enterprise, but this is not true. Even when he says that sentences that share the form of "Spot falls under the concept **dog**" and "To be a dog is a property of Spot" are synonymous (1892b, p, 190), we should not take him to be asserting the metaphysical thesis that there are properties. In fact, the sentence "There are properties," while not ill-formed, must be construed, according to Frege, as involving second-order quantification; it says, basically, that some concept *falls within* that which is expressed by "is a property" (or alternately "is a concept"). Notice that even here the reference by one level of language to another is characterized by means of metaphor.

This brings us to why Frege believed that a function could not be its own argument and to what that entails. A function cannot be its own argument, because a concept (or property) cannot be an object. This, however, should not be taken as asserting a certain rift in nature. If Dummett (1955) and Sluga (1980) are correct, then the matter could be put purely formally: concept-words cannot be proper names (i.e., singular terms). Because concept-words play a predicative function, they are essentially incomplete expressions. The predicate of a sentence, e.g., "_____is a man," contains a gap that must be filled by a proper name (if the sentence is of the first order) or by a bound variable (if it is of the second order). That concept-words have no meaning in isolation is, as we saw earlier, necessitated by Frege's belief that psychologism can only be avoided by treating sentences or formulae as the basic units of meaning. And, as we saw, the replacement of subject-predicate analy-

ses with function-argument analyses extensionalizes the language in such a way as to sanction what seem intuitively to be valid inferences. Since concept-words and proper names are defined in terms of their functional roles relative to one another, and since these roles are mutually exclusive within any given sentence, within any given sentence no concept-word can *be* a proper name and vice versa.

When the point is put in the material mode by saying that no concept can be an object, what is essential to Frege's view is lost. In that mode quandaries arise over how to explain the apparent truth of sentences like "The concept *horse* is not a concept" or "The property of being blue is not a property" (1892b, p. 184). If Frege is interpreted as advancing metaphysical theses, then it is necessary to find (and it would have been necessary for Frege to argue that there exists) some characteristic possessed by objects but not by concepts, such that what is *named* by "The concept *horse*" cannot be a concept (a difficult task, given that the word "concept" which is contained within the definite description appears to play the same predicative role as "red" in "Put it in the red barn").[60] In this vein, Dummett (1967, p. 97) suggests that in the *Grundlagen* Frege holds that for every object there must be some "'criterion of identity'...for 'recognizing the object as the same again'". To that kind of response it may be objected that it is entirely possible to speak of concepts or properties as the same or different. Or it may be objected that asserting there to be some criterion of identity is not the same thing as *specifying* some such criterion; and, therefore, Frege's conditions are incomplete. To overcome this problem Frege would need to advance substantive metaphysical claims, but that is precisely what is precluded by the undefinability of truth.

Rather than view Frege as a bad metaphysician, one should construe

[60] On the predicative nature of definite descriptions, cf. Donnellan (1966).

his work as belonging to the philosophy of logic. Commentators who have taken the distinction between concept and object to be ontological fail to take into account that Frege's responses to the problem, far from being metaphysical, are always formal in nature. That is to say, he always attempts to reconcile such difficulties by identifying logically relevant features of syntax. For example, as Dummett (1973, p. 245) points out, many difficulties of this kind are treated by Frege as resolvable if the problematic sentences are *translated* as involving second order quantification. Or, again, as Rusinoff (1992, p. 64) points out, in "Comments on Sense and Meaning" (1892c, p. 118) Frege tries to arrive at a purely formal solution to the problem of the concept *horse* by suggesting that 'what-phrases' (as in "Jesus is what 'man' refers to") may function both predicatively and as singularly. The point is that we would not expect Frege to pursue this sort of solution if his principal interest consisted in defending a metaphysical thesis. Frege's concern, first and last, is with the theory of inference.

This *de-ontologized* interpretation of Frege's work carries major implications concerning the way that philosopher's distinction between *Sinn* and *Bedeutung* is to be understood. Frege introduces that distinction most explicitly in "On Sense and Meaning" (1892a) in order to accommodate the apparent semantic difference between sentences of the form a = a and a = b. Whereas a sentence like "The Morning Star is the Morning Star" is analytic and *a priori* true, "The Morning Star is the Evening Star" is synthetic and true only *a posteriori*. Although the two sentences share the same reference (namely, Venus), they differ with respect to their "cognitive value" (1892a, p. 157). That is to say, they express different "thoughts" (1892a, p. 162), where a thought is to be understood, not as anything subjective, but a something objective that can be *grasped* by more than one individual. It is this that Frege refers to as the *sense* of a sentence. The sense of a sentence is the

"mode of presentation" (1892a, p. 158) of whatever is designated by (is the *Bedeutung* of) the sentence. Although Frege maintains (in 1892b, p. 187) that his distinction between *Sinn* and *Bedeutung* is fully compatible with his earlier views in *The Foundations of Arithmetic* (1884), such is not the case. The reader will recall that Frege was earlier described as maintaining (specifically in 1879b, but this characterization is no less applicable to Frege, 1884) that what appears on the left side of the equality sign in "2 x 3 = 6" and "3 + 3 = 6" is in each instance the "mode of determination" of that which appears on the right side of the sign. It can be assumed that "mode of presentation" and "mode of determination" denote the very same thing. In that case, what is earlier referred to as the mode of determination belongs entirely to the *Bedeutung* of a sentence: the *Bedeutung* of a concept-word is a concept; the *Bedeutung* of a proper name (i.e., a singular term) is an object; and the *Bedeutung* of a sentence is the truth-value determined by the former taking the latter as argument. In an important respect it *appears* the early Frege can counted among those who accept a relational theory of judgment. The description of the judgment stroke in the *Begriffsschrift* (1879b, pp.111-112) as a predicate equivalent to "is a fact" and the corresponding view of judgment as the countenancing of a fact suggests as much. Judgment is not viewed as involving a relation to a mental content or sense. What Frege refers to as the assertable content of an expression appears then to be the fact thus countenanced. It seems as if what Frege calls the assertable content of an expression corresponds to what Wittgenstein refers to as the *Bedeutung* of a true propositional sign. Nevertheless, if the interpretation of Frege as adhering to a Lotzean conception of objectivity is correct, then this way of reading Frege is inaccurate. Object-talk and concept-talk do not carry ontological commitments, but rather express a commitment to the sanctioning of certain inferences.

Frege's later reference to senses, consequently, *appears* to involve the positing of an entity external to the act of assertion which mediates or determines the reference of signs. But if the interpretation of Frege as adhering to a Lotzean conception of objectivity is correct, then the introduction of senses should not be construed as the introduction of a new entity; rather, it is the introduction of terminology necessary both for sanctioning and prohibiting certain inferences. In regard to the latter case, talk of senses does introduce an intensional element into the language, but this should not be taken to mean that it involves positing *intensions* as objects. Thus, to say that *oratio obliqua* refers to the senses, rather than the referents, of expressions is just to say that inferences will not be sanctioned among sentences containing certain psychological verbs that take, as their object, noun clauses in which there occur co-referential terms. It is to prohibit inferences, for example, from "John believes that Washington is president" to "John believes the husband of Martha is president." Nevertheless, a terminology that allows us to speak of senses *as if* they are objects does enable us to say (without ontological commitment) that *there is* something about which John has a belief. In this way the form of expression allows a certain type of quantification that appears most natural.

Aquila (1977, p. 88) points out that a similar function is fulfilled by David Kaplan's (1969) angle-bracket notation. That notation does permit a particular type of quantification within intensional contexts. Aquila, it should be noted, *does* assign an ontological interpretation to Frege's senses according to which the sense of an expression "is in some way an 'object' of the act whose content it is...something which is *apprehended* by that judgment or at least by the mind in making the judgment" (1977, p. 89). A useful antidote is Frege's remark that to speak of "grasping" or "apprehending" the sense of an expression is

to speak metaphorically:

> The expression "grasp" is as metaphorical as "content of consciousness." The nature of language does not permit any thing else. What I hold in my hand can certainly be regarded as the content of my hand; but all the same it is the content of my hand in quite another and more extraneous way than are the bones and muscles of which the hand consists or again the tension these undergo (1918, p. 368).

As Sluga points out, this passage suggests that "Frege does not hold that thoughts are in the mind as the bird is in the hand, but rather as the muscles and bones are in the hand. The objective is not something alien or external to the mind, but constitutive of it" (1980, p. 121). The passage suggests that Frege should be regarded as an adherent, not of Platonism, but of what might best be called inter-subjectivism. Thus (in a passage not far removed from the analogy just sighted) Frege maintains:

> Neither logic nor mathematics has the task of investigating minds and contents of consciousness owned by individual men. Their task could perhaps be represented rather as the investigation of *the* mind; of *the* mind, not of minds (1918, pp. 368-369).

Although acceptance of Sluga's non-Platonistic interpretation of Frege's senses has the advantages described above, it is not without its problems. Frege (in the very work just cited, which dates from 1918) argues that a thought, which is the sense of a sentence, is to be identified with an *entity* of a certain sort that "belongs neither to my inner world as an idea, nor yet to the external world, the world of things perceptible to the senses" (1918, p. 369). Thoughts are described as belonging to a third realm consisting of eternal, changeless things (1918, p. 370). Frege goes so far as to say that a thought would remain true even if there were no thinker to entertain it (1918, pp.

371-372).[61] This would entail that the senses of expressions would continue to exist, they would still be *there* to be grasped, even if there were no speakers to utter the expressions of which they are the senses. If credence is to be given to Sluga's position, it is necessary to give some account of this third realm that senses occupy, and this account must do justice to Frege's assertion that senses would exist even if there were *no* language-users to grasp them. It is difficult to see how inter-subjectivism--the Lotzean conception of objectivity--could fit the bill. *Inter*-subjectivity looks like a *great deal* of subjectivity. If by inter-subjective we mean (what Lotze may well have meant, given his Kantian bearings) transcendental or necessary features common to all rational agents, then the non-existence of rational agents would entail the non-existence of senses.

The Platonistic interpretation, on the other hand, is saddled with what may be referred to as *the problem of distinguishing the Sinn and the Bedeutung of a predicate*, and I believe this problem proves to be considerably more intransigent than the problem facing proponents of the non-Platonistic interpretation which, as shall be explained below, identifies the senses of expressions with their inferential roles. If there is some sort of ontological distinction between *Sinn* and *Bedeutung*, then--on pain of Leibniz's Law--the *Sinn* and the *Bedeutung* of an expression must differ with respect to one or more properties. How this can be achieved, if both the *Sinn* and the *Bedeutung* are abstract entities, remains utterly mysterious. A Platonist with respect to *numbers* would be in a position to distinguish between numbers by distinguishing their different roles within the number system, by describing their various properties (e.g., being prime), etc. How shall one carry out such a

[61] Whether thoughts or senses, construed Platonistically, can be true in the manner required by Wittgenstein and, hence, whether Wittgenstein's own semantic theory is compatible with semantic Platonism will be considered at the end of this chapter.

project when it comes to the *Sinn* and *Bedeutung* of a predicate? Suppose the *Bedeutung* of "red" is the concept or property *redness*. The *Sinn* of "red" would be abstract as well. It could not be distinguished from the *Bedeutung* in the way, for example, the *Bedeutung* "one" may be distinguished from the *Bedeutung* of "two." It is difficult to see what could serve to distinguish the two.

Nor, in contrast with Frege's tendency to resolve philosophical disputes by introducing linguistic distinctions and criteria, can the property which distinguishes *Sinn* from *Bedeutung* merely be notional; that is, *Sinn* and *Bedeutung* cannot be distinguished solely on the grounds, for example, that the former is referred to by an embedded noun clause whereas the latter is not. That would be like Descartes distinguishing between mind and matter on the grounds that the former has, whereas the latter lacks, indubitable existence. Now of the various types of expressions said to have both *Sinn* and *Bedeutung*--i.e., sentences, singular expressions and predicative expressions--it is most important to explain what distinguishes the *Sinn* of a predicative expression from its *Bedeutung*. This is due to the fact that there is a certain semantic primacy to the sense of a predicative expression. The sense of a sentence is *composed of* the senses of its component expressions. Concerning the components, the senses of predicative expressions or concept-words seem more important than those of singular expressions, because Frege appears to think that the senses of singular terms need to be explicated in terms of the senses of predicative expressions[62] In "On Sense and Reference" he suggests that the sense of a proper name is to be identified with the sense of the definite description that the speaker associates with the name (1892a, p. 158n.). Thus for a given speaker

[62]Note that this does not mean that the *referents* of singular expressions need or can be explicated in terms of the referents of predicative expressions. As noted earlier, what is designated by "the concept 'horse'" is not to be identified with a concept.

the *sense* of "Aristotle" may be that of "the student of Plato and teacher of Alexander the Great" or that of some other definite description uniquely satisfied by Aristotle. For Frege the sense of a singular expression is identical to the sense of some predicative expression that is uniquely satisfied. Using both Kaplan*ish* hindsight concerning the potential of definite descriptions to function predicatively, as well as our own hindsight concerning Frege's attempts at providing a *logical* link between singular and predicative expressions (as described, for example, by Russinoff, 1992), it is clear that an account of the sense of a singular expression must *include* an account of the senses of predicative expressions along with an account of what it is for such expressions to be uniquely satisfiable. Consequently, much turns on the account to be provided of predicative expressions. The problem comes in discerning a Platonic entity to be the sense of a predicate.

The traditional caricature of Frege's view, which I contend is inaccurate, runs like this: (i) the sense of a sentence is a proposition or thought; its referent is a truth-value; (ii) the sense of a singular term consists in the cognitive content expressed by the definite description associated with it; its referent is an object; (iii) the sense of a predicative expression or concept-word is a concept; its referent is the extension of the concept. This caricature of Frege's position, particularly the attribution to Frege of (iii), is quite commonplace. We see it, for example, in Putnam (1975). Putnam, who in that article wants to attack the assumption that *Sinn* (or intension) determines *Bedeutung* (or extension), counts Frege among his adversaries. Regarding the *first* clause of (iii), Putnam says,

> Frege and more recently Carnap and his followers...rebelled against...'psychologism', as they termed it. Feeling that [senses] are *public* property--that the *same* [sense] can be 'grasped' by more than one person and by persons at different times--they identified concepts (and hence 'intensions' or [senses]) with abstract entities rather than men-

tal entities (1975, p. 218).[63]

And concerning its *second* clause:

> The *extension* of a term, in customary logical parlance, is simply the set of things the term is true of. Thus 'rabbit', in its most common English sense, is true of all and only rabbits, so the extension of 'rabbit' is precisely the set of rabbits (1975, p. 216;)."[64]

Customary logical parlance it may be, Frege (I shall argue below) it is not. Anyhow, it is precisely this sort of distinction that one must attribute to Frege if one is to construe his concepts as Platonic entities.

Once the requisite Platonic status has been attributed to *concepts*, the issue becomes defined as one of isolating the difference between concepts and their extensions. Concepts, it is maintained are essentially incomplete and in need of saturation or satisfaction from objects. The objects that make up the extension of the concept, on the other hand, are in some sense *complete*, which (perhaps) means that they can undergo modifications regarding certain non-essential properties while yet retaining their identity. Any modification of a concept, however, would create a new concept, which is just to say that concepts cannot be modified. Consequently, claim proponents of this interpretation, particular objects are *wirklich*, concepts are not.

I contend that this caricature of Frege's position is inaccurate and incoherent. It may be dismissed on the grounds of charity as well as fidelity to the text.

First, with respect to fidelity to the text, Frege *never* says that

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[63] I have substituted the word "senses" for Putnam's "meanings," since it is clear from the context that that is what he means. One of Putnam's theses just is that the word "meaning" as traditionally used is ambiguous, i.e., in some occurrences it is synonymous with reference, *Bedeutung*, or extension but in other occurrences it is synonymous with sense, *Sinn*, or intension.

[64] That Frege's senses are to be understood as Platonic entities is reiterated (1975, p. 222.).

the sense of a predicate is a concept; on the contrary, a concept is always said to be the *Bedeutung* of a predicate! This view is expressed not only in such early writings as *Begriffsschrift* (1879a) and *The Foundations of Arithmetic* (1884) but in many writings published around the same time as "On Sense and Meaning" (1892a) and "On Concept and Object" (1892b) in which the *Sinn/Bedeutung* distinction first appears in full force. That concepts are the *Bedeutungen* of concept-words is made abundantly clear by the chart contained in his May 1891 letter to Husserl (1891b, p. 118), as well as by his "Foundations of Geometry I (1903, p. 282) and "Foundations of Geometry II (1906b, p. 307). This flagrant misinterpretation is exacerbated by a misunderstanding of what Frege means by the *extension of a concept.* A careful examination of "Function and Object" (1891a, pp. 146ff.) reveals that although the extension of a concept (or, more generally, of a function) is a set of objects, it is not the set of objects which fall under the concept (or the arguments of the function). The extension of a concept or function is identified with the *value-range* of the sentence or formula in which the concept-word or function-expression occurs. The extension of a concept is thus a set of truth-values (1891a, p. 146). The point is expressed perhaps most succinctly in his critique of Schröder. There he warns his readers "[t]he extension of a concept does not consist of objects falling under the concept" (1895, p. 228). Rather, "the extension of a concept is constituted in being, not by the individuals, but by the concept itself; i.e. *by what is said of an object when it is brought under*

a concept (1895, pp. 224-225, emphasis added).[65] So if we let b denote some object that falls under the concept denoted by "is red," it would not be appropriate to say that **b** is within the extension of that concept. Rather, the extension is *what is true of* **b**. We may state the point more accurately by saying that the set of truths (the value-range) designated by "is red" for a set of arguments, {a, b, c,...*n*}, are the extension of the concept. As will become clearer below, this is a matter of the utmost importance, if we are to understand what Frege thinks is problematic about Russell's Paradox and if we are to fully appreciate what Wittgenstein is up to in introducing his distinction between showing and saying. Here it suffices to point out that it is the failure to distinguish the relation of *falling under* (or subsumption under) a concept from that of being a member of the extension of a concept that lies at the heart of the Platonistic misinterpretation of Frege. The relation of *falling under* is, in fact, a relation that obtains among the *Bedeutungen* of a sentence's components; it is not, as the above interpretation suggests, one that holds between the *Sinn* of a predicative expression and the *Bedeutung* of a proper name. The senses of predicative expressions must indeed be distinguished from their *Bedeutungen* (see especially the diagram he offers to Husserl in 1891b, p. 118), but now what those senses could *be*, on the Platonistic interpretation, poses an

[65] Here, I think, we should resist any temptation to interpret this passage so as to identify the extension of a predicate with the concept or function itself. Notice that Frege does not use the phrase "extension of a *predicate*" when articulating his view. Rather, he speaks of the extension of a *concept*. In order to even pose the alternative reading of this passage, one must regard a concept and the extension of a concept as the very same thing. Surely this is unjustified; it certainly involves treating Frege as speaking in as convoluted a fashion as possible. Needless to say, this leaves us with the question of what the extension of a concept *is*, if it is neither the objects that fall under the concept nor the concept itself. As noted above, this burden becomes relatively light in lieu of the discussion Frege gives the subject in "Function and Object" (1891a).

insurmountable problem."

There is also something incoherent in the Platonistic interpretation. It is quite ludicrous to attribute to Frege the view that the *Bedeutungen* of predicative expressions are to be identified with extensions, since extensions of concepts are objects, and *objects* can *never*, for Frege, be considered the *Bedeutungen* of predicative expressions. This objection is even applicable to the view that identifies the extension of a concept with the set of objects that fall under it, since for Frege both classes and their members can be regarded as objects (1895, p. 224).[67] Because the extension of a concept is a kind of object, it must be designated *by* a singular term rather than a predicative expression. What makes the view being considered incoherent is that it breaks down the distinction between concept and object and fails to distinguish the logical roles of singular and predicative expressions, and these are the most fundamental distinctions in all of Frege's philosophy. This is not to deny that Frege's philosophy contains much that is problematic (perhaps incoherent); that it is susceptible to Russell's Paradox indicates as much. The point here is rather that it is impossible to even begin to *interpret* Frege, let alone judge whether what he says is true or false, on the above interpretation. The above interpretation fails

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[66] Passmore's (1966, p. 150) account of Frege also identifies concepts (and more generally functions) as the senses *expressed by* concept-words. Unlike Putnam, he resists identifying the *Bedeutungen* of predicates with sets of objects falling under the concept. In fact, he appears to deny they have any *Bedeutung* at all; quoting the *Foundations of Arithmetic* (1884) out of context, Passmore suggests this is a question which should not be raised.

[67] Frege maintains, against Schröder, that classes must be considered objects in their own right and not merely collections of individuals. His argument is based on the premise that the identification of a class with the collection of its members would make discourse regarding empty classes impossible. Yet Frege is willing to permit the use of predicative expressions under which no objects fall within an exact science; negative existentials such as "There are no frictionless plains" are a case in point. What he is unwilling to permit is the use of singular expressions which designate no object (1895, p. 228).

to break Frege apart at the crucial joints.

It is easier to overcome the charge that a Lotzean conception of *objectivity* entails the subjectivity of senses than it is to find Platonic entities to be the senses of predicates. The key is to make their objectivity somehow parasitic upon that of their *Bedeutungen*. Such a suggestion seems wildly problematic at first, given the fact that the Lotzean conception of objectivity makes the *Bedeutungen* of expressions themselves merely inter-subjective. It seems highly unlikely that something so lacking of full-blooded ontological status could *ground* the objectivity of senses. It even appears that the interpretation of Frege as accepting the Lotzean conception of objectivity could crumble under the weight of this problem; after all, if *Sinn* and *Bedeutung* are both assigned the status of being merely inter-subjective, what could serve to distinguish them? Sluga's interpretation of Frege seems to flounder in a way not unlike the competing interpretation: it fails to do justice to a (*the*) crucial distinction operating in Frege's writings.

Sluga's view is defensible, nonetheless. The *Bedeutungen* of expressions are not *merely* inter-subjective, even if one is restricted to describing them solely in terms of the logical properties of the terms that refer to them. It does not follow from the fact that one cannot, as it were, step outside of language to characterize the way in which language corresponds to reality, that there is no reality to which language corresponds. It does not follow from the fact that there is no neutral observation point from which to characterize correspondence, that correspondence does not occur. It would clearly be wrong, for example, to regard Frege as an Idealist.[68] What Frege has done is specify the formal conditions for truth. The three criteria for objectivity described earlier--viz., that what is objective must at least be inter-

[68] A letter dated 3 April 1920 from Frege to Wittgenstein makes the former's dissatisfaction with Idealism abundantly clear.

subjective, that it must not be the mere product of a psychological process, and that it must not be identified merely with that which is *wirklich*--specify formal conditions for *saying* that something has objective existence. Such conditions apply to our *talk* of both the *Sinn* and the *Bedeutung* of linguistic expressions. But their objectivity does not consist in their mere satisfaction of these formal conditions. Language, for Frege is not a mere shuffling of empty symbols, as his numerous attacks upon Hilbert and his followers make clear (see, for example, 1906b, pp. 326-327); language is not simply *about* language. Truth and its preservation require the satisfaction of material as well as formal conditions. The sciences (including the science of mathmatics[69]) provide this material. Thus I stand opposed to the assumption which animates interpretations of Frege by Church (1956, pp. 24ff) and Davidson (1969, pp. 39-40 and 1990, pp. 303-304) according to which, in Davidson's words:

> The correct objection to correspondence theories is not...that they make truth something to which humans can never legitimately aspire; the real objection is that such theories fail to provide entities to which truth vehicles...can be said to correspond. If this is right, and I am convinced it is, we ought also question the popular assumption that sentences, or their spoken tokens, or sentence-like entities or configurations in our brains, can properly be called "representations," since there is nothing for them to represent (1990, p. 304).

The assumption is that if neither the relation nor the relatum of correspondence can be characterized or described (an epistemological point), then there can be no such relation or relatum (a metaphysical point) and the very idea of language being a representational medium loses its force. We need not accept this assumption. The very purpose of Wittgenstein's distinction between showing and saying and the Picture Theory of the proposition is to provide an account of how linguistic ex-

[69] Mathematics is to be included *among* the sciences; this is to be understood in light of the fact that not everything which is objective is *wirchlich*.

pressions may be related to the world in spite of the fact that nothing can be *said* about their relation. The seed from which Wittgenstein's theory would grow is contained, however, in Frege's philosophy.

The Lotzean conception of objectivity does not rule out the possibility of there being entities that correspond to linguistic expressions. (In fact, Frege's criticism of formalism may well also hold against the sort of view, described above, attributed to him by Church and Davidson, since that view makes language self-contained in the manner of a game; see Frege, 1906b, p. 327.) But let us be quite clear here concerning what is at issue. What is *not* at issue is whether a *semantic* relation holds between the *Sinn* of an expression and its *Bedeutung*. In interpreting Frege this much is uncontroversial: (i) the senses of sub-sentential components determine or compose the sense of a sentence; (ii) the sense of a sentence (a) determines the truth-value of the sentence that is used to express it, which is to say it picks out or accomplishes reference to the True (what is true) or the False (what is false), (b) determines in part the truth-value of molecular propositions into which it figures, and (c) serves as a necessary condition for the *preservation* of truth in valid inference, provided it designates what is true. What is more, it is uncontroversial that for Frege the sense of an expression, or rather the *grasping* of an expression's sense determines what a *speaker* is referring to.

What *is* controversial is whether there exists an *ontological* relation between *Sinn* and *Bedeutung*, such that the nature of the former is determined by the nature of the latter. It is precisely the apparent absence of such a relation that enables Putnam (1975) to include Frege among those who incorrectly believe that intension determines extension. I contend that Frege's senses could not perform their semantic roles unless their structures and relations are determined by the structures and relations of their *Bedeutung*. I think there is in Frege a tendency to

accept the thesis which would remain undeveloped until Wittgenstein's *Tractatus*, namely, that the structure of a thought and the relations that obtain among thoughts are *isomorphic to* structures and relations among the referents of expressions. In other words: language and thought share the logical form of the world, and that it is by virtue of this shared form that the former perform their semantic roles.

What evidence there is for this may be found in the fact that Frege always finds in the semantically and logically relevant features of language and thought features that the world must presumably share. Indeed, in reference to what he feels is his apparent good fortune in being a native German speaker, Frege observes: "[i]t is here very much to my advantage that there is such good accord between the linguistic distinction and the real one" (1892b, p. 185). Consider first the relation that holds between a predicative and singular expression. The predicative expression is essentially incomplete, having meaning only insofar as it modifies a proper name or some other singular expression. Thus it is with the *Bedeutungen*, the meanings, of predicative expressions: concepts or functions have a "predicative nature" (1892b, p. 187), i.e., are essentially incomplete and in need of "supplementation" (1892, p. 187n) by an object. Objects, on the other hand, are not only identified by the logical properties of the expressions that refer to them (particularly by the fact that expressions that refer to them are capable of flanking the identity sign), they are said to be be capable of sustaining their identity across changes in their mode of presentation. This cannot be said of concepts. Any change in *their* mode of presentation is a change in what is presented. The concepts that are designated by "is Plato's greatest pupil" and "is Alexander's greatest teacher" may be satisfied by one and the same individual, but what those predicative expressions designate are two *different* concepts. Presumably, then, objects are capable of retaining their identity under

one or another determination.

Just as the senses of sub-sentential components determine or compose the sense of a sentence, the referents of sub-sentential components comprise a sentence's truth-value; which is to say they compose the *Bedeutung* of the sentence as a whole, i.e., they constitute "the circumstance that it is true or false" (1892a. p. 163). It is impossible to imagine that the senses of a sentence's sub-sentential components could determine the sense of the the sentence as a whole (whose function is to determine a truth value) unless the component senses stand in a logical relation to one another in a way that is analogous to the relations that obtain among the referents of the sentence's sub-sentential components. If the sense of a sentence is not structured so that the sense of a predicate, F, does not stand in relation to the sense of a singular term, a, then how would it be possible for the senses of the sub-sentential components to comprise the sense of a sentence: *that a is F*? In fact, Frege does employ the metaphors "saturated" and "unsaturated" both to relations among the senses and to relations among the referents of a sentence's components (1892b, p. 193; also 1923, p. 390).

It is difficult to see how the semantic function of a sentence's sense to determine a truth-value could be carried out unless there is some object (truth-values are objects for Frege), some *circumstance*, that makes the thought expressed by the sentence true or false. And that thought, the sentence's sense, must be structured in order to represent the *fact* that a is F. Indeed if *Sinn* and *Bedeutung* were not to share the same structure, it would be impossible to distinguish the True from the False. Since, for Frege, the singular terms of a science *must* refer (1892a, p. 169; 1895, p. 228), the only way the falsehood of an atomic sentence may arise is if a given object fails to fall under a concept. Given the reference of the singular term, a true and a false thought will be *about* the very same thing. What then distinguishes

them? Clearly the fact that the thought represents an object as standing in relation to a concept that in fact does not obtain is decisive. This point, implicit in Frege, becomes explicit in Wittgenstein's dictum that a propositional sign cannot be a name and that it must convey (show) by means of its structure the possibility of its falsehood. This will be discussed in greater detail below.

The matter does not essentially change when we consider sentences containing quantifiers or connectives. Both quantifiers and connectives contribute to the sense of a sentence; they *designate* (*bedeuten*) relations. Quantifiers function as second-order predicative expressions that designate relations among concepts (1884, pp. 64-65; 1892b, p. 187ff) To say "Something is green" is to assert that the concept *green* falls within the concept *not nought* (or has the property *not nought*). To say "Everything is green" is tantamount to saying that the concept *green* falls within (or may be assigned the number) **n**, which is identical to the number of objects in the domain of discourse. To say "Nothing is green" is to assert that *green* falls within the concept *zero* or *nought*.

Indeed "Something is not green" may be taken as meaning that not everything is green, i.e., that it does not fall within the concept (or may be assigned a number *other* than) **n**, which is identical to the number of objects in the domain of discourse. Categorical propositions may be dealt with in similar ways, for example: to say "All dogs are mammals" is to assert that the concept *dog* falls within or is subordinate to the concept *mammal*. The point here is that quantifiers, like other sub-sentential components, have reference as well as sense. Their referents are *relations among concepts*, and it is crucial to note that these are *logical* relations.

The other logical constants, the connectives, also have *Bedeutungen*, inasmuch as they designate relations among truth-values

(1892a, p. 173). For example, "If S, then P" asserts that for all values of S: if S is true, then P is not false. It is important to keep in mind that truth-values, for Frege, are objects, and, therefore, that the connectives designate logical relations among objects.

It is fair to say that the other two functions assigned to the senses of atomic propositions--viz., to determine in part the truth-values of the molecular propositions in which they occur and to serve as a necessary condition for the preservation of truth across inferences--could not be accomplished unless the requisite relations obtain among the concepts and among the truth-values to which quantifiers and connectives refer. In the first instance, were there not logical relations among the truth-values of atomic propositions, molecular propositions could never be true. What molecular propositions assert simply could not obtain. But neither could they be false! What makes a proposition false is that what it denotes stands in a logical relation other than that which is asserted, but if there are *no* such relations, then there is nothing to falsify the propositions in question. Those propositions would then be, not true or false, but nonsensical. In that event the sense of the molecular proposition could not determine a truth-value (and *a fortiori* the sense of an atomic proposition could not contribute to the determination of the molecular proposition's truth-value) as there would be no such values to determine.

One can see that this entails the impossibility of the *preservation* of truth through inference. A form of inference, such as *modus ponens*, can be sound if and only if it is possible for the conjunction of the formulae of which it consists to be true in at least one instance. But that would be impossible, since that conjunction would be a molecular proposition that, as we have seen, could have no truth-value (i.e., could be assigned no value range) at all. To anticipate the obvious objection that validity does not require consistency, let me point

out that for Frege *it does* (1906b, p. 335; 1923, p. 402). Thus Frege drops the distinction between validity and soundness (a practice found in some logic texts, e.g., Lemmon, 1978).

To return to our question: how can senses be objective if they are not Platonic entities? Senses could not fulfill their essential functions if they happened not to stand in relation to, or to stand in relations to one another in ways analogous to, the *Bedeutungen* of a sentence's components (including those of the logical constants). It is this sharing of logical form that bestows objectivity upon senses. This may sound contrary to the usual cliche`, attributed to Frege, that sense determines reference, but such is not the case. It is the *grasping* of sense that makes it possible for a *speaker* to accomplish reference, and so forth. *That* says nothing at all about the ontological relation between *Sinn* and *Bedeutung*. Ontologically, *Sinn* (the *essential* function of *Sinn*) is determined by *Bedeutung*. Because, on this view, the objectivity of sense is determined by the isomorphism that exists between *Sinn* and *Bedeutung*, and because the principal determinant of that isomorphism are the logical relations that exist among (and partly comprise) the *Bedeutungen*, I can think of no better way to describe the sense of an expression than as its *logical role*. Actually, even this is somewhat misleading, since it locates the sense of an expression among expressions or signs themselves. To do so would be to give up too much to Hilbert and his followers; that is to say, we would not be able to adequately distinguish between the views of Frege and at least one of his principal adversaries. To rectify this I suggest that the sense of an expression *is* an aspect of what Frege refers to by the word "idea." Ideas, for Frege, clearly are subjective. But the text distinguishes between what is *merely* an idea and the sense of an expression "which is indeed *no longer* subjective like the idea, but is yet not the object itself" (1982a, p. 160, emphasis added). What distinguishes mere ideas

from senses, suggests Frege, is that the former are "*wholly* subjective" (1892a, p. 160, emphasis added). I suggest that senses are not *wholly* subjective, because their properties and relations mimic those of their *Bedeutung*. Senses are made out of the same material as ideas (whatever that might be), but they are to be distinguished from mere ideas (what is *purely* subjective) by this feature (this isomorphism) that they possess. *It* is their link to the *Bedeutung* and to the relations among the *Bedeutungen*. Thus it would be more accurate to say that a sense is the *cognitive* content of an idea that is expressed by a sign, where "cognitive content" must be understood as designating that aspect of the idea which plays a *logical* role.

Because sense can be made out of the objectivity of *Sinn* without appealing to Platonic entities, and because the Platonistic version is incapable of accounting for the senses of predicates (something we cannot imagine Frege leaving undone), the non-Platonistic version is to be preferred.

Let it be noted that one does not need to accept the Lotzean conception of objectivity, in order to accept this non-Platonistic account of senses. That Frege accepted it, that he would be content to venture only formal criteria for objectivity, reveals his unwillingness to acknowledge the metaphysical dimensions of his problems (or of their solutions), in spite of the implicit role this metaphysical dimension plays in securing the objectivity of senses.

Russell's paradox is problematic for Frege, not so much because it raises ontological difficulties concerning classes as objects (even though it is true it does), but because it introduces an invidious inconsistency into a system that is to serve as a model for all valid inference. The paradox produces inconsistent value-ranges, rendering the system as a whole useless to protect against invalid inference. Taking the *name* of the problematic class as argument(s), the *Bedeutung* of the

sentence is both the True and the False. It is for this reason that Frege wrote to Russell in 1902 "[y]our discovery of the contradiction has surprised me beyond words and, I should almost like to say, left me thunderstruck, because it has rocked the ground on which I meant to build arithmetic" (1902, p. 132).

It is interesting to note that in his initial response to Russell Frege does attempt some semblance of a counter-argument. Frege notes what he perceives as Russell's inexact use of the expression "predicate" in "A predicate is predicated of itself," and responds, "[a] predicate is as a rule a first level function which requires an object as argument and which cannot therefore have itself as argument (subject) (1902, p. 132). It sounds as if Frege is introducing a theory of types not unlike Russell's own. Although the *way* the objection is phrased is characteristically Fregean (in that it attempts to undermine the intelligibility of the opponent's position by clarifying the meanings of certain key words), the message contained in it is not. It is true that Frege countenanced hierarchies of concepts, so that quantifiers are second-order predicates to which first-order predicates may be subordinated. However, the subordination does not extend all the way down to the relation that obtains between a first order concept and the object which falls under it. The expression "falls under" is misleading, because first-order concepts and objects are on the same level ontologically. When the term is applied to the subordination of first- to second-level concepts it is being used ambiguously. His letter to Russell aside, Frege is usually quite cautious in this matter; for example, "Concept and Object" states:

> Second-level concepts, which concepts fall under, are essentially different from first-level concepts, which objects fall under. The relation of an object to a first level concept that it falls under is different from the (admittedly similar) relation of a first-level to a second-level concept. (To do justice at once to the distinction and to the similarity, we might perhaps say: An object

> falls *under* a first-level concept; a concept falls *within* a second-level concept) (1892b, 190).

Here we should note that the similarity to which Frege refers consists in the fact that correlated with any predicative expression there exists a singular expression which, in turn, may fall under higher-level predicative expressions.[70] And that just is what permits the formation of the paradox: does the problematic class (i.e., the class of all classes not members of itself) now conceived as a kind of object *fall under the concept* to which "is a member of itself" refers? The paradox is certainly not blocked by the sort of consideration raised in his letter to Russell If Frege thought that it might be, he did not feel that way for long.

Even if Frege did consider the possibility of developing a theory of types along the same lines as Russell, doing so would have taken him far from the center of his philosophy. He would have had to engage in just the sort of metaphysical inquiry precluded by the Lotzean conception of objectivity he accepted. He would have had to provide some metaphysical account of the distinction between what is referred to by proper names and by concept-words. The problem of the concept *horse*, for example, would have had to have been settled once and for all, and not by appealing to features of syntax whose logical role is to mediate the apparent referential gap between proper names and concept-words, but by an account of the *referents* of those terms. What would be required of Frege would be the sort of account offered by Russell in his numerous writings: of universals, particulars and forms as the *objects* of judgment, of acquaintance as the way in which reference to objects is effected, and so forth. But for Frege an account of reference, of corre-

[70] Again, it is hard to understand how it is possible for this correlation to occur and the paradox to ensue while at the same time it is maintained that concepts cannot be named, unless one is willing to question the depth Frege attributes to the metaphysical waters in which the concept/object distinction floats.

spondence, is clearly out of the question. As we saw earlier, Frege repudiates the possibility of a correspondence theory of truth. Terms like "truth" and "validity" must remain primitive and indefinable. They may be elucidated by way of metaphor or further explicated by listing the sentences or sets of sentences of which they may be predicated, but they cannot constitute the subject matter for a semantic *theory*, that is, one that goes beyond a theory of inference (the *preservation* of truth) to include an account of reference and correspondence (or *original* truth). For Frege the sentences comprising such a theory would have to fall beyond the pale of the concept-script. That the *coherence* of logic and mathematics must depend upon saying the unsayable would surely have been regarded by him as undermining the whole project. It is this complaint which we see Wittgenstein registering against Russell's theory of types when he maintains that an adequate theory of types is impossible.

It is to Wittgenstein's credit to have found a way to render a theory of types unnecessary. From Frege he retrieves the idea that primitive semantic terms can only be *elucidated*; only in Wittgenstein's hands this idea develops into a full-blown semantic distinction between what can be said and what can be shown.

3. The Distinction Between Showing and Saying.

We can view Wittgenstein's account of *what is shown* as the successor to Frege's notion of an elucidation (*Erlauterung*). In fact, well into the *Tractatus* Wittgenstein retains Frege's terminology:

> The meanings of primitive signs can be explained by means of elucidations...(1922b, 3.262).
>
> Philosophy aims at the logical clarification of thoughts
> Philosophy is not a body of doctrine but an activity.
> A philosophical work consists essentially of elucidations.
> Philosophy does not result in 'philosophical propositions,' but rather in the clarification of propositions...(1922b, 4.112).

> My propositions serve as elucidations in the following way: anyone who understands me eventually recognizes them as nonsensical, when he has used them--as steps--to climb up beyond them... (1922b, 6.54).

The account of *showing* also provides us with the predecessor to what in the later Wittgenstein's philosophy are called grammatical remarks or grammatical propositions, which are characterized as being neither true nor false but (in a sense to be explained in a later chapter) antecedent to truth. We see the later view already present in the *Tractatus*:

> The propositions of logic describe the scaffolding of the world, or rather they represent [*stellen*] it. They have no 'subject-matter'.(1922b, 6.124)[71]

The unavoidability of a distinction between what can be said and what can only be shown carries major implications concerning how we view the nature of language. A complete characterization of the view which is entailed will have to await a later chapter; however, let me say here that the view entails: (i) that linguistic *tokens* (i.e., particular utterances and inscriptions), rather than one or another sort of linguistic *type* (e.g., propositions that are individuated in terms of their so-called cognitive content or statements that are individuated in terms of their truth-conditions), can be said to be the bearers of meaning;[72] and (ii) that a radical conventionalism with respect to what we call true

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[71] The verb *stellen* is perhaps more accurately rendered as "they present" as found in the Ogden (1922a) translation. That this is the case will become apparent below.

[72] I say "*said to be* the bearers of meaning" rather than "*are* the bearers of meaning," because on the later view, our talk of meanings must be understood instrumentally. On that view, there are no meanings (although on this Wittgenstein's early views concerning negative existentials would return to haunt him. What there is is our *talk of meaning*. Tokens of such (which *can* be individuated along structural and functional lines) play a certain role in our discourse, but do not constitute a meta-language. It would be more accurate to say that such remarks function as linguistic exemplars or prototypes. I am convinced, for reasons to be presented in this and a forthcoming chapter, that this idea originates in the Tractarian (and Pre-Tractarian) account of showing.

and false and a certain conceptual relativism with respect to what we call rationality is possible. That possibility is already acknowledged in the Tractarian declaration that "[t]he world of the happy man is a different one from that of the unhappy man" (1922b, 6.43). What does not go unnoticed, even in the *Tractatus*, is that conceptual relativism requires what we might call, for lack of a better term, a *token theory of meaning*. That theory holds that the existence of language-users is a necessary condition for the possibility of there being sense or meaning at all. In the *Tractatus* the view is implicit in the claim that "[w]e use the perceptible sign of a proposition (spoken or written, etc.) as a projection of a possible situation...a proposition is a propositional sign in its projective relation to the world" (1922b, 3.11-3.12). (What Wittgenstein means by *projection*, and how it differs from Russell's acquaintance will be taken up in Chapter Three.) In Wittgenstein's later philosophy the point becomes explicit: an account of the meaning of an expression is exhausted by a description of the uses to which that expression is put by language-users. The point is that *meaning* something with symbols is a human activity--nothing more, nor less. Both the early and late Wittgenstein can be viewed as setting up positions opposed to the linguistic Platonism which is (rightly or wrongly) attributed to Frege and which informs the work of philosophers from Gödel to Katz. Wittgenstein's pre-Tractarian attack upon the theory of types and upon meta-languages generally is the first leg of a life-long process that would move him further and further in the direction of naturalistic (and realistic) semantics. This naturalism is already present in the *Tractatus*: "[e]veryday language is a part of the human organism and is no less complicated than it" (1922b, 4.002). Anyhow, to understand the way the distinction between showing and saying resolves Russell's and Frege's difficulties, it is necessary to appreciate how, for Wittgenstein, a sentence's meaning and sense (i.e., its relation to

reality "in [the] wide sense" 1914a, p. 112) are the product a human *activity* that shows or displays what *may* be said.

Wittgenstein's World War I *Notebooks* open with the observation that:

> If syntactical rules for functions can be set up *at all*, then the whole theory of things, properties, etc., is superfluous. It is also all too obvious that this theory isn't what is in question either in the *Grundgesetze*, or in *Principia Mathematica*. Once more: logic must take care of itself. A possible sign must also be capable of signifying. Everything that is possible at all, is also legitimate. Let us remember the explanation why "Socrates is Plato" is nonsense. That is, because we have not made an arbitrary specification, NOT because a sign is, shall we say, illegitimate in itself (1914b, p. 2)!

This entry, dated 22 August 1914, is followed about a week later by the following:

> Frege says: Every well formed sentence must make sense; and I say: Every possible sentence is well-formed, and if it does not make sense that can only come of our not having *given* any meaning to certain of its parts. Even when we believe we have done so (1914b, p. 2).

These claims appear virtually unaltered in the *Tractatus* as 5.473 and 5.4733 respectively.[73] They are also largely anticipated in the remarks found in his 1913 "Notes on Logic" and early letters to Russell regarding the fact that different kinds of things must be symbolized by different kinds of symbols. Language users determine what type of symbol will represent what type of thing. Thus if it is specified as a matter of *arbitrary convention* (1913, 101) that small letters (a, b, c, etc.) shall function as names (and only these will function as names), and that capital letters (F, G, H, etc.) will function predicatively (and only these will function predicatively), then formulae of the form F(Fx) or F(F$\hat{}$x) will be patently nonsensical, since we will not have given

[73] One difference is that the example of "Socrates is Plato" in the first passage has been replaced by "Socrates is identical" at *Tractatus* 5.473.

such a construction meaning. Hence, "[t]he reason why 'The property of not being green is not green' is *nonsense* is because we have only given meaning to the fact that 'green' stands to the right of a name" (1914a, 116). For formulae taking but one argument (hence for sentences containing one-place predicates), the difference in syntactic type will suffice to show which expressions may be used singularly and which predicatively. For formulae that take two or more arguments (and sentences containing two- (or more-) place predicates), the positioning of symbols will effect the appropriate ordering of arguments (cf., 1913, p. 104). In essence, the syntactic formation rules of the language would render a theory of types unnecessary: given conventions concerning legitimate syntactic types and their relations, the fact that $F(F\hat{}x)$ is nonsensical is *shown* by the symbolism itself. *We* have given this expression no meaning.

Before Frege's views were examined, a question was posed concerning the apparent arbitrariness of this view. If $F(F\hat{}x)$ is excluded *by convention*, what justifies the convention? We may now state this objection in a more succinct manner. According to Frege, a phrase like $F\hat{}x$ functions as a singular expression precisely because it corresponds to a phrase which begins with a definite article. Any expression of the form "the so-and-so" functions for Frege as a name. Names name objects. The names of objects (and, for the later Frege, objects themselves) are the arguments of functions. Why should we prefer a set of linguistic conventions that exclude the possibility of the problematic forms from arising over those criteria laid down by Frege for distinguishing singular and predicative expressions? And why should the Vicious Circle Principle not simply be viewed as a convention *of the very sort* envisioned by Wittgenstein? Wittgenstein is faced with a dilemma. If the class and semantic paradoxes are to be avoided by adopting a particular

set of conventions, then he must explain why Frege's set of conventions (the liberality of which afford certain advantages over classical accounts of inference that fail to heed the function/argument distinction) should be rejected. If his answer to this is that it is necessary to reject such conventions *in order to avoid an illogical language*, then he is left with the task of explaining what distinguishes the sorts of conventions or rules he has in mind from those which are *stated* by Russell and Frege in their theory of types. Even if we attribute to Wittgenstein something like the view he would later express in the *Philosophical Investigations*, according to which "there is a way of grasping a rule that is *not* an interpretation" (1958, sec 201), that is, even if we ascribe to him the view that language users can adopt conventions and abide by rules without consciously entertaining *discursive* sets of rules, the problem is not resolved, for it is Wittgenstein's contention that a theory of types is neither possible nor necessary. It seems as if the factors which make a theory of types unnecessary just are those which make one possible. To avoid this dilemma it is necessary for Wittgenstein to demonstrate that what can be shown *cannot* be said.

The key is Wittgenstein's remark, cited earlier, concerning the impossibility of an illogical language.

> For the symbol of a property, e.g., Gx is that G stands to the left of a name form, and another symbol F cannot possibly stand to the left of such a *fact*: if it could, we should have an illogical language, which is impossible (1914a, p. 116).

Clearly what distinguishes Wittgenstein from Russell and Frege is that the latter two believe that steps must be taken to insure language against the possibility of becoming illogical. Both Russell and Frege have as their goal the *construction of* a logically perspicuous language free of the vagueness and inconsistency supposedly inherent in natural language. Neither ever acknowledges that what guides the development of

their systems is a desire to accommodate the inferential intuitions of natural language users (particularly with respect to intensional contexts). Wittgenstein, on the other hand, believes that an illogical language is *impossible*. His view is that if language--*any* language, including natural langueage--is capable of being a representational system, then it must be logical. An illogical language would be incapable of representing anything at all. This is because no contradictory statement is capable of *saying* anything whatsoever, and so, in an important sense, no such statement (although that term is a misnomer here) can *belong to* the language. This theme echoes loudly in the *Tractatus* where Wittgenstein declares:

> It used to be said that God could create anything except what could be contrary to the laws of logic.--The truth is that we could not *say* what an 'illogical' world would look like (1922b, 3.031).

The point is easy to miss. Using the hindsight afforded by the *Tractatus*, it is tempting to think that an illogical language is impossible, since--on the Picture Theory of the Proposition--any propositional sign must be capable of signifying, given the fact that its pictorial properties allow it to share the logical form of the possible states of affairs that it may picture. It is tempting, in other words, to see the picture theory of the proposition and its ontology as providing the grounds for the idea that an illogical language is impossible. Such an approach is taken by McGuiness who, in describing Wittgenstein's 1912-1913 views, says:

> Signs go proxy for objects precisely because when properly constructed--or, what comes to the same thing, properly understood--they cannot be combined in ways which are impossible for the objects. This guarantees that every possible proposition is well-constructed; that no nonsensical proposition can be formulated; and consequently that no theory of types is necessary (1974, p. 56).

The idea that signs go proxy for objects can be traced to a December

1914 entry into the *Notebooks* (1914b, p. 37). McGuiness, however, believes the thesis is implicit even in the 16 January 1913 letter to Russell (a portion of which was cited earlier):

> I now think that qualities, relations (like love) etc. are all copulae! That means I for instance analyse a subject predicate proposition, say, "Socrates is human" into "Socrates" and "something is human," (which I think is not complex). The reason for this is a very fundamental one: I think there cannot be different Types of things! In other words whatever can be symbolized by a simple proper name must belong to one type...(1912, pp. 121-122).

We can agree with McGuiness that the Tractarian idea that signs go proxy for objects provides added detail as to why an illogical language is impossible. We can also agree that the Picture Theory of the Proposition owes much to the Fregean idea that different kinds of things are symbolized by different kinds of symbols (which is remarked upon later in the very same letter). Wittgenstein's declaration that qualities and relations (or, rather, that the expressions which stand for them) are copulae makes abundantly clear his acceptance of Frege's thesis that they (or the symbols which stand for them) are essentially incomplete. But this cannot be the complete answer. It was, after all, Frege's distinction between concept and object that *permitted* the construction of Russell's paradox in the first place! Later in that same letter he does mention that an adequate theory of symbolism must render a theory of types superfluous, but it should not be supposed that that has been accomplished in the mere reference to theses held in common with Frege. That the relations which may hold among syntactically different types of symbols make representation possible (i.e., make the possession of a sense possible), for Wittgenstein, cannot be doubted. But it does not explain why it is impossible for there to be an illogical language.

The issue becomes all the more puzzling in light of the later Wittgenstein's views on inconsistency. In the *Remarks on the*

Foundations of Mathematics (1937) and elsewhere Wittgenstein maintains that illogical language games are perfectly possible, but that they would just be the sorts of things no one would take an interest in. Like measuring with a flexible ruler, such a procedure would get one nowhere (1937, p. 38). In a more radical vein he goes so far as to suggest that we can "[i]magine being taught Frege's calculus, contradiction and all. But the contradiction is not presented as a disease. It is rather an accepted part of the calculus, and we calculate with it. (The calculations do not serve the usual purpose of logical calculations)" (1937, pp. 209-210). (This author has no desire to speculate *how* the parenthetical remark could be true.) Surely, however, such sentiments are not shared by the early Wittgenstein. What is wanted is some account of why a contradiction must be assigned a degenerate status. As I mentioned above, what is distinctive about Wittgenstein's early view is that contradictions cannot *say* anything at all; they lack significance or sense. His early view stands in contrast to his later view as well as to classical accounts of contradiction according to which contradictions *say too much*.

The traditional interpretation of Wittgenstein's response to the paradoxes, as found, for example, in Ishiguro (1981) and McGuiness (1974), has always placed emphasis upon Wittgenstein's similarities with Frege--as if Frege's view just needs to be tidied up a bit. However while it is clear that Wittgenstein's view is in much the same spirit as Frege's (in that the symbolism itself *shows* the nonsensical nature of the paradoxes), in his solution he diverges from Frege's view greatly. Frege is to be credited with the idea that different kinds of symbols play different logical roles. Names and concept-words play singular and predicative roles respectively. What Frege failed to realize is that *sentences* play a role different in nature from *names*. He believed that sentences are singular terms precisely because they are able to flank

the identity sign. The source of that assumption in the analogy between sentences and equations was discussed earlier. Wittgenstein questions that assumption. As early as 1913 he writes Russell that "[i]dentity is the very Devil and *immensely important*. It hangs...with the most fundamental questions, especially with the questions concerning the occurrence of the *same* argument in different places of a function" (1912, p. 123).

Wittgenstein's doctrine of the bipolarity of the proposition entails that sentences cannot be names. Recall that, for Frege, sentences are *themselves* names of objects. It is that thesis which is the source of Frege's difficulties. Once the way in which propositional signs *do* refer is made clear, the superfluousness of a theory of types becomes apparent.

Earlier the bipolarity of the proposition was presented as Wittgenstein's solution to (i) the problem of falsehood, (ii) the problem concerning the logical relationship of affirmative propositions to their denial, and (iii) the problem concerning counter-intuitive belief-ascriptions when the subject of belief believes or asserts a falsehood. If one accepts the interpretation of Frege which imputes to his work ontological significance, then Wittgenstein's views concerning (i) are antithetical to Frege's inasmuch as they deny the possibility of objective falsehoods. Of even greater significance is the difference that exists between Frege's and Wittgenstein's conception of sense, and this difference exists regardless of whether one interprets Frege's notion of objectivity ontologically or epistemologicallly. The ontological interpretation construes Fregean senses as Platonic entities that are *grasped* by the mind: one understands (i.e., is able to pick out) the meaning (i.e., the *Bedeutung*) of an expression by grasping the sense (*Sinn*) expressed by its use within a particular context. The epistemological interpretation construes Frege's talk of senses as a *façon de*

parler made necessary by an adequate theory of inference.

Wittgenstein's conception of sense, in contrast, is to be interpreted ontologically but not along Platonistic lines. His senses, as described earlier, are *possible* states of affairs. The *Bedeutung* of a given propositional sign is that actual state of affairs that renders the sign either true or false. Earlier, too, it was mentioned that, for the *very* early Wittgenstein, negative propositions are made true (and affirmative propositions are made false) by negative facts that are later replaced by the *Sachverhalte* of the *Tractatus.* Wittgenstein tries to express the relation of a propositional sign to its sense by way of his *ab*-notation. The proposition is represented as standing between poles: **a**--P--**b**. The signs a and b correspond to the two possible states of affairs that can render P either true or false and which constitute the sign's sense (*Sinn*) (1913, pp. 98-99).[74] It is the sum of such possibilities that Wittgenstein refers to as Reality in the wide sense. The actual state of affairs that renders P true or false is the sign's meaning (*Bedeutung*). Because a propositional sign has both a sense and a meaning, it cannot be a kind of name. Suppose that **a** is what makes P true. Although the person who utters P asserts (i.e., means) that **a** is the case, the sense of P would have to be expressed by saying that "*either* a *or* b is the case" (although this will have to be qualified below, as the sense of P is *shown* rather than said). The expression of the sense of a propositional sign is essentially disjunctive. Indeed, inasmuch as ***b***'s being the case entails ~P, the sense of

[74] This marks a divergence from the symbolism ordinarily used in this dissertation. Ordinarily, a, b. c, etc. denote singular terms; here Wittgenstein uses them to denote states of affairs. Under no condition should this be taken to mean that Wittgenstein thinks states of affairs can be named. To avoid confusion I have taken the liberty of placing Wittgenstein's symbols in bold characters. It must be remembered that **a** and **b** are *possible* states of affairs (belonging to Reality *in the wide sense*), and that only one will be the actual state of affairs which is P's meaning.

P (as well as ~P) may be expressed by saying that either a or not-a is the case; consequently, the expression of the sense of a proposition is essentially disjunctive *and negative* (1913, pp. 99-100). Because a propositional sign has a *Sinn*, it will, as stated earlier, always be *about* more than what is actual; because a propositional sign possesses a *Bedeutung*, it will always at least be about what is actual. This is not true of names, even though some names have referents and others do not.

If a name--such as "Sherlock Holmes,"--lacks a referent, then in a manner of speaking it is about what is not. In that case, however, it will fail to have a *Bedeutung*. Since all sentences must have a *Bedeutung* but some names lack a *Bedeutung*, it follows that sentences cannot be names. Of course, it might be argued that it is false that all sentences have a *Bedeutung*, since sentences occurring within literature (e.g., sentences about Sherlock Holmes) may not be made true by anything. Be that as it may, such sentences *do* possess a *Bedeutung*; they may not be made true by anything, but they are made false by the facts that do happen to obtain. The *Bedeutung* of the sentence "Holmes walked the streets of London in February of 1875" is the circumstance which makes that sentence false. In Wittgenstein's pre-Tractarian terminology, that sentence is made false by the negative fact consisting of Holmes not walking the streets of London in February of 1875.

If a name has a referent, then it is only *about* (that is, it refers to) what is actual; there is no sense in which it can be about what is possible but not actual. A name, therefore, may have *Bedeutung*, but it cannot have *Sinn* (a thesis retained in the *Tractatus*, cf. 1922b, 3.3). For this reason, Wittgenstein says, "[n]ames are points, propositions arrows--they have *sense*" (1913, p. 101; cf. 1922b 3.144). He means by this that names isolate some thing that is existent. Propositions, or propositional signs, on the other hand, *divide* the ontological terrain into what is and what is not. Since what a proposi-

tional sign P *asserts* (or *says*) is **a**, rather than **b**, it divides Reality (in the wide sense) into two parts: what is presumed to be actual and what is presumed to be merely possible but not actual. With the exception of McGuiness (1974), the nature of this matter has gone unappreciated by Wittgenstein's commentators. For example, Black (1964, p. 106), commenting upon *Tractatus* 3.144 where the analogy between a propositional sign and an arrow reoccurs, maintains simply that propositions are like arrows in that they are *aimed* at facts. Nevertheless while it is true that a proposition has a direction in that P *says* **a** but not **b**, the purpose of the analogy is lost if one equates the sense of a propositional sign with a target, that is to say, a point. That interpretation misses the point of the analogy by assimilating propositions to names. What is important in the analogy is that the *path* of the arrow circumscribes an area of, what Wittgenstein would later call, logical space. In the "Notes on Logic" he puts the matter by saying that the propositional sign effects a "discrimination of facts" (1913, p. 105). It *delineates* between positive and negative facts. Just how it does so is important and will be discussed below, as it is the mechanics of sense that form the true basis for the showing/saying distinction. What is of importance here is that a propositional sign accomplishes something that no name can accomplish. So, it follows (again) that sentences cannot be names.

When Wittgenstein says in his 16 January 1913 letter to Russell that "there cannot be different Types of things" (1912, p. 122) and in his "Notes on Logic" that [n]either the sense nor the meaning of a proposition is a thing" (1913, p. 102), he is expressing this very conclusion. If by a *thing* we understand (as Wittgenstein did) something that can be named, then facts are not things. This is not to say that Wittgenstein fails to countenance facts within his ontology; as noted earlier the *Bedeutung* of a propositional sign is the fact that makes it

true or false (1913, p. 94); they are not, however, nameable things (1913, pp. 96 and 107). A fact can only be represented by another fact (a propositional sign) that has a structure isomorphic to it (1913, p. 97; 1922b, 2.141 and 3.14).

We finally arrive at Wittgenstein's real solution to Russell's Paradox. Earlier it was maintained that both Brockhaus (1991) and Ishiguro (1981) misconstrue Wittgenstein's solution. Ishiguro's misinterpretation construes the problematic function--which, following Wittgenstein's own misstatement of the issue at *Tractatus* 3.333, he takes to be F(Fx)--as being as ill-formed as "is green is green." Consequently, the issue is viewed as concerning whether a function can be its own argument and whether the predicate of a sentence can also be its subject. This way of viewing matters does not do justice to the fact that *what* is being considered as argument at least purports to be a singular term. Brockhaus, on the other hand, does justice to *that* fact by construing the problematic expression as analogous to "That which is green is green." Yet he does not do justice to the fact that Wittgenstein is not merely worried about a certain redundancy. Indeed, redundant statements do have a sense. Wittgenstein, in contrast, will want to say that the problematic expression--which is really $F(\hat{F}x)$--lacks a sense entirely.

Given that Wittgenstein maintains that sense is *given* to signs by means of arbitrary conventions (1913, p. 101), the problem of how to explain Wittgenstein's dismissal of the problem as anything other than an arbitrary stipulation arose. The question became: how could Wittgenstein's approach be any less *ad hoc* than Russell's own introduction of the Vicious Circle Principle? The answer is: facts cannot be named; they cannot be represented simply with a name. The expression $\hat{F}x$ attempts to name a fact, but because it cannot do so it cannot serve

as an argument for F(x). Consequently, F(F$\hat{}$x) cannot be a propositional sign.

All sentences of the form F(F$\hat{}$x)--e.g., "The fact that something is green is green"--are nonsensical. That is to say, they fail to effect a discrimination of facts, and, consequently, they lack sense. Consider, *per impossibile*, what this would be like. Since F$\hat{}$x is to be a name, it presumably must instantiate the formula (∃x) Fx. The sense of this expression may be expressed by means of a disjunction formed of it and its negation: [(∃x) Fx] v [~(∃x) Fx]. Even though (∃x) Fx does not assert the disjunction (indeed what it asserts is [(∃x) Fx] & [~~(∃x) Fx]) it does divide reality into these *possibilities*. Perhaps a way to express this (a way that remains neutral with respect to the evolution of Wittgenstein's ontology from negative facts to *Schverhalten*) is by employing modal quantifiers. Thus (∃x) Fx has a sense if and only if it is possible for there to be something that is F and it is possible that there not be anything that is F: [◊(∃x) Fx] & [◊~(∃x) Fx]. The formula obtained by instantiating the variable with a name, Fa, will have a sense if and only if ◊Fa & ◊~Fa. The question is whether F$\hat{}$x can instantiate the variable in the same way. The expression F(F$\hat{}$x) can have a sense if and only if [◊F(F$\hat{}$x)] & [◊~F(F$\hat{}$x)]. However, this condition cannot be satisfied. If F$\hat{}$x is to function as a name at all, then it *must* have a referent; its referent *must* exist. Presumably this referent would have to be the fact that x is F; it could not be the negative fact that x is not F, since in that case F$\hat{}$x would not refer at all: F$\hat{}$x does not refer to a negative fact. The only *thing* to which it can refer (if we allow that it does refer) is the positive fact that x is F. But if it *must* refer to such a fact, then it

refers to something that is necessarily so. That means that the *proposition* $F(\hat{F}x)$ is necessarily true. But that entails that $\Diamond\text{-}F(\hat{F}x)$ cannot possibly be true. As that is required for $F(\hat{F}x)$ to have sense, expressions of the form $F(\hat{F}x)$ can have no sense.

Here, I think, an objection must be entertained. If $F(\hat{F}x)$ is the name of something complex (cf. 1922b, 3.322), so that x and F designate its components, might not $F(\hat{F}x)$ serve as a name even if there is no fact that **x is F**? After all, the *propositional sign* Fx can refer to **x** even if "x is F" is false. It follows that $F(\hat{F}x)$ need not be necessarily true. With its contingency thus intact, it may be said to have a sense.

Wittgenstein appears to be aware of the possibility of this objection. In the "Notes on Logic" he writes,

> Frege said "propositions are names"; Russell said "propositions correspond to complexes". Both are false; and especially false is the statement "propositions are names of complexes" (1913, p. 97).[75]

Ultimately the *Tractatus* would offer a defense of the claim that propositional signs cannot be names of complexes on the grounds that names must always name *simple* objects which are the immutable substance of the world. This requirement is said to be necessary in order for sense to be determinate (1922b, 3.23) and for the complete analysis of propositional signs (including sentences of ordinary language) to be possible (1922b, 3.201 and 4.221).[76] Both the ontology of simple objects and the

[75] Wittgenstein might well have added Moore to this list. In the early months of 1912 Wittgenstein had attended numerous lectures by Moore (McGuiness, 1988, p. 117). These lectures, collected in what is now Moore (1953), describe sentences and noun clauses as names of propositions, i.e., facts. See particularly Moore (1911, pp. 263-265).

[76] Wittgenstein's argument will be given considerable attention in the next chapter.

concept of analysis underlying this argument are motivated by a desire to create a semantic theory that is more than a mere theory of inference. Even though that desire is expressed very early in Wittgenstein's career (e.g., 1914a, p. 117), we are unable to avail ourselves of the ensuing argument, precisely because the positing of simple objects constitutes an *elaboration* of the picture theory and of the way a proposition shows its sense; whereas we are trying to provide the justification for those very doctrines. At the very least we need an argument whose *conclusion* is that names must be semantically simple.

The argument in the "Notes on Logic " is obscured by the fact that it appears to require the abandonment of negative facts, yet that work makes abundant reference to such facts. The argument is quite sketchy, but it appears to be as follows. To begin with, an expression can serve as a name if and only if it names something determinate. We have already seen that Wittgenstein rejects Russell's account of quantified expressions as possessing indeterminate reference. In this respect Wittgenstein is like Frege, since that philosopher does not treat quantified expressions as first-order assertions about objects and concepts. (Wittgenstein, though, would not view them as second-order assertions either but as meaningless prototypes for first-order assertions.) It follows that ($\hat{F}x$) can be an argument for Fx only if it names something determinate; but this it cannot do. This follows from the fact that it itself has *sense*. In its propositional form, its ability to assert x is F depends upon the possibility of **x being F** as well as the possibility of **x not being F**. If the situation is represented using the ***ab***-notation, using **a--Fx--b**, then Fx refers to (*bedeutet*) *either* **a** *or* **b**; hence, ($\hat{F}x$) must have indeterminate reference. In the case where Fx is *false* the problem is compounded, since there is more than one way for it to be false: there may be some object **x** that happens not to be **F**

(in which case (∃x) ~Fx would be true), or there may not be an x at all that happens to be F (thereby rendering ~[(∃x) Fx] true). The point is that when Fx is false, even if we grant that F^x refers to *something*, since it is not clear what makes Fx false, the reference of F^x cannot be determinate.

It is this last point that Wittgenstein is trying to express when he says that no sense can be attached to the negation of a name (1913, p. 97). If Fx can function as a name, then we should be able to substitute "Socrates" for it. And since propositional signs can be negated, it should be possible to form the construction "~Socrates," but such cannot be done. What would "~Socrates" mean? The point is not just that "~Socrates" *sounds* like nonsense. Indeed the objector might maintain that it refers to the negative fact that makes Fx false. *But what fact is that?* Is it the fact represented by (∃x) ~Fx, or the fact represented by ~[(∃x) Fx]? Again we arrive at an indeterminacy of reference. (I believe this is ultimately the basis for Wittgenstein's rejection of negative facts; the expression "negative fact" cannot refer to anything determinate.) In the next chapter we will consider his claim that "[t]he false assumption that propositions are names leads us to believe that there must be logical objects" (1913, p. 107). In that chapter, too, the fact that negative existentials (like ~[(∃x) Fx]) fail to effect a discrimination within reality will turn out to be crucial to his argument that there must be simple objects that constitute the substance of the world.

A last attempt on the part of the objector might be this: since Wittgenstein requires genuine propositional signs to contain no variables (1913, p. 100), might the indeterminacy be eliminated by instantiating the variable and insisting that reference to a given object is established? Could it not be maintained that Wittgenstein's attack upon

the possibility of F^x being a name is an attack upon a straw man? If instead we consider whether F^b can be a name, the same indeterminacy cannot arise, since F(Fb) cannot be made false by **b** not existing.

On Wittgenstein's behalf it may be argued that the indeterminacy cannot be avoided in this way. The expression F(Fb) can be made false in two different ways. If Fb is true, then F(F^b) can be made false by F^b not being **F**. This would be the case, for example, if one to assert "The fact that the Empire State Building is tall is tall." One may say that the fact that the Empire State Building is tall (or of the *tallness* of the Empire State Building) is overwhelming, unimpressive, or a long time in the making, but one cannot say it is tall: it is the Empire State building, not the fact that the Empire State building is tall, which is tall. The second way F(F^b) could be made false is by **b** not being **F** (which would constitute a *kind* of reference failure for F^b even if it does not fail to refer to b). If the Empire State Building were not tall, then regardless of whether or not its tallness can be tall, the statement corresponding to F(F^b) would be false. A better example, one that comes closer to the class paradox itself, would be the following. Consider two objects designated as a and b. Let Rab stand for "a is not to the left of b," and let Rab function as the name of the fact that **a is not to the left of b.** Also let Sx correspond to the one-place predicate "is not to the left of b." We could then form a propositional sign, S(R^ab), which would be synonymous with "The fact that **a is not to the left of b is not to the left of b.**" Now suppose what is designated by a *is* to the left of what is designated by b. In that case the sentence is false, not because the fact that it actually denotes fails to be **S**, but because it is false that **Rab.** As I

said before, this is a kind of reference failure. The *fact* that **a is not to the left of b** does not exist. The point is that indeterminacy cannot be avoided simply by instantiating the variables, since expressions like F(F^b) and S(R^ab) retain the possibility of being false in more than one way. So long as the formula contains (what purports to be) a singular term that is itself complex, no discrimination of facts is effected.

This is apparently what Wittgenstein has in mind when he says, "[t]he question whether a proposition has sense (*Sinn*) can never depend on the *truth* of another proposition about a constituent of the first" (1914a, p. 117). If whether F(F^b) has sense depends on the truth of the proposition "F^b names the *fact* that **b is F**," then its having sense will depend upon whether Fb is true. But it is precisely that contingency which precludes F(F^b) from having a sense, for our earlier discussion of the bipolarity of the proposition demonstrates that in order to understand the sense of a propositional sign, one must know both what would be the case if the sign is true and what would be the case if the sign is false. This should not be taken to mean that the propositional sign might have a sense but that language-users might not *know* what that sense is. Rather, the sign is incapable of projecting the possible states of affairs that *are* its sense. The reason why an illogical language is impossible is that the very possibility of representation requires determinancy of sense, and *that* insures inferences from P to ~~P or from "It is false that the building is tall" to "*The building* is not tall," etc.

The suppositions that lead to Russell's Paradox are specific instances of the kind of formulae or sentences that Wittgenstein regards as lacking sense. These two suppositions are (i) that the class of all

classes that are not members of themselves is a member of itself, and (ii) that the class of all classes that are not members of itself is *not* a member of itself. In order to see how they are special instances of what Wittgenstein has in mind, it is necessary to construe the subject of both sentences as a name of a fact. What is named--the class of all classes that are not members of themselves--must be thought of as the fact *consisting of* the class of all classes that are not members of themselves. Earlier we saw that Russell's Vicious Circle Principle seeks to prohibit $C(\hat{C}x)$ from becoming a value for Cx which we said corresponds to "x is a member of the class of all classes that are not members of themselves." Now that we have seen that Wittgenstein's dictum that facts cannot be named entails, not just that a name alone is incapable of saying *how* things are, but that propositional signs themselves cannot be names, we see why a theory of types is unnecessary. Since $\hat{C}x$ attempts to name a fact, $C(\hat{C}x)$ cannot possibly have a sense.

I think there are two important ways in which Wittgenstein's view may be misunderstood, both stemming from an uncritical reading of the passage from the "Notes Dictated to Moore" quoted earlier:

> The reason why "The property of not being green is not green" is *nonsense*, is because we have only given meaning to the fact "green" stands to the right of a name; and "the property of not being green" is obviously not *that*.
>
> F cannot possibly stand to the left of (or in any relation to) the symbol of a property. For the symbol of a property, e.g., Gx is that G stands to the left of a name form, and another symbol F cannot possibly stand to the left of such a *fact*: if it could, we should have an illogical language, which is impossible (1914a, p. 116).

One way is to misconstrue the character of the singular term which is in question. This was the problem we found with the interpretation of this passage and of *Tractatus* 3.333 offered by Ishiguro (1981) and Brockhaus (1991). The other way is to read the last line as somehow suggesting

that the *reason* why the suppositions underlying the class and semantic paradoxes are nonsensical is that they entail something that is impossibly illogical: a contradiction among sentences that presumably have sense. But those suppositions are nonsensical, not for *that* reason (actually that would provide grounds merely for saying they are false), but for the reason they fail to effect a discrimination among facts. Contradictions and tautologies are without sense for the very same reason, namely, that they do not respect the bipolarity of the proposition. To understand the sense of a proposition one must be able to know *what* would be the case if it is true and *what* would be the case if it is false (1913, p. 98 and 1922b, 4.024). This condition is not met by propositions traditionally regarded as *necessarily* true or false.

Concerning tautologies Wittgenstein says,

> Signs of the form "p v ~p" are senseless, but not the proposition "(p) p v ~p." If I know that this rose is either red or not red, I know nothing. The same holds for all *ab*-functions (1913, p. 104).
>
> Naming is like pointing. A function is like a line dividing points of a plane into right and left ones; then "p or not-p" has no meaning because it does not divide a plane (1913, p. 94).[77]

The expression (P) P v ~P quantifies over propositional signs that have a sense. In effect it tells us that one may say p or one may say ~P, but one cannot *say* P v ~P. All propositional signs may either affirm something (and be made false by whatever makes its denial true), or deny something (and be made false by whatever makes the affirmative sign true). Such does not hold for P v ~P or for its presumed denial ~(P v ~P). There *is* nothing that makes, or that could make, the denial of P v ~P true. The short way to say this is to say that only contingent

[77] Here again Wittgenstein's use of lower case letters as propositional variables has not been modified to conform to the conventions used in the body of this dissertation. His use of quotation marks has been retained as well.

propositions may have a sense and be true or false."[78] What are traditionally held to be *logical* truths and falsehoods are, strictly speaking, neither true nor false. An illogical language is impossible, because contradictions lack sense and, therefore, are not a part of language, the contradiction derivable from Russell's Paradox not withstanding.

What emerges from these considerations is the rudimentary distinction between showing and saying. The claim that what can be shown cannot be said may be fleshed out in terms of the following theses. Some of these theses are the basis for the Picture Theory.

First, a propositional sign is always *about* more than what it asserts. It has a sense as well as a meaning. This entails that the propositional sign will always stand in relation to some possible (but not actual) state of affairs that (were it actual) would have made false a true propositional sign or true a false propositional sign. Wittgenstein would later put this matter by saying that "[a] proposition *shows* its sense" (1922b, 4.022).

Second, a non-molecular propositional sign is itself a fact whose constituents must be structurally isomorphic to what the sign represents. Although it is simply an arbitrary convention which symbols are used, *that* symbols of different syntactic types are used to represent function and argument (or predicate and singular term), *that* they differ syntactically from the propositional sign which is composite, and *that* they can stand in determinate relations to one another (so that "[a]

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[78] Thus we have the 2 December 1916 *Notebooks* remark which would evolve into *Tractatus* 6.53:

> The correct method in philosophy would really be to say nothing except what can be said, i.e., what belongs to natural science, i.e., something that has nothing to do with philosophy, and then whenever someone else tried to say something metaphysical to shew him that he had not given any reference to certain signs in his sentences (1914b, p. 91).

proposition cannot occur in itself" (1913, p. 96)) *is* essential if representation is to be possible. It is misleading, says Wittgenstein to describe how a propositional sign represents by saying, for example, that the complex sign aRb says that **a** stands in relation **R** to **b**; the fact of the matter is more accurately put by saying *that* a stands in a certain relation to b says *that* **aRb** (1913, p. 106; 1922b, 3.1432). It takes a fact with a certain kind of structure to say *how* things are. In the *Tractatus* Wittgenstein would express this by saying, "[a] proposition *shows* how things stand *if* is true. And it *says that* they do so stand" (1922b, 4.022). It is this that forms the basis of the Picture Theory, of the idea that names go *proxy* for objects. It thus pictures, provides a model for, the facts.

The structure exhibited by the sign not only makes *saying* possible, it makes possible the expression of the propositional sign's sense. If the fact that my humidor is to the left of my desk can represent the fact that my brother is taller than me, then the full sense of the propositional sign is conveyed by that fact (that arrangement of furniture) and by the *possibility* that the furniture could have been arranged otherwise. To perceive a set of signs as arranged in some way, one must be able to imagine or conceive of them as arrangeable in other possible ways. The contingency of the fact represented is thereby mirrored in the contingent arrangement of signs. In this way the sense of the proposition can be read off from the signs themselves. And if a set of symbols lacks a sense, then that too is exhibited by the arrangement of the symbols themselves. This is what makes it possible for logic to take care of itself (1914b, p. 2; 1922b, 5.473).

A third important thesis, entailed by the others, is that sense and meaning require a representational *medium*. Here Wittgenstein's view achieves nearly complete opposition to the view of G. E. Moore outlined at the beginning of this chapter. Propositional signs as well as the

thoughts that they express (1922b, 3) must be models or pictures of the facts; they are not *acts* of consciousness or judgment. Consequently, for Wittgenstein, truth is a kind of correspondence, a sharing of logical or pictorial form. It is the point at which he recognizes the need to posit a distinction between *Sinn* and *Bedeutung* which constitutes the point at which he clearly breaks away from Moore's relational theory of judgment. Alluding to his *ab*-notation he says, in the "Notes on Logic," "[t]he epistemological questions concerning the nature of judgment and belief cannot be solved without a correct apprehension of the form of the proposition" (1913, p. 106). It would be accurate to say that Moore's theory of judgment allows for the possibility of *Bedeutung* but not *Sinn*, in spite of its own distinction between what is real but not actual. On that view the only difference between the properties of an existent versus a non-existent object is that in the former all the properties coalesce in a certain time and place (which gives the existent object a unique relational property). But what properties a unicorn has are as real as those possessed by an actual horse. Such objective falsehoods (which should not be confused with Wittgenstein's negative facts) we saw to be extremely problematic. Wittgenstein's own distinction between what is possible but not actual and what is both possible and actual is offered as an antidote to Moore's ontology. What is possible but not actual remains a *mere* possibility *of* what is actual. To say the world is more than what is actual, that it in some sense contains what is possible, is not to postulate the existence of a Platonic realm of universals. Nevertheless, for Wittgenstein, both the sense and the meaning of an expression are something objective.

Frege, it is true, recognized that the structure of a sign is significant. Regardless of where one stands with respect to the ontological status of Fregean senses, one finds in Frege's work the thesis that meaning is only possible if different logical roles are assigned to syn-

tactically distinguishable components of formulae or sentences. For Frege, as for Wittgenstein, syntactic differences are indicative of ontological differences. Frege's predicates, or concept-words, or function expressions refer to concepts or functions; names name objects. Wittgenstein's remark that different kinds of things are symbolized by different kinds of symbols reflects an indebtedness to Frege, although there is little indication that he accepted the underlying Fregean ontology. We have said little about Wittgenstein's own ontology except that the determinancy of sense requires there to be simple objects which are the substance of the world. More will be said on that subject in the following chapter. The point here is that for Frege meaning is only possible given the existence of *something*--language itself (i.e., a system of physical signs) or senses (if these are to be construed Platonistically)--in possession of an ontologically significant structure. For Frege and Wittgenstein, but not for Moore, meaning requires some intermediary between the act of consciousness or judgment and its object.

The claim that the existence of meaning requires some medium that *has* meaning should not be confused with the claim that there are *mental* contents. Nothing in Wittgenstein's view either entails or precludes that mental contents exist. What his view does entail is that the existence of meaning requires there to be *bearers* of meaning (mental or otherwise). Although the *Tractatus* would continue to add greater constraints upon what could count as a propositional sign, it would remain largely neutral with respect to what these meaning-bearers (and sense-bearers) are. What is essential to being a meaning-bearer, as shall be explained in greater detail in the next chapter, is the capacity to stand in a projective relation to the world, and this the propositional sign can do only if it shares the pictorial or logical form of the *Sachverhalte* it depicts. Wittgenstein's view is incompatible with

Moore's and his own earlier view, because the relational theory of judgments posits no meaning-bearers with such properties. It would, of course, be misleading to say on behalf of Moore that the mental act of judging *has* a meaning (in the sense required by Wittgenstein); Wittgenstein has demonstrated that whatever possesses a meaning must also possess a sense, and this is something, given the direct realism of Moore's relational theory of judgment, no mental act can have. And while it may be true that, for Moore, one may form a judgment about what is real but non-existent as well as about what is real and existent, one cannot do so simultaneously. That a judgment is always simultaneously *about* two possible states of affairs that differ in their ontological status (one being possible but not actual, the other being possible and actual) is the moral of the bipolarity of the proposition.

As stated thus far, Wittgenstein's semantic theory seems compatible with a variety of accounts concerning the nature of meaning-bearers: it remains neutral as to whether these should be construed as mental contents, *or* as sounds, inscriptions, gestures, etc. produced by language-users, *or* even as physical facts within the language-user's environment (as when Wittgenstein mentions that the fact "that this inkpot is on the table may express that I sit in this chair," 1913, p. 97). The bearers of meaning must be facts of some sort or another. However what we want to ask at this stage is whether Wittgenstein's view is compatible with semantic Platonism.

It would be tempting to dismiss their compatibility straightaway on the grounds that abstract entities could not provide the requisite structured medium. The very idea of a medium is that of some substance (presumably physical but we are allowing for non-physical, "psychical" substances as countenanced by Dualists as well) that can be arranged in one way or another according to convention. The elements so arranged constitute facts. Abstract entities, being neither physical nor psycho-

logical, can have no parts or elements that can be arranged into facts.

Platonists like Katz (1990) do speak of *sense structures* and of relations among senses. The sense structure of a sentence is said to be composed of the senses of its constituent expressions. Relations among senses (for example, the relation of antonymy that holds between the senses of "opened" and "closed") constitute semantic *facts* according to Katz. Indeed Katz argues that semantic structures so conceived are not reducible to syntactic structures, not even to the syntactic structures of a logically perspicuous language such as envisaged by Frege (1879a), Russell (1918) or Wittgenstein (1922b). In a later chapter his specific argument will be examined in some detail. Here the only point is that a Platonist could very well maintain that abstract entities have structure and are capable of entering into facts.

It does seem, however, that Wittgenstein's semantic theory is incompatible with Platonism for another reason. In order for a propositional sign to show its sense (as Wittgenstein uses that word), the elements of the sign must stand in relations to one another that are contingent; the contingency of the state of affairs which is the sign's *Bedeutung* is reflected in the contingency of their own relations to one another. Even if there were Platonic senses that mediate reference, could *their* elements be contingently related? Apparently not. For that to be the case sentences like "The sense of 'opened' is antonymous to the sense of 'closed'" or "The word 'bachelor' is synonymous with the expression 'unmarried adult human male'" would have to be contingently true. Yet these and their material mode counter-parts are typically held to be analytic and thus necessarily true. Perhaps these sentences *can* be regarded as contingently true, but that would require giving up the analytic/synthetic distinction--something no self-respecting Platonist would be willing to do. It follows that Platonic senses cannot be the bearers of meaning (*Bedeutung*) in the manner required by

Wittgenstein, thus rendering the two views incompatible.

CHAPTER III

REFERENCE FAILURE, DECOMPOSITIONALITY AND THE PICTURE THEORY

1. Structure and Form.

In the last chapter we followed Wittgenstein's argument up to the point at which he concluded that language and thought may represent facts only if the former are structurally isomorphic to the latter. It is in virtue of their pictorial properties that language and thought are said to be able to represent. Such a claim is not unproblematic. Consider the nature of pictorial representation. It is not necessary to imagine a painting or a photograph; one may as well imagine actors on a stage or children playing with toys. (Indeed, the idea, central to the Picture Theory, that names go *proxy* for objects, is said to have occurred to Wittgenstein upon reading about the way in which an automobile accident was represented in a courtroom by means of model cars and dolls (1914b, p. 7; cf. Wright, 1955, p. 532).) Or recall the example taken from the "Notes on Logic" "that this inkpot is on this table may express that I sit in this chair" (1913, p. 97).

At a bare minimum a picture or model (*Bild*) must contain as many elements as there are objects in the scene to be depicted. If an auto accident involving two cars and a pedestrian is to be represented, the courtroom model must contain three elements. It is not essential that these elements resemble the objects they represent (as do hieroglyphics), but it is essential that the elements and the objects be identical in number so that a one-to-one correspondence exists between the members of the two sets (1922b, 2.13).

Next, the picture or model must be capable of representing the relations among the objects.

> What constitutes a picture is that its elements are related to one another in a determinate way (1922b, 2.14).

> The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.
>
> Let us call this connexion of its elements the structure of the picture, and let us call the possibility of this structure the pictorial form of the picture (1922b, 2.15).

If the pedestrian was crushed *between* two cars, then the elements of the courtroom model must be able to stand in relation to one another in an analogous fashion. This does not mean that the element which represents the pedestrian must actually be positioned *between* the elements which which represent the two cars. Rather they must simply stand in *some* relation so as to represent the relation among the objects. For example, that the pedestrian was crushed between two cars might be represented by stacking the two model cars on top of the doll representing the pedestrian; here the relation of being *beneath* (the other two elements) would represent the relation of being *between* (the objects represented by those elements).

It is crucial here to distinguish, as Wittgenstein does in the passage above, between a picture's structure and its form. (The two can be easily confused, since the words "structure" and "form" are often used synonymously.) The structure of a picture is the actual arrangement of its elements. Pictorial form, on the other hand, consists in the set of possible arrangements which may occur among the elements. For example, let the two cars be depicted by the symbols Ω and Δ, and let the pedestrian be depicted by Ψ. For the sake of convenience, let the fact that an object is between two others be represented by the appropriate element being between the other two elements. Let a similar convention hold for the relations of *to the left of* and *to the right of*. And let these exhaust the conventions governing the arrangement of elements, so that elements can only occur beside or between one another but never, for example, above or below one another. In order to depict the

pedestrian as being between the two cars (struck on the left by the car represented by Ω and on the right by the car represented by Δ), the picture would have to be structured thus: Ω¥Δ. But the pictorial *form* consists in a set of possible configurations: {Ω¥Δ, ΩΔ¥, ¥ΩΔ, ¥ΔΩ, Δ¥Ω, ΔΩ¥}. To speak of the pictorial form of Ω¥Δ just is to speak of its being one possible configuration of elements among many; the form of a picture is identical with the combinatorial possibilities of its elements.

The distinction between structure and form is semantically significant. It is the structure of the picture (i.e., *how* it depicts things) which determines, along with how things actually stand, whether it is accurate or inaccurate, true or false (1922b, 2.21). Just as the structure of a picture consists in elements "related to one another in a determinate way" (2.14), so too

> The determinate way in which objects are connected in a state of affairs is the structure of the state of affairs (1922b, 2.032).

A picture will be accurate or true, if and only if its structure *corresponds* (1922b, 2.13) to the structure of the state of affairs.

The *form* of a picture, however, corresponds to the *possible* ways the objects depicted *may* be related to one another. This is why Wittgenstein says,

> Pictorial form is the *possibility* that things are related to one another in the same way as the elements of the picture (1922b, 2.151, emphasis added).

> What a picture must have in common with reality, in order to be able to depict it--*correctly or incorrectly*--in the way it does, is its pictorial form (1922b, 2.17, emphasis added).

The possible states of affairs corresponding to the form of Ω¥Δ (i.e., to the set of structures to which Ω¥Δ belongs), minus that which corre-

sponds to ΩΨΔ itself, are the conditions which would make ΩΨΔ false. Thus the picture exhibits bi-polarity in the manner discussed in the previous chapter. This means the picture contains the possibility *both* of being accurate or true *and* of being inaccurate or false.[79] Consequently,

> In order to tell whether a picture is true or false we must compare it with reality (1922b, 2.223).
>
> It is impossible to tell from the picture alone whether it is true or false (1922b, 2.224).
>
> There are no pictures that are true *a priori* (1922b, 2.225).

There cannot be tautologous or contradictory pictures, that is, pictures which are necessarily true or false on *a priori* grounds. This is so, not for the question-begging reason that there cannot be tautologous or contradictory states of affairs, but because the nature of picturing precludes any such possibility. A contradictory picture (so to speak) would need to represent the same object at two places at once. That would require a picture with one and the same element in two places at once; but that is impossible, since elements occupying two distinct locations would just be distinct elements. If the elements of a contradictory picture would be in two places at once, those of a tautologous picture would be nowhere in particular. How would one picture the possibility of an object either occupying or not occupying a particular position? One could perhaps place a faint resemblance of the element which represents the object in various locations. But in that event an

[79] A reminder: the terms "bipolar" and "bivalent" are not equivalent. A picture or propositional sign is bipolar if and only if it is possibly true and possibly false; a picture or propositional sign is bivalent if and only if it is either true or false. Bipolarity requires contingency; bivalence does not. Thus contradictions and tautologies (as traditionally understood) are bivalent but not bipolar. Since, for Wittgenstein, all meaningful propositions must be bipolar, contradictions and tautologies must be regarded by him as senseless pseudo-propositions.

element would be placed nowhere. (The alternative is to think of the faint images of elements as genuine elements, in which case we would have a contradictory picture.)

Because a picture has both a form and a structure and exhibits bipolarity, it may be said to have both a sense and a meaning. The *meaning* of a picture is the state of affairs (consisting of objects in some determinate relation) which renders the picture accurate or inaccurate. If ΩΨΔ is accurate, then its meaning consists in the state of affairs which shares that very structure; if it is inaccurate, its meaning is a state of affairs with some other structure. If one knows what objects the elements of a picture stand for, then one can simply read off from the structure of the picture what would make it true.[80]

The possible states of affairs which correspond to the form of a picture constitute its sense. It is this which Wittgenstein has in mind when he says,

> What a picture represents [*darstellt*] is its sense (1922b, 2.221).

Perhaps it would be less ambiguous to say that a picture *displays* (*aufweist*) or *shows* (*zeigt*) its sense (cf. 1922b, 4.022), since the picture *depicts* but one of various possible states of affairs. But how can a picture show its sense, if it depicts but one possible state of affairs? Ultimately, the contingent truth of a picture is grounded in the contingent arrangement of objects depicted by the picture's elements. The contingent arrangement of objects upon which the accuracy of the

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[80] Wittgenstein rarely speaks of the meaning of a picture or propositional sign as a whole; usually he speaks of the meanings (referents) of names (and so, presumably, of a picture's elements). This is not problematic. Names only have reference within the context of a propositional sign (1922b, 3.3), and it is an essential trait of the objects which are denoted by names that they be able to enter into relations with one another. Therefore, for Wittgenstein, it is inconceivable that there be objects independent of states of affairs. Thus to speak of the meaning of a picture or propositional sign is to speak *of* the objects as so related. That just is what a state of affairs *is*.

picture depends is matched by (reflected in) the contingent arrangement of the picture's elements; and anyone who recognizes the picture for anything other than an empty label (that is, anyone who recognizes it as something which depicts *how* things are) will recognize this potential in its elements. Of objects Wittgenstein says,

> If I know an object I also know all its possible occurrences in states of affairs.
>
> ...Every one of these possibilities must be part of the nature of the object...(1922b, 2.0123).

Similarly, if one knows what object an element stands for and that its possibilities for combination in various states of affairs is written into its very nature, then presumably being able to construe the element *as* an element of a picture entails being able to construe the element *as* capable of entering into various relations with the other elements which comprise the picture.

It should be noted that not every passage in the *Tractatus* comports neatly with this account of the sense of a picture. At 2.222 we read:

> The agreement [*Übereinstimmung*] or disagreement [*Nichtübereinstimmung*] of [a picture's] sense with reality constitutes its truth or falsity (1922b, 2.222).

This passage suggests that the sense of a picture is not a set of possible states of affairs, but some kind of entity which occupies an intermediary position between the picture (which is a human construct) and the fact which makes the picture true or false. The passage, for this reason, appears to support a Fregean interpretation of Wittgensteinian senses (this regardless of one's interpretation of Frege). Such a view, endorsed by Carruthers (1989), was attacked in the previous chapter. The fact is that 2.222 is atypical and makes little sense in the context in which it occurs. That context, 2.15-2.225, examines the relationship between the form of a picture and the form of a state of affairs, such

that a picture "reaches right out to" reality without the aid of any intermediary (1922b, 2.1551). (Actually the picture just is such an intermediary, so positing a further entity would be pointless.) It is difficult not to conclude that Wittgenstein's wording at 2.222 is careless. In a later passage, 4.2, after having shown that propositional signs are *logical* pictures (a point to be discussed below), Wittgenstein asserts,

> [t]he sense of a proposition is its agreement and disagreement with possibilities of existence and non-existence of states of affairs (1922b, 4.2).

Here it is clear that sense consists in the relation which obtains between a proposition (or propositional sign) and reality in the wide sense, i.e., with *possibilities* of existence and non-existence of states of affairs. Presumably the same holds for ordinary (non-discursive) pictures as well.

A final word about pictorial representation is in order: a picture cannot depict its own pictorial form (1922b, 2.172). Above it was noted that a picture *depicts* its meaning, and that it *displays* or *shows* its sense. The actual structure of the picture accomplishes the former; the possibility of the picture's elements occurring in other structures, i.e., its form, accomplishes the latter. It is physically impossible for the picture to depict its *sense*. If anything, the attempt to do so would produce what was earlier referred to as a tautologous picture. Just as a sentence with the structure of P v ~P or ◇P & ◇~P asserts neither P nor ~P, any attempt to depict all the possible states of affairs into which a set of objects may enter will result in nothing being depicted whatsoever. For depiction to be possible at all an actual structure must be presented rather than a mere array of possible structures.

Now the question before us is: to what extent are the sentences

of ordinary language like pictures? The answer is: *not much*. There are some similarities. For example, what is said or depicted may often be said or depicted in various media. The particular vehicle of truth or falsehood may be irrelevant. But beyond that the differences are enormous. In ordinary pictures, for example, spatial relations among objects are represented by spatial relations among the elements of the picture. Clearly, it is not necessary for spatial relations to be represented in this way. In point of fact, the decision to represent spatial relations among objects by means of similar spatial relations among the elements of a picture--as when we represented the pedestrian between the two cars by means of ΩΨΔ--is itself a decision to adopt a particular convention, namely to represent the relation of *being between* by placing the appropriate element between other elements. Even if we retain the convention that spatial relations among objects are to be represented by spatial relations among elements, this can be done in a variety of ways: *being between* could be represented by putting the appropriate element to the left of, to the right of, above, below, or anywhere else in the proximity of the other elements. But the relation of *being between* need not be represented by any spatial relations among the elements at all. We might adopt the rule that the symbol * after an element indicates that the object so represented is between the other objects regardless of the order in which they are listed. Using this convention and the symbols described earlier, the fact consisting of a person being between two cars could be represented by means of a variety of strings: ΩΨ*Δ, ΩΔΨ*, Ψ*ΩΔ, Ψ*ΔΩ, ΔΨ*Ω, ΔΩΨ*. If we also retained the earlier convention pertaining to *to the left of* and *to the right of* for all elements not followed by *, then any of the first three in this list would be capable of conveying that the pedestrian was caught between (what is represented by) Ω on the left and (what is rep-

resented by) Δ on the right. Of course, even this convention could be laid aside. We could easily adopt the rule that any element not followed by *, but which is followed by ¤, is to the left of the others. In that case, the very same state of affairs could be represented by any of the following: Ω¤Ψ*Δ, Ω¤ΔΨ*, Ψ*Ω¤Δ, Ψ*ΔΩ¤, ΔΨ*Ω¤, ΔΩ¤Ψ*. The conventions adopted could even vary depending upon the context; one convention might be appropriate in formal contexts, another in informal contexts.

Ordinary language does not even remotely approximate a picture that represents spatial relations among objects in virtue of the spatial relations among its elements. Nor are temporal relations among events represented by analogous temporal relations among the elements of a narrative: the fact that the phrase "He murdered her" occurs *before* the phrase "she finished her dissertation" in the sentence "He murdered her after she finished her dissertation" does *not* mean he murdered her before she finished her dissertation. The spatio-temporal relations that occur among the elements of a sentence need in no way correspond to the spatio-temporal relations that obtain among the referents of a sentence's elements. Generally speaking, reference and predication is not accomplished by the *resemblance* the representational medium bears to possible states of affairs it represents.

To accommodate this fact, the *Tractatus* displaces the idea of pictorial form with that of logical form. Indeed, pictures are said to represent *by virtue of* their logical form:

> What any picture, of whatever form, must have in common with reality, in order to be able to depict it--correctly or incorrectly--in any way at all, is logical form, i.e. the form of reality (1922b, 2.18).
>
> A picture whose pictorial form is logical form is called a logical picture (1922b, 2.181).
>
> Every picture is *at the same time* a logical one. (On the other hand, not every picture is, for example, a

spatial one) (1922b, 2.182).

Logical form is to be cashed out in terms of mathematical multiplicity. This means that there must be at least a one to one correspondence between possible combinations of symbols and possible combinations of objects. Since ordinary objects, like chairs, happen to be complex facts (*Tatsachen*) contingent for their existence upon relations that hold among their constituents, it must be possible to refer to these constituents. In principle, then, any statement about a complex object must be capable of an analysis in which reference to the complex object is replaced by statements that refer to simpler objects. This at least is the case for sentences in which singular reference occurs.[81] A sentence like "The chair is brown" would be analyzed in such a way as to eliminate reference to *the chair* in favor of a series of descriptions of its constituents, i.e., of its arms, legs and seat or of its wood, metal and cloth, etc. In this regard the semantics of the *Tractatus* is decompositional in nature. The meanings of singular terms that refer to complex objects are composed of (or *decompose into*) the meanings of statements containing terms for simpler objects (1922b, 2.0201).

2. The Argument for Logical Atomism.

The specific form of decompositional semantics to which Wittgenstein adheres is *logical atomism*. This is the view that analysis terminates in sets of sentences that refer to simple objects that are in no way composite. In the *Tractatus* Wittgenstein describes these simple objects as the "substance of the world" (1922b, 2.021); they are "unalterable" (1922b, 2.023, 2.026, 2.027) and "subsistent" (1922b, 2.024, 2.027, 2.0271), whereas "their configuration is what is changing and unstable" (1922b, 2.0271). It is their configuration that produces states of affairs (*Sachverhalten*)(1922b, 2.0272). States of affairs are what correspond to (are the *Bedeutungen* of) elementary propositions

[81] Sentences lacking singular reference will be dealt with below.

(*Elementarsatz*) that describe configurations of simple objects when such propositions are true (1912, p. 130).

The question now becomes: why is it necessary to posit simple objects? Why must *they* be required for representation to be possible? Off hand, it seems the Picture Theory only requires there to be names for the constituents or parts of complex objects provided one wants to speak of the *complexity* of those objects. Yet one might want to speak of tables and chairs and never have any inclination to speak of their complexity or the events upon which their existence is contingent. Tables and chairs might well be among the *basic* objects of which one speaks. Perhaps speaking of a fact of which the chair is a constituent e.g., the fact that the chair is to the left of the table) requires a word for something simpler than the fact itself. But unless one wants to speak of the fact *that is* the chair, nothing simpler, not even in principle, seems to be required.

Against the logical atomism of the *Tractatus* one wants to argue, as did the author of the *Philosophical Investigations* several decades later,

> But what are the simple constituent parts of which reality is composed?--What are the simple constituents of a chair?--The bits of wood of which it is made? Or the molecules, or the atoms?--"Simple" means: not composite. And here the point is: in what sense 'composite'? It makes no sense at all to speak absolutely of the 'simple parts of a chair' (1958, 47).[82]

The point here is not that physical atoms or their components are infinitely divisible, even though that may very well be true. It is rather that human concern, what *counts* as simple and complex, is relative to a context in which humans act and communicate. If humans have a need to speak of *ultimate* simples, then fine; but the question for the

[82] References to Part One of the *Philosophical Investigations* will be to section rather than page. As is customary, references to Part Two will cite page numbers.

later Wittgenstein would be: in what context, if any, does (or would) the need to talk this way arise?

Wittgenstein does, however, provide an argument in the *Tractatus*:

> If the world had no substance, then whether a proposition had sense would depend on whether another proposition was true.
>
> In that case we could not sketch any picture of the world (true or false) (1922b, 2.0211-2.0212).

That there is a link between the possibility of sense and the existence of simple objects (i.e., the referents of simple signs) is repeated:

> The requirement that simple signs be possible is the requirement that sense be determinate (1922b, 3.23).

These passages provide no easy task for interpretation. We have already encountered one case in which it is problematic for the truth of one proposition to be dependent upon that of another: Moore's problem with ~P *containing* (and thus entailing) P. But that cannot be the problem here, since for Wittgenstein P and ~P are *about* the same thing to the extent that they share the same *Sinn*. Moore had failed to make that distinction and, was consequently beset by the troubles described in Chapter I. However, Wittgenstein's semantic theory avoids *those* difficulties.

Most commentators interpret Wittgenstein's argument as one in which one or another infinite regress is to be avoided. I am in agreement with this strategy, however I think neither the nature of the regress, nor the way in which it is avoided, has been appreciated.

Black (1964, pp. 58ff) suggests that Wittgenstein maintains there must be a terminus for analysis if anyone is to *know* the meaning of a proposition. Unless there were such a terminus, a person would have to know the meaning of an infinite number of propositions in order to know the meaning of even one. This interpretation, however, does not seem to be motivated by the text. To the contrary, a *Notebooks* entry dated 16

June 1915 devoted to the question of whether the names of ordinary objects might serve as *logical* simples concludes: "...a proposition may indeed be an incomplete picture of a certain fact, but it is ALWAYS a *complete picture*" (1914b, p. 61).[83] The moral here, which goes substantially unchallenged throughout the *Notebooks'* discussion of the issue, is that the propositions of ordinary language can possess sense (and so can be understood by speakers as having a sense) without being *complete*, i.e., without being fully analyzed. This is what Wittgenstein is after when he says:

> Man possesses the ability to construct languages capable of expressing every sense, *without having any idea how each word has a meaning or what its meaning is*--just as people speak without knowing how the individual sounds are produced (1922b, 4.002; emphasis added).

A second way a regress can be run is suggested by Weinberg (1935). Here it is supposed that unless simple objects serve as the terminus for analysis, propositions would never refer to an extra-linguistic reality (1935, p. 80). Propositions would be related to one another and to nothing else. This construal of his argument at least does do justice to Wittgenstein's dissatisfaction with Frege's minimalist semantics which reduces semantic theory to the theory of inference. However, the argument, as described, is wholly unconvincing.[84] What could justify the assumption that reference is impossible unless reference to *ultimate simples* is possible--as if one stands in need of a complete physics in order to refer to chairs and tables? That is precisely the question that stands in need of an answer.

A third possibility would be the following. This, at least, does do some justice to the fact that determinateness of sense requires the existence of simple objects and to the importance we know Wittgenstein

[83] This passage is retained in the *Tractatus* at 5.156 where it occurs within a discussion of probability and generality.

[84] As Weinberg notes.

ascribed to the bipolarity of the proposition.[85] Recall that a proposition must effect a discrimination within reality. It must distinguish what, if it is true, is actual from what is merely possible but not actual. This is made possible by the fact that a propositional sign shares with a fact both a form and a structure. The sense of a propositional sign is said to be determinate inasmuch as it represents precisely what would make it true (by virtue of its structure) or false (which it represents by virtue of its form). There is, furthermore, an *ontological* side to the determinate nature of sense as well. The *world* must be such that, given objects {a, b, c,...*n*} and their relations {R, S, T,...*N*}, a proposition about those objects must be *rendered* determinately true or false. In other words, the bipolarity of the proposition entails the world must be such as to make *bivalence* possible.[86] A sentence must be rendered true or false, and nothing else, by the objects and relations (or possible relations) to which it refers.

Now let us suppose there are no simple objects. Consider what this would entail, given Wittgenstein's assumption that all propositions possessing sense are contingent. A sentence that makes reference to a complex entity--as does "You are to give the hemlock only to Socrates"--will effect a discrimination within reality (and thus have a determinate sense) if and only if "Socrates" actually refers to some complex entity. If Socrates is a complex entity, then it is the kind of thing whose constituents can be described by means of sets of sentences. Since *these* sentences, in order to have a sense, must be contingent, it follows that whether "Socrates" refers is contingent. (The assumption here is that

[85] Few scholars explicate Wittgenstein's argument in terms of suppressed premises concerning bipolarity. One notable exception is White (1974).

[86] The bipolarity of the proposition, we now see, incorporates four distinct ideas: the law of excluded middle, the law of contradiction, the thesis that all propositions with sense are contingent, and the thesis that all sentences with a sense are bivalent, i. e., *exclusively* true or false.

the truth conditions of the sentences that describe Socrates' constituents are identical to the referential conditions for the word "Socrates".)[87] If the set of sentences describing the constituents were to be false, then "Socrates" would not refer; in which case the sentence "You are to give the hemlock only to Socrates" would fail to effect the requisite discrimination to possess a sense. This is because no particular object (Socrates) would have been singled out among objects as the term of the dyadic relation expressed by "are to give the hemlock only to". One is left asking: give the hemlock to *this* object as opposed to *that* object, or to *that* object as opposed to *this* object? The sense of the proposition would be indeterminate.

The point is that if there were no simple objects, objects that necessarily exist, then it would be possible for *all* the sentences of our everyday language to lack any determinate sense. In other words, it would be possible for the sentences of our everyday language not to be a representational medium at all, *for the contingency would go on and on!* But as we noted earlier in course of rejecting Weinberg's interpretation of the argument, this is not a possibility Wittgenstein is prepared to accept. On the contrary, "[m]an possesses the ability to construct languages capable of expressing every sense, without having any idea how each word has a meaning or what its meaning is" (1922b, 4.002).

If representation is possible, then a propositional sign (or those sentences into which it is analyzed when the names of complex objects are eliminated) must have as many referring expressions as there are objects in the state of affairs represented. Since representation does occur, there must be *at some level of analysis* just this sort of isomorphism. If there were no simple objects, then it would be possible for there never to be any such level, since for any level of analysis the

[87] One can already get a feel for the problematic character of this argument. We immediately want to ask, *which* descriptions of Socrates are essential here?

objects would remain contingent. Since there must be some such level, there must be simple objects that necessarily exist.

I think this comes very close to being Wittgenstein's argument, although I believe it is possible to exploit the text and our understanding of Russell's influence upon Wittgenstein to produce a stronger one. As it stands the argument described above is invalid. I have tried to give expression to this to an extent in the last couple sentences of the previous paragraph. Clearly a modal fallacy occurs in the inference from:

(1) Each of the referring terms of a given propositional sign or its analysand must refer to what exists.

to:

(2) Each of the referring terms of a given propositional sign or its analysand refers to what must exist.

The two claims differ greatly. The first assigns a necessary semantic property to the vehicle of representation, whereas the second amounts to a countenancing of *de re* necessity. If the argument is valid, we have a case in which a significant metaphysical thesis is derived from a claim solely about language. Clearly, as it stands, (2) does not derive from (1) without further ado; intermediary premises *are* required. Here is an analogous case: Let the class of F's be the class of terms that refer to what exists. It is *definitive* of F that its terms refer to something. In other words, it is a necessary condition for membership in F that there exists (or there has existed or there will exist) some object to which the member refers. The singular term "Socrates" satisfies the necessary condition for membership in F without, however, Socrates *necessarily* existing. Now what case can be made for thinking that "Socrates" can be analyzed into a string of sentences concerning Socrates-components--indeed, subsistent and eternal Socrates-components?

It is at this juncture that we would do well to consider the influence of Russell upon Wittgenstein. The true strength of

Wittgenstein's position can only be appreciated when viewed against the backdrop of Russell's own argument for logical atomism. We begin by considering why, for Russell, "Socrates" is to be regarded as a special kind of predicate rather than a genuine name.

In *The Philosophy of Logical Atomism* (1918) Russell asserts:

> The names we commonly use, like 'Socrates', are really abbreviations for descriptions; not only that, but what they describe are not particulars, but complicated systems of classes or series. A name, in the narrow logical sense of a word whose meaning is a particular, can only be applied to a particular with which the speaker is acquainted, because you cannot name anything you are not acquainted with....We are not acquainted with Socrates, and therefore cannot name him. When we use the word 'Socrates,' we are really using a description. Our thought may be rendered by some such phrase as, 'The Master of Plato', or 'The philosopher who drank the hemlock', or 'The person whom logicians assert to be mortal', but we certainly do not use the name as a name in the proper sense of the word.
>
> That makes it very difficult to get any instance of a name at all in the proper logical sense of the word. The only words one does use as names in the logical sense are words like 'this' or 'that' (1918, p. 62).[88]

Russell's argument may be sketched as follows: (i) an expression, *n*, is a proper name, if and only if *n* refers to a particular with which one is acquainted; (ii) many common expressions {"Socrates," "Plato," "Aristotle,"..."Hegel"} that *seem* to be names do not in fact refer to particulars with which one may be acquainted; therefore, (iii) many common expressions that seem to be names are not genuine names at all (let us refer to this class of expressions as R); (iv) if the members of R are do not denote particulars with which one may be acquainted, then they denote objects (i.e., "complicated systems of classes or series") that are known by description; so, (v) the members of R denote objects known by description; (vi) if the members of R denote objects known by description, then R's members function essentially as predicative ex-

[88] The argument here is consistent with that offered in *The Problems of Philosophy* (1912), pp. 52-58.

pressions, i.e., as disguised definite descriptions; thus, (vii) the members of R function essentially as predicative expressions, i.e., as disguised definite descriptions.

Let us begin in the middle of the argument with premise (iv) as it is one of the more substantive claims. Premise (iv) gives expression to Russell's famous distinction between knowledge by acquaintance and by description. These are two *ways* subjects may be related to the objects of awareness and judgment. "We shall say that we have *acquaintance* with anything," Russell explains, "of which we are directly aware, without the intermediary of any process of inference or any knowledge of truths" (1912, p. 46). In *The Problems of Philosophy* Russell countenances various *modes* of acquaintance, each involving it own peculiar kind of object. Perception allows one to be acquainted with sense data (1912, p. 46). Introspection has as its objects one's own acquaintances and the self that is acquainted (1912, pp. 50-51). Memory allows one to be acquainted with past objects of perception and introspection (1912, p. 48). And, finally, conception is the mode of acquaintance by virtue of which one is aware of universals (1912, p. 52).[89]

Knowledge of an object by description occurs "when we know that it is 'the so-and-so', i.e. when we know that there is one object, and no more, having a certain property; and it will generally be implied that we do not have the same knowledge by acquaintance" (1912, p. 53). It is tempting to think of the distinction as one that obtains between mere awareness or consciousness *of* an object and judgment or knowledge *that* such and such is true of an object. The latter will not, however, suffice as a definition of knowledge by description. Knowledge by description should not be *identified* with propositional knowledge; one would not possess knowledge by description, for example, if one knows that

[89] His willingness to countenance universals continues in (1918), pp. 36 and 128-129 and (1924) p. 166.

Socrates was under six feet tall, even if being under six feet tall is (somehow) a necessary condition for being Socrates. Knowledge by description requires the subject to be aware that a particular object, and only that object, possesses a given property.[90] As Russell suggests in the passage from the *Lectures on Logical Atomism*, the description uniquely satisfied might well be very complicated in the event that it is necessary to advert to "complicated systems of classes or series" (1918, p. 62). It may well be that knowledge by description of Socrates involves knowing that Socrates is identical to the object consisting of *k*-type sense data occurring at times $t_1 \ldots t_n$, *l*-type sense data occurring at times $t_n \ldots t_o$, etc. For the sake of simplicity we will follow Russell in saying that one has knowledge by description of Socrates when one knows, for example, that Socrates was the Master of Plato.

We will save specific criticisms of Russell's theory of judgment until later when further details will be spelled out. Although there are several passages within the World War I *Notebooks* (dating from May 1915) where Wittgenstein shares Russell's terminology (1914b, pp. 50 and 52), there is no question that Wittgenstein rejected Russell's epistemology. There can also be no question concerning Wittgenstein's unwillingness to proceed in these matters on the basis of epistemological

[90] This is the definition given in (1912) and suggested by the examples in (1918), both cited above. A less restrictive definition appears to be operating in (1913); cf. pp. 57 and 69.

premises.[91] However, Wittgenstein *would* accept that not every expression that appears to be a name is one in fact (i.e., premise (iii)); and he would accept that these expressions (which Russell would refer to as relative names) are really disguised definite descriptions to be analyzed in accordance with Russell's Theory of Incomplete Symbols (i.e., the conclusion at (vii)). For Wittgenstein the class of expressions to be analyzed this way is the class of expressions that appear to denote *complex entities* rather than the class that appears to denote objects other than particulars with which one may be acquainted; consequently, he would not accept the stipulation in premise (i) that genuine names refer to, and only to, particulars with which one may be acquainted. Nor would he regard (ii) as relevant, since it discounts an expression's status as a name on the basis of membership in the class of objects other than particulars with which one may be acquainted. Presumably, Wittgenstein would reject (v) and (vi), too, since they are founded upon the same epistemological considerations. Fortunately, the Theory of Descriptions and the Theory of Incomplete Symbols can be defended on grounds independent of Russell's epistemological views.

According to Russell's Theory of Descriptions, the relative name "Socrates" can be said to denote the very same individual as that denot-

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[91] The rejection of any such strategy occurs very early in Wittgenstein's writings; for example:

> The "self-evidence" of which Russell has talked so much can only be dispensed with in logic if language itself prevents any logical mistake. And it is clear that "self-evidence" is and always was wholly deceptive (1914b, p. 4).

This early (8 September 1914) passage from the *Notebooks* forms the basis of *Tractatus* 5.4731).

It is somewhat a historical curiosity that Russell's epistemological theses concerning acquaintance and description would play such a heavy hand in the 1918 *Lectures on Logical Atomism*, given the way work on his 1913 *Theory of Knowledge* ground to a halt in the face of Wittgenstein's criticism that the theory left room for the possibility of judging nonsense. This possibility, as the passage just cited indicates, is to be ruled out by the nature of the symbolism itself. "What makes logic a priori is the *impossibility* of illogical thought" (1922b, 5.4731).

ed by a definite description such as "The Master of Plato". Although Wittgenstein would never consider basing a semantic thesis (such as that *objects can only be named*) upon an epistemological premise, he could appreciate Russell's belief that "[a] logical theory may be tested by its capacity for dealing with puzzles" (1905, p. 110). One cluster of problems revolves around the puzzle, to use Russell's words, of "how...a non-entity [can] be the subject of a proposition" (1905, p. 110). Whereas Wittgenstein had found a foil in Moore (1899) and the early Russell (1903), it was not until Russell began wrestling with Meinong's (1899) philosophy that the paradoxes associated with (apparent) reference to non-existents occurred to him. However, as time passed both became concerned with these issues, that is, with how there could be false judgments, negative existential propositions, and true belief ascriptions concerning persons with false beliefs. Russell's Theory of Descriptions provides answers to some of these problems consistent with his epistemological views and his Theory of Types. For Wittgenstein, in contrast, the search for answers to these problems leads to the bipolarity of the proposition and to the Picture Theory's thesis of structural isomorphism. For him the Theory of Descriptions offers a solution to some of the cases in which it appears that a propositional sign is not structurally isomorphic to the world.

Consider "Pegasus has wings" and "The present King of France is bald". Are these sentences true or false? In either event on Wittgenstein's view it would be necessary for each sentence to contain as many elements *in* it as there are objects represented *by* it. But neither "Pegasus" nor "The present King of France" have any referent. How *could* these sentences possess name-object isomorphism? And yet these sentences do not seem to stand outside the bounds of sense in the manner in which the problematic sentences that give rise to the class and semantic paradoxes do.

Russell's proposal, accepted by Wittgenstein (1922b, 3.24), is to treat "Pegasus," "Socrates," etc. as disguised descriptions, and to treat definite descriptions like "The winged horse," "The Master of Plato," and "The present King of France" as affirming that "there is one object, and no more, having a certain property" (1912, p.53). Definite descriptions, Russell maintains, are to be understood as *incomplete symbols*; that is to say, when viewed in isolation apart from a series of claims, they have no meaning whatsoever. Their use in a sentence must be seen as entailing (and being entailed by) a series of claims.

The sentence "The present King of France is bald" is then analyzed as a conjunction of the following:

(1) There is at least one present King of France.

(2) There is at most one present King of France.

(3) Whoever is the present King of France is bald.

Symbolically (allowing K to stand for "is a present King of France" and B to stand for "is bald") the original sentence may be represented: $(\exists x)\,[Kx \,\&\, (y)\,(Ky \rightarrow y = x) \,\&\, Bx]$. Rather than being nonsensical or of some indeterminate truth-value, the original sentence turns out to be false, due to the falsity of the first conjunct. There are no values of x such that x is a present King of France. Thus the semantics of the sentence can be explained without either introducing a new semantic category or positing a nonexistent object as referent.

Russell's Theory of Descriptions has been the subject of considerable controversy. The principal criticism of it pertains to what are perceived as its undesirable logical consequences. These come about in the following way. Consider the sentence "Socrates is the Master of Plato" which expresses a contingent truth. Since "Socrates" is synonymous with "the Master of Plato," this sentence is equivalent to "The Master of Plato is the Master of Plato" and may be represented: $(\exists x)\,[Mx \,\&\, (y)\,(My \rightarrow y = x) \,\&\, x = x]$. But this claim may be *deduced from*

$(\exists x)$ [Mx & (y) (My $\rightarrow$ y = x)], which asserts that Socrates (i.e., the Master of Plato) exists, as the conjunction of it and the law of identity. It, therefore, follows from the fact that Socrates exists that Socrates is the Master of Plato. The former *strictly implies* the latter; thus: $\{(\exists x)$ [Mx & (y) (My $\rightarrow$ y = x)]$\} \Rightarrow \{(\exists x)$ [Mx & (y) (My $\rightarrow$ y = x) & x = x]$\}$ is true. That is to say, if Socrates exists, then Socrates is necessarily the Master of Plato. The possibility of Socrates existing but not being the Master of Plato is ruled out.

Russell, we should note, believed these problems could be avoided. The fact of the matter is that Russell expressed grave reservations over treating names as *synonymous* with definite descriptions. These reservations are expressed as early as "On Denoting" (1905, p. 113) where he quips that we can hardly credit George IV with an interest in the law of identity when he desired to know if Scott was the author of Waverly. Indeed, in the *Introduction to Mathematical Philosophy*, written within a year of the passage quoted above, he asserts "'Scott is the author of *Waverly*' is not the same proposition as results from substituting a name for 'the author of *Waverly*'" (1919, p. 172). In that work, too, he suggests that the substitution that creates the unwanted analyticity runs afoul of the Theory of Types (1919, p. 171). This can be seen from the fact that if "Socrates" is synonymous with "the Master of Plato" or "Scott" is synonymous with "the author of Waverly", then the names and the definite descriptions would be of the same type. Consequently, "Socrates is the Master of Plato" becomes an illegitimate construction, and, so, the substitution that generates the unwanted analyticity is blocked. While this gets Russell off the hook with respect to the problem described here, he appears to be impaled upon the horn of a dilemma, since, after all, "Socrates is the Master of Plato" is *true*.

Wittgenstein, we will see, circumvents this problem by construing the elementary propositions into which "Socrates is the Master of Plato"

decomposes as logically independent; this has the consequence of making the sentence contingent, as the Picture Theory requires *if* the sentence is to have a sense.

Having noted the potential problem associated with Russell's conclusion (at (vii)), several comments concerning the argument in general are in order before we turn to Wittgenstein's argument. First, note that the argument does not *establish* in any way that there are simple objects. All of the ontology enters via the first premise where it is stipulated that names name objects of acquaintance. In the *Lectures* Russell appears simply to assume the existence of simple objects. He clearly acknowledges the lack of support he has given the claim:

> I think it is perfectly possible to suppose that complex things are capable of analysis *ad infinitum*, and that you never reach the simple. I do not think it is true, but it is a thing one might argue, certainly. I do myself think that complexes--I do not like to think of complexes--are composed of simples, but I admit that is a difficult argument, and it might be that analysis could go on forever (1918, p. 64).

The fact is that Russell's ontological commitment to simple objects was never great. It is perhaps its greatest in the *Lectures*. There he comments upon the fact that all names are eliminated within the notation of *Principia Mathematica* (1910) saying: "...in the logical language set forth in *Principia Mathematica* there are not any names, because there we are not interested in particular particulars but only in general particulars, if I may be allowed such a phrase" (1918, p. 63). (Russell means by the last phrase that in *Principia Mathematica* he was interested in particulars only to the extent that they are subject to quantification.) Nevertheless, although Russell would continue to find it desirable to posit simple objects, he would remain cautious in his commitment. The 1924 article, "Logical Atomism," put the matter this way:

> When I speak of 'simples', I ought to explain that I am speaking of something not experienced as such, but known only inferentially as the limit of analysis. *It is quite*

> *possible that, by greater logical skill, the need for assuming them could be avoided.* A logical language will not lead to error if its simple symbols (i.e. those not having any parts that are symbols, or any significant structure) all stand for objects of some one type, even if these objects are not simple. The only drawback to such a language is that it is incapable of dealing with anything simpler than the objects which it represents by simple symbols. But I confess it seems obvious to me (as it did to Leibniz) that what is complex must be composed of simples, though the number of constituents may be infinite (1924, p. 173; emphasis added).

It is interesting that the tradition has largely remembered Russell's belief in ineliminability as a criterion for ontological commitment but not his reluctance to view names as eliminable. Quine, for example, maintains that "the singular noun...can always be expanded into a singular description, trivially or otherwise, and then analyzed out *a la* Russell" (1948, p. 8). This belief becomes the basis of Quine's own position on ontological commitment, namely, that a theory is committed to the kinds of entities over which it *quantifies*, since (on his view) quantifiers but not names are ineliminable. It would be more accurate to describe Russell as believing that all *relative names* are eliminable, and that it is possible but not likely for analysis to terminate with names of objects that are not simple. Be that as it may, the tradition has come to identify *the Russell view* with the view that it is possible to eliminate all names by means of analysis (Haack (1978), pp. 62-63; Coffa (1993), pp. 111-112). And, indeed, he did take the elimination of names to be *possible*.

Wittgenstein's view may be sharply contrasted with Russell's, since for him it is not even possible to eliminate reference to simple objects if analysis is to be complete and representation is to be possible.

Given what we know about Russell's influence upon Wittgenstein, we can reconstruct his argument as follows: (i) if the name of a complex

entity, n, occurring within a propositional sign S which has a determinate sense can be eliminated upon analysis, then n possesses complex logical structure (or a decompositional semantic structure); (ii) If n possesses a complex logical structure, then this structure will be revealed by either a two-stage analysis (in which the first stage replaces the name with a definite description and the second stage replaces the definite description with a series of quantified expressions) or by a three-stage analysis (in which the variables of the second stage are replaced by names); (iii) if a two-stage analysis were complete, then it would be possible to analyze propositions with determinate sense as functions of propositions whose sense is indeterminate; (iv) it is impossible for a propositional sign that has determinate sense to be analyzed into components whose senses are indeterminate; therefore, (vi) a propositional sign S that contains the name of a complex to be eliminated upon analysis must be given a three-stage analysis; and, therefore, (vii) the sense of a propositional sign S is determined by the referents of those names into which it decomposes. What makes this conclusion so important is the fact that, following Frege, Wittgenstein holds that any propositional sign that has a sense must contain *both* argument and function, that is, they must contain both singular and predicative expressions; hence, (viii) *there must be names*. But what analysis demonstrates is that (ix) nothing which purports to be the name of a complex *is* a name. So, if there are names (and (viii) affirms that there are), then (x) names must name *simples*. In other words, there must be simple objects.

The first premise is a truism implicit within the project of logical analysis. Wittgenstein credits Russell with "showing that the apparent logical form of a proposition need not be its real one" (1922b, 4.0031). The early analysts sought to free themselves from what they viewed as the metaphysical excesses of their predecessors and, indeed,

the commitments imposed on them by their own early theories of judgment. They believed an uncritical attitude toward ordinary language with its various forms to be at the source of these excesses. Consequently they regarded a mistrust of ordinary forms as a prerequisite for doing philosophy. There was thus initiated--primarily in the writings of Frege (1879a), Russell (1903) and Russell and Whitehead (1910)--the search for a logically perspicuous language. But as we saw earlier, for Wittgenstein, "the propositions of our everyday language, just as they stand, are in perfect logical order" (1922b, 5.5563), because an *illogical* representational medium is impossible. Thus:

> Language disguises thought. So much so, that from the outward form of the clothing it is impossible to infer the form of the thought beneath it, because the outward form of the clothing is not designed to reveal the form of the body, but for entirely different purposes.
>
> The tacit conventions on which the understanding of everyday language depends are enormously complicated (1922b, 4.002).
>
> ...Most of the propositions and questions of philosophers arise from our failure to understand the logic of our language (1922b, 4.003).

The task would not be simply to *construct* an ideal language and then to begin conducting business within it. Rather, the task would be to cut through the numerous conventions that govern the *use* of language in ordinary contexts to discover the underlying logical form. Beneath the conventional forms there lies the "logical syntax" of our language (1922b, 3.325, 3.33, 3.334).

The process of analysis involves, at the very least, the clarification of propositions, that is, the clarification of what makes them true. When a proposition names an object that is complex, then certain *facts* about that object will contribute to the conditions that make the proposition true; at the very least it does this by determining the referential conditions for the name of the object. The first premise sim-

ply takes stock of this fact. If facts about the referent contribute to the truth or falsehood of a proposition, then it will upon analysis have to be eliminated in favor of descriptions of those facts. Thus analysis yields more complex syntactic forms.

The second premise asserts that there are two principal candidates for what counts as a complete analysis. The first alternative, attributed to Russell (by Wittgenstein among others), has it that analysis is complete once all proper names are eliminated in favor of one or more definite descriptions that are, in turn, eliminated in favor of quantifiers, predicates and variables.

On Wittgenstein's view such an analysis is incomplete. To be complete the analysis must be carried out so as to replace the quantifiers and variables with names of actual existents. This involves replacing the existential quantifier with the logical sum, and the universal quantifier with the logical product, of those names for which the predicate is possibly a function. It is to this possibility that the second disjunct in premise (ii) points.

This might seem like a trivial distinction to draw, since today it is generally accepted that a formula containing quantifiers is made true either by the fact that its predicates are satisfied for some values of the variables it contains (on an objectual reading of the variables), or by the fact that one of its substituends is true (on a substitutional interpretation of variables).[92] In either event it turns out that expressions containing names or other singular terms are truth-bearers. The view that sentences containing quantifiers are true (or false) depending upon their relation to sentences containing names or other singular terms is commonplace, however, as a consequence of Wittgenstein's

[92] I take Wittgenstein to adhere to a substitutional interpretation of variables, since, for him, variables function as prototypes or exemplars of *symbol* types rather than as referring expressions of either an object language or a meta-language.

and Russell's work. Its actual significance can only be appreciated when viewed against a historical background dominated by the logic and metaphysics of British Idealism. Frege, Wittgenstein, and eventually Russell had, as we discussed in a previous chapter, abandoned subject-predicate analyses of sentences in favor of analyses based upon function and argument. The Wittgensteinian idea that sentences containing quantifiers, not only are made true, but *have a sense* in virtue of their relations to sentences containing names of objects entails the falsehood of the doctrine of internal relations so integral to Idealism. This becomes apparent if the reason why the analysis must be extended is considered.

Unless sentences containing quantifiers are treated as sums or products of sentences containing names, no discrimination will be effected within reality and no sentence containing quantifiers will have a sense. Considered in themselves, apart from any such relation, sentences containing quantifiers remain indeterminate, as do the sentences that contain names of complex entities for which they provide an analysis:

> When a propositional element signifies a complex, this can be seen from an indeterminateness in the propositions in which it occurs. In such cases we *know* that the proposition leaves something undetermined. (In fact the notation for generality *contains* a prototype) (1922b, 3.24).

What is left undetermined is any discrimination within reality of what would be the case if the formula or sentence were true and what would be the case if it were false. This can be done by saying that, for a given domain {a, b, c,..., *n*}, (**E**x) Fx is made true by Fa v Fb v Fc...F*n*, and it is made false by ~Fa & ~Fb & ~Fc...~F*n*. The reason it does not suffice to say simply that (**E**x) Fx is made false by ~[(**E**x) Fx] is that what makes the latter true just is the fact that, for a given object **a**, Ga v Ha v Ja v *N*a is true. The possibilities referred to by these dis-

juncts belong to the sense of Fa; and should any of them obtain, Fa would be false. For example, the sentence "Nothing is blue" would be made true by every object within a given domain being red or yellow or green or some other color incompatible with the object being blue."[93] Ultimately it is the determinate *nature* of objects that secures for quantified expressions a determinate *sense*.

We can see how this thesis runs contrary to any sort of doctrine of internal relations that holds all relational properties of objects to be essential. Although this is not the place to go into details on such matters, that view has it that an object's identity conditions are determined by all of the object's actual relations at a given time. Given any change in actual relation, the object would fail to persist. To return to our earlier example of the pedestrian between the two cars, a doctrine of internal relations would maintain that the pedestrian--if it makes sense at all to talk about the pedestrian *per se*--ceases to be the object it once was once it stands in a different relation to the two cars. On Wittgenstein's view, in contrast, what an object is cannot be determined by the relations into which it actually enters. Rather an object's *possibility* of being related thus-and-so is written into the very nature of the object itself. Thus:

> If things can occur in states of affairs, this possibility must be in them from the beginning.
>
> (Nothing in the province of logic can be merely possible. Logic deals with every possibility and all possibilities are its facts.)
>
> Just as we are quite unable to imagine spatial objects outside space or temporal objects outside time, so too there is *no* object that we can imagine excluded from the possibility of combining with others.
>
> If I can imagine objects combined in states of affairs, I

[93] In later years Wittgenstein (1929a) would regard what has been described here as posing a problem concerning the logical independence of elementary propositions. Concerning the so-called color exclusion problem more will be said below.

> cannot imagine them excluded from the *possibility* of such combinations (1922b, 2.0121).
>
> If I know an object I also know all its possible occurrences in states of affairs.
>
> (Every one of these possibilities must be part of the nature of the object) (1922b, 2.0123).

Ultimately, the ontological primacy given to objects and *their* possibilities rests upon the need for propositions with sense to effect a discrimination within reality in such a way as to make their own truth or falsehood contingent. There must be objects of a determinate nature, and in some way reference must be made to these objects if quantified expressions are to have a sense. In this way we arrive at the truth of premise (iii): if a two-stage analysis were complete, then it would be possible to analyze propositions with determinate sense as functions of propositions whose sense is indeterminate.

Premise (iv), however, asserts that it is impossible for a propositional sign that has determinate sense to be analyzed into components whose senses are indeterminate. This follows from the fact that a sentence containing a quantifier only has a sense in virtue of its logical relation to a sentence containing names that do refer to actual objects. If the former has a determinate sense, the latter must. One might ask whether this claim is *generally* true and not merely true of propositions containing quantified expressions. But, in fact, this question does not arise for Wittgenstein, since, for him, any proposition about anything complex can be analyzed by means of sums or products of propositional signs containing only quantifiers, names and predicates. At the bottom of premise (iv), then, lies the appropriateness or inappropriateness of the two Russellian assumptions that names of complexes are disguised definite descriptions and that definite descriptions are to be understood primarily as playing a predicative role. The latter assumption

has been questioned on more than one occasion (Strawson, 1950; Donellan, 1966). These criticisms are particularly relevant in that they reach to the very heart of the syntacticist tradition by raising the possibility that a linguistic token's use within a context, rather than its logical or syntactic form, determines its semantic properties. Since Wittgenstein (1953), too, eventually shared these concerns, a full treatment of the issue is best left until later when we consider Wittgenstein's own abandonment of syntacticism.

Russell, as we know, accepted these theses in order to eliminate the need to posit non-existent beings. They also permit him to accommodate falsehood without making falsehood contingent upon truth; and, when conjoined with his theory of judgment, they enable him to accommodate true ascriptions of false beliefs to others. For Wittgenstein, on the other hand, the two theses serve to augment the Picture Theory's requirement of logical isomorphism. So the question that should really be raised here is that of whether the Picture Theory does indeed require this kind of augmentation. I would suggest that it does. The alternative would entail that a propositional sign contain either more or less elements than there are objects to be represented. In the case of too few elements, ambiguity enters the proposition due to the fact that an element must represent more than one object. (Consider: *under this interpretation* a is to the left of b, but *under that interpretation* b is to the left of a.) In the limiting case no discrimination within reality is effected. But, and more germane to the present issue, the same holds when there are too many elements, as is the case when "the present King of France" is taken as a singular term. Given that there is no such object, a sentence containing such a phrase would leave undetermined what object possesses a given property or is the term of a given relation. That is to say, if "the present King of France" is construed merely as a singular term within the sentences in which occurs, then it

will remain unclear just *how* to interpret such sentences: of *what* shall a given property or relation be predicated? It is as if one would not know where to look for a state of affairs that would render the sentence true or false. One could, as it were, survey *all* objects and determine that the denoting phrase refers to none of them, thereby determining the falsehood of the sentence; but that sort of procedure involves treating the denoting phrase as a predicate that goes unsatisfied. And that is precisely what the theory of descriptions calls for.

That sense must be determinate thus requires (vi), namely, that a propositional sign containing the name of a complex must be given a three-stage analysis. Consequently, we get the following progression:

L1. "Socrates exists" or $(\exists x)\ (x = s)$.

L2. "The Master of Plato exists" or $(\exists x)\ (Mx\ \&\ (y)\ (My \rightarrow y = x))$.

L3. "Either a is the Master of Plato, or b is the Master of Plato, or c is the Master of Plato..." or $[Ma\ \&\ (y)\ (My \rightarrow y = a)]\ v\ [Mb\ \&\ (y)\ (My \rightarrow y = b)]\ v\ [Mc\ \&\ (y)\ (My \rightarrow y = c)]...v\ [Mn\ \&\ (y)\ (My \rightarrow y = n)]$.

The first level consists of the original unanalyzed sentence. At the second level the name of the complex is eliminated in favor of the definite description, and the the resulting sentence is analyzed according to Russell's theory. The third level initiates the sort of analysis countenanced by Wittgenstein. In L3 the existential quantifier has been replaced by its logical sum. The analysis would proceed with the elimination of the universal quantifier in favor of its logical product. So, for example, the first disjunct in L3 would become: $[Ma]\ \&\ [(Mb \rightarrow b = a)]\ \&\ [(Mc \rightarrow c = a)]\ \&\ [(Md \rightarrow d = a)]...[(Mn \rightarrow n = a)]$.

The third level of analysis is not yet complete however. The logical sums and products that appear upon analysis of L2 *disappear*, along with the identity sign (1914b, p. 19), if the convention is observed that each object has one and only one name and no two objects have the

same name (1914b, p. 34; 1922b, 5.53). Consequently, we get:

L3' Ma & ~Mb & ~Mc...~Mn.

Let me point out that in the actual presentation in the *Tractatus* the existential quantifier is retained. That is because this portion of the text, 5.53-5.534, is intended only to show how the identity sign is eliminated and no more. Thus he provides various examples and retains the existential quantifier for the sake of simplicity. For example, he says, "the proposition, '*Only one x* satisfies *f*()', will read '$(\exists x).fx: \sim(\exists x,y) .fx.fy$'" (1922b, 5.5321). But the existential quantifier is dispensable too, because all names are taken to refer to existents, since symbols that purport to be names of entities possessing Being but not existence are eliminated upon analysis. In this way the use of names and the differences between names *show* what is usually *said* by means of quantifiers."[94] Wittgenstein, like Quine, can be understood to be taking logical ineliminability as a criterion for ontological commitment; but, in contrast to Quine, he holds quantifiers rather than names to be unnecessary.

Is it an arbitrary matter which convention is accepted? I think not. For Wittgenstein, at any rate, the need to eliminate the identity sign results from the demand that sentences with sense not decompose into sentences that lack sense. That such would occur *given the convention concerning naming* is obvious enough, since a = a and a = b would be tautologous and contradictory respectfully; and because they would fail to be contingent, they would fail to have a sense. But Wittgenstein does provide an independent, and less question begging, argument. Roughly, it is this: (i) either a = a and a = b can be interpreted formally as being merely about symbols, or they can be interpreted materially as being about extra-linguistic objects and their rela-

[94] Difficulties arising from the elimination of the identity sign are discussed in Black (1964), pp. 290-295. A strong defense of the technique may be found in Hintikka (1957).

tions; (ii) assume for the sake of argument that they are to be interpreted materially; (iii) "to say of *two* things that they are identical is nonsense, and to say of *one* thing that it is identical with itself is to say nothing at all" (1922b, 5.5303; cf. 1914b, p. 4); therefore, (iv) neither a = a nor a = b may possess sense; for which reason, (v) they cannot be interpreted materially; and therefore, (vi) they must be interpreted as merely formal devices (1922b, 4.241-4.242). The only claim here that stands in need of explanation is the first clause of (iii). The reason it would be nonsense to say of *two* things that they are identical is that no relation (i.e., no *object*, as "[r]elations and properties, etc. are objects too" (1914b, p. 61)[95]) has been designated as the referent of "the relation of identity between two different objects. Or, at least, none *shall be* designated as such so long as words like "identity" and "difference" are used as they are, i.e., in ways consistent with Leibniz' Laws. (Here one wants to say: "But the identity relation is a *logical* one." But what does *that* mean in this context? That it is merely a formal one? In that case no state of affairs will have been asserted as existing. If it is a formal concept, then it expresses a relation between signs.)

We now have a complete picture of how the final stage of analysis is to be conducted according to Wittgenstein; and we can now make sense of premise (vii), i.e., that the sense of a propositional sign is determined by the referents of those names into which it decomposes. The form (as distinguished from the structure) of a propositional sign corresponds to a range of possible facts which constitute its sense. These possible facts are possibilities *of* the objects that are their constituents. Names are required to refer to these.

Therefore, (ix) there must be names. The *Notebooks* are illuminat-

[95] The extent to which this passage is useful in clarifying the relation between Wittgenstein's and Frege's conception of an object will be discussed below.

ing on this point:

> One cannot achieve any more by using names in describing the world than by means of the general description of the world!!!
>
> Could one then manage without names? Surely not.
>
> Names are necessary for an assertion that *this* thing possesses *that* property and so on.
> They link the propositional form with quite definite objects.
> And if the general description of the world is like a stencil of the world, the names pin it to the world so that the world is wholly covered by it (1914b, p. 53).

One day later he observes:

> The great problem round which everything that I write turns is: Is there an order in the world *a priori*, and if so what does it consist in (1914b, p.53)?

What makes Wittgenstein's philosophy *a priori* is that it proceeds from an examination of the necessary conditions for the possibility of representation. The sentences that make up the *Tractatus* are not, at least according to its author, *a priori* true in the same way as, say, "All bachelors are unmarried" is true, given the meaning of the word "bachelor", even if being unmarried *is* a necessary condition for being a bachelor. For it is not from the meanings of any particular *words* that the claims that make up the *Tractatus* issue. They stem, rather, from arguments concerning what must be necessary if language and thought are able to represent (that is, to be able *to refer to* and *be true of*) a world external to itself.[96]

These conditions include bipolarity and logico-pictorial form. The latter requires a form/structure distinction and *names of objects* as

[96] That the statements of the *Tractatus* can be reconstructed as a set of arguments, as I have attempted to do in this dissertation, is itself an important fact to consider when evaluating whether those claims are nonsensical as its author maintains. How can entailment relations obtain among sentences that are alleged to be nonsense? In a later section I will describe a fallacy to which Wittgenstein has fallen susceptible in thinking that a statement P describing a necessary condition for Q cannot be contingent.

pictorial elements. Furthermore, the world must be such as to contain objects, and these objects must have a determinate nature. This entails that their possibilities for being related to one another must be determined by their very nature.

In the final stage of the argument the *a priori* order of the world is extended to include *simple* objects. The fact is there must be names, yet analysis shows that (ix) nothing which purports to be the name of a complex *is* a name. The 'names' of complex objects are really disguised descriptions (1914b, p. 52). Yet if there must be names, but 'names' of complexes do not function as such, then names must be names *of* non-complex or simple objects. Therefore, (x) there must be simple objects.[97]

What *are* simple objects? On this the author of the *Tractatus* remained notoriously reticent. He does tell us what simple objects must *be like*; but he does not believe himself able to name and ostensively define such an object. This reticence follows considerable soliloquy on the subject during the composition of the *Notebooks*. At one point he waxes Russellian: "[t]the simple thing for us IS: the simplest thing that we are acquainted with" (1914b, p. 47).[98] The simplest thing with which we are acquainted, he goes on to suggest, "need appear only as a prototype, as a variable in our propositions" (1914b, p. 47). The argument for the *Grundgedanke* of the *Tractatus*, discussed in the next section of this chapter, constitutes his rejection of that idea. For Wittgenstein there can be no logical *objects*. In the *Notebooks* he also considers and rejects the identification of simple objects with sense data, as there is no "*minima sensibilia*" (1914b, p. 45; see also p. 51).

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[97] Wittgenstein suggests at one point that it is not appropriate to label as names both symbols that refer to complexes as well as to simples. The word "name" should be reserved for the latter.(1914b, p. 52).

[98] Compare Russell: "...any entity with which something is acquainted will be called an 'object'... An entity with which nothing is acquainted will not be called an object" (1914a, p. 162). Objects, on this view, are construed *de dicto*, i.e., as objects *of awareness*.

Furthermore, he rejects (presumably for the same reason) the identification of simple objects with "parts of space" (1914b, p. 47), though he notes how "instinctive" (1914b, p. 48) it is to regard them *as* objects."[89]

Perhaps most telling is his consideration and rejection of a Fregean position:

> But if there are simple objects, is it correct to call both the signs for them and those other signs [i.e., signs for complexes] "names"?
>
> Or is "name" so to speak a *logical* concept?
>
> Names signalise what is common to a single form and a single content... (1914b, pp. 52-53).

The question being raised in the second paragraph pertains to whether names must be characterized *merely* in terms of their logical role as argument, or whether it is possible to go further by explaining their potential for reference. We have seen in a previous chapter that Frege is skeptical about the latter possibility. He believed that at most the relations between symbols and their referents could be the subject of eludidations or metaphors such as "satisfaction," "falling under," and the like. From Frege Wittgenstein would inherit a sense for the problematic nature of a theory of reference, but from Russell and Moore he inherited a realism that requires reference and the referents of names

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[89] Interestingly, the very next entry into the *Notebooks*, one day later on 14 May 1915, finds its way into the *Tractatus* at 4.002: "Language is a part of our organism, and no less complicated than it" (1914b, p. 48). As I mentioned earlier, I believe Wittgenstein's naturalism emerges very early in his career. This entry constitutes one of its earliest and most forcible expressions.--Slightly more contentious is Wittgenstein's remark in the "Notes on Logic," which found its way into the *Tractatus* at 4.1121 that "[e]pistemology is the philosophy of psychology (1913, p. 106). Be that as it may, naturalism--as discussed in the Introduction to this work--is implicit in the methodology employed by adherents of relational theories of awareness and judgment.

to be characterized.[100] When Wittgenstein says, "[n]ames signalise what is common to a single form and a single content..." (1914b, p. 53), he takes his stand against Frege and with Russell and Moore.[101] What is common to "a single form and a single content" are the *objects* whose various possibilities for combination correspond to the form of the proposition (thereby constituting its sense) and whose actual combination constitute the proposition's content or meaning.[102] The fact of the matter is that Wittgenstein's distinction between sense and meaning (which is first and foremost a *metaphysical* distinction between possible and actual states of affairs) along with the ontology of the Picture Theory required to sustain it are the outcome of philosophical investigations initially undertaken to secure, among other things, inferences from ~~P to P. Securing the possibility of an adequate theory of inference without falling prey to Russell's Paradox was the task with which Wittgenstein began his philosophical career. The point is that the difference between Frege and Wittgenstein is not merely a difference in program or research goal. Wittgenstein began with very much the same goal as Frege, but found that the theory of inference needs to be grounded in the theory of reference. Thus, "if the general description of the world is like a stencil of the world, the names pin it to the

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[100] In the 1903 *Principles of Mathematics*, a work with which Wittgenstein was very familiar, Russell says:

> That the meaning of an assertion about all men or any man is different from the meaning of an equivalent assertion about the concept *man*, appears to me, I must confess, to be a self-evident truth--as evident as the fact that propositions about John are not about the *name* John (1903, p.90).

For further discussion see Coffa (1993), pp. 100-107.

[101] Of course his Fregean inheritance would become manifest in his unwillingness to regard sentences like this one as straightforwardly truth-functional.

[102] The word "content" (*Inhalts*) is here used as a synonym for the "meaning" of a sentence. It is what corresponds to (or fails to correspond to) a propositional sign's structure; the term is used in the *Tractatus* at 2.025, 3.13, and 3.31. The *sense* of a proposition are the array of possibilities that correspond to its form.

world so that the world is wholly covered by it (1914b, p.53).

But what are the simple objects that make up the substance of the world? No answer is given. Looking back upon his work years later, he would remark to Malcolm,

> ...that at that time his thought had been that he was a *logician*; and that it was not his business, as a logician, to try to decide whether this thing or that was a simple thing or a complex thing, that being a purely *empirical* matter! (Malcolm, 1972, p. 86).

In spite of the fairly obvious objection that any nameable object could turn out to be complex, Wittgenstein would maintain that "the *infinitely* complex situation seems to be a chimera" (1914b, p.50), and that empirical science could prove it to be such.

Wittgenstein's view is not so ludicrous as common sense might think. The common sense idea that objects are located in *a space* that is infinitely divisible and of infinite extent is a Newtonian idea; it is one that was as contentious in Newton's time as it was in Russell's and Wittgenstein's time. Wittgenstein's own view is similar to Leibniz's in that both regard space as an emergent property of objects (monads in Leibniz's case) that make up the substance of the world. This appears to be what Wittgenstein has in mind when he says, "Space, time and colour (being coloured) are forms of objects" (1922b, 2.0251).[103] Needless to say, if relativity theory or the theory of quan-

[103] This does not constitute a major divergence from the use of "form" described earlier in this dissertation. The form of a proposition just is its truth-conditions. The truth-conditions are none other than the possible ways in which objects named may be related to one another. So to speak of the form *of an object* just is to speak of *its* possibilities for combination:

> Objects contain the possibility of all situations.
>
> The possibility of its occurring in states of affairs is the form of an object (1922b, 2.014-2.0141).

Black describes the form of an object as "a power or capacity to combine with other objects in atomic facts: objects have different logical forms when they have different liberties of association" (1964, p. 55).

ta are true, then the Newtonian picture is incorrect.[104]

My principal concern with the argument up to this point is not that countenancing simple objects requires one to abandon the idea of space as infinitely divisible. At least, I am not concerned with the intelligibility of that idea. What *is* difficult to understand is how to reconcile that possibility with Wittgenstein's contention that:

> the propositions of our everyday language, just as they stand, are in perfect logical order.--That utterly simple thing, which we have to formulate here, is not a likeness of the truth, but the truth in its entirety (1922b, 5.5563).

For if the substance of the world is without the kinds of attributes attributed to it by Newtonian physics and by and large by common sense, then everyday language (*Umgangssprache*) cannot be in perfect logical order, since the propositions which comprise it would all be false! The point is that one cannot give up the idea of infinite divisibility without modifying one's conception of ordinary, composite objects. What sense can be made out of the idea of a composite object *composed of* non-spatial and non-temporal objects? If the objects to which we ascribe extension as well as the extensionless objects that supposedly make up the substance of the world are of equal ontological standing, then the manner of their relating constitutes a metaphysical mystery on a par with how Aquinas' God could cause Aquinas' universe or how Descartes'

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[104] Even though Wittgenstein's later discussions with members of the Vienna Circle suggest he is willing for elementary proposition to be *very* unlike the propositions of ordinary language (cf. Waismann, 1979, p. 42), it might appear we are getting Wittgenstein out of the pot and into the fire by invoking the possibility of non-Newtonian physics. The so-called Copenhagen interpretation of quantum mechanics, which is now accepted by most physicists, appears to entail subjectivism (which would be contrary to the realism of the *Tractatus*), primarily in its interpretation of the law of excluded middle as not holding for objects within its domain. Clearly, that would make quanta ineligible as Wittgensteinian simple objects, since bipolarity requires the exclusion of the middle in order for sense to be determinate. Recently, however, Albert (1993) has argued that Bohm's alternative interpretation of quantum mechanics can avoid these un-Wittgensteinian consequences.

Russell (1925) was concerned to dispel similar fears concerning Einstein's research.

mind could cause motion in Descartes' body. The alternative is to not think of ordinary objects as sharing an equal ontological footing. For example, they might be construed along phenomenalistic lines, that is, as having a kind of existence in virtue of their relation(s) to perceiving subjects. But this just does not square with the realism that animates the *Tractatus*, and certainly it is not consistent with the claim that "the propositions of our everyday language, just as they stand, are in perfect logical order" (1922b, 5.5563).

Here an interesting objection can be raised against the exposition of the *Tractatus* thus far offered in this dissertation. This dissertation has gone to great lengths to argue that the *Tractatus* is a realist work; and that, indeed, Wittgenstein is to be regarded as more of a realist than Frege, who, we have argued, is to be understood as advocating a minimalist conception of semantics. Perhaps the principal criticism facing this line of interpretation stems from Wittgenstein's remarks about solipsism in the *Tractatus*. Such claims as that "[t]he world is my world" (1922b, 5.62) seem hard to reconcile with realism. The burden of meeting this objection will have to be postponed until Section Three below. There reasons shall be given for why the remarks on solipsism should be regarded as semantic rather than metaphysical theses. The trick to this is to explain how this is possible without lapsing into Fregean minimalism.

Although the problem of how composite objects are related to non-composite ones is not articulated in the *Tractatus*, a solution does seem to be posed within the work. The solution is to draw an ontological distinction between molecular facts (*Tatsachen*) and atomic facts or states of affairs (*Sachverhalten*) such that the former are not reducible to the latter. For this to be the case the *Grundgedanke* of the *Tractatus* must be true. The distinction between *Tatsachen* and *Sachverhalten*, and the thesis that the logical constants are not refer-

ring terms, together constitute a theory of how the composite can consist of the non-composite. Although all Wittgenstein scholars admit that an adequate account of Tractarian semantics requires a discussion of the logical constants (particularly since the sentences of ordinary language are to be analyzed into sets of sentences or formulae containing them), few if any appear to recognize that the compositionality of the Picture Theory hangs on such an account. Nevertheless that there is a connection between the two seems clear:

> The possibility of propositions is based on the principle that objects have signs as their representatives.
> My fundamental idea is that the 'logical constants' are not representatives; that there can be no representatives of the *logic* of facts (1922b, 4.0312).

It is quite relevant that the *Grundgedanke* follows, within the same numbered passage, a claim fundamental to the Picture Theory concerning the necessity of names. Typically when Wittgenstein does this it means he regards the two sentences either as different elucidations of the very same point or as being such that the former entails (i.e., presupposes) the latter. It is to the *Grundgedanke* that we turn in the next chapter.

CHAPTER IV

THE *GRUNDGEDANKE* OF THE *TRACTATUS*

1. Introductory Remarks.

Wittgenstein's fundamental idea is that the logical constants--i.e., the sentence-forming operators of the propositional or sentential logic, the quantifiers of the predicate logic, as well as the identity sign--play no referential role. Unlike names they do not refer to any sort of thing. Elsewhere in the *Tractatus* he would state the point by saying "that there are no *logical objects*" (1922b, 5.4).

Concern over the status of the logical constants occurs very early in Wittgenstein's career. Its earliest expression, and indeed the first statement of the *Grundgedanke*, is found in a 22 June 1912 letter to Russell:

> Logic is still in the melting pot but one thing gets more and more obvious to me: The propositions of Logic contain ONLY *apparent* variables and whatever may turn out to be the proper explanation of apparent variables, its consequences *must* be that there are NO *logical constants*.
>
> *Logic must turn out to be a* totally different kind than any other science (1912, p. 120).

Here we see Wittgenstein's concern with the variables of the predicate logic. His concern with the sentence-forming operators of the propositional logic would remain primarily (though not always[105]) focused upon the negation sign. We have already seen that the problem of negation (and related problems) forced Wittgenstein to reject Moore's relational theory of judgment. A 25 November 1914 entry in the *Notebooks* states:

> It is the *dualism*, positive and negative facts, that gives me no peace. For such a dualism can't exist. But how to get away from it?
>
> All this would get solved of itself if we understood the

[105] A letter to Russell, dated some time during 1912, mentions the disjunction sign and the predicate logic variables together (1912, p. 121).

nature of the proposition (1914b, p. 33).

The identity sign would also be acknowledged early on as problematic:

> Identity is the very Devil and *immensely important*; *very* much more so than I thought. It hangs--like everything else--directly together with the most fundamental questions, especially with the questions concerning the occurrence of the *same* argument in different places of a function (1912, P.123).

We have already introduced the principal considerations bearing upon the status of both the quantifiers and the identity sign, and for that reason they shall only receive cursory treatment here. Reasons for thinking (1) that quantified expressions contribute to the sense of a propositional sign only by virtue of being abbreviations for logical products and logical sums in which singular terms occur, and (2) that the identity sign does not contribute to the sense of a propositional sign at all were evinced in the course of the argument for logical atomism. If I am correct, the final component of the *Grundgedanke*--namely, (3) that the sentence-forming operators of the propositional or sentential logic are not referring expressions--is a claim crucial to establishing Wittgenstein's particular brand of atomism. To be sure, the 4's of the *Tractatus* do initiate a lengthy discussion of possible counter-examples to the Picture Theory that include molecular propositions, scientific laws, normative claims and propositional attitude ascriptions. However important it is to establish that molecular propositions do not constitute a counter-example to the Picture Theory, the greater importance of the third clause of the *Grundgedanke* consists in its role in establishing a metaphysical distinction between facts (*Tatsachen*) and states of affairs (*Sachverhalten*).

2. Problems with Molecular Propositions.

It should be fairly clear why molecular propositions pose a problem for the Picture Theory. The presence of sentence-forming operators

within a propositional sign poses a dilemma: *either* there are more elements within the propositional sign than there are objects to be depicted, in which case we have a failure of isomorphism, *or* isomorphism does obtain, in which case negative, disjunctive, conjunctive, and conditional facts must be admitted into the ontology. Wittgenstein resolves the dilemma by passing through its horns: he denies that a propositional sign containing sentence-forming operators possesses more *referring* expressions than there are objects to be depicted, *and* he denies that there are negative and other kinds of molecular facts and offers instead an ontology of *Tatsachen* and *Sachverhalten*. The operators, in turn, express various *attitudes towards* propositional signs. Affirmation and denial are two such attitudes; and, though not discussed by Wittgenstein in the *Tractatus*, analogous attitudes are expressed by disjunction, conjunction and material implication signs. Rather than having to introduce negative, disjunctive (etc.) facts to account for the semantic properties of these symbols, truth tables may be used to define them functionally. Thus the truth-values of molecular propositions may be represented as *truth-functions* of elementary propositions. For example, sentences with the same structure as "Either Carnap wrote the *Aufbau*, or Wittgenstein did, but not both" could be represented by the final column in the following chart:

P	Q	P v Q	~(P & Q)	(P v Q) & ~(P & Q)
T	T	T	F	F
T	F	T	T	T
F	T	T	T	T
F	F	F	T	F[106]

The column represents the *sense* of the proposition, i.e., its possibili-

[106] Wittgenstein does not employ the standard table used here. He typically employs rows where today we use columns. Thus, (FTTF) (P,Q) would represent the final column in the table above (1922b, 5.101). At places he also employs his *ab*-notation (1922b, 6.1203).

ties for truth or falsehood under different conditions; the row that corresponds to what is *actually* the case with respect to P and Q represents the *meaning* of the proposition.[107] Nothing contributes to the truth-value of the molecular proposition other than that which contributes to the truth-values of the elementary propositions.

The question we now face is: what argument can be given in support of the *Grundgedanke* for sentence-forming operators? We today have become so accustomed to the truth table definitions for connectives that the matter hardly seems one for which an argument is even necessary. This dogmatic attitude is not justified. It is hardly a self-evident truth that negation, disjunction, and the rest are, as it were, contributed by the subject who judges or speaks rather than a part of the objective *content* of the judgment. Sartre (1975), for example, argues that in a certain respect negativity is objective. His most famous example consists of a description of what one experiences when one *discovers* the absence of a friend from a particular setting: one expects to meet Pierre at the cafe, but instead one *finds* he is not there. According to Sartre, one is encountering the negative fact (*négatité*) that Pierre is not in the cafe. "It is an objective fact at present that I have discovered this absence, and it presents itself as a synthetic relation between Pierre and the setting in which I am looking for him" (1975, p. 42). The point is that phenomenologically at least it seems as if the negativity belongs to the content of the judgment--i.e.,

[107] One interesting consequence of Wittgenstein's view is that propositions that differ in terms of sense may have the very same meaning. This is a harmless consequence, given what Wittgenstein means by "sense" and "meaning". Notice that the same may be said for Fregean semantics. Sentences with very diverse senses (such as "Snow is white" and "Grass is green") may both mean (*bedeuten*) the very same thing, namely, the True. This is a very undesirable consequence for Frege if that philosopher is understood as advancing metaphysical distinctions in distinguishing between the *Bedeutung* of a name and that of a concept-word. The previous chapter argues for a more charitable interpretation of Frege's work.

to *what* one believes, not to how one believes it. Sartre, it should be noted, is well aware of, and argues against, the obvious criticism that what one is encountering is a positive fact *other than* the fact one expected to encounter and that the negativity seemingly encountered is to be explained by the fact that one's expectations were denied. Other persons who do not share one's expectations would not encounter the negative fact at all; and *that* shows that what one is experiencing is not objective in nature. But against this Sartre maintains that the very possibility of forming expectations (or of asking questions or engaging in projects) presupposes what he refers to as "a prejudicative comprehension of non-being" (1975, p. 39). Before one even forms the judgment that Pierre is not in the cafe one may be aware *of* the possibility of Pierre not being in the cafe. Hence, "non-being does not come to things by a negative judgment; it is the negative judgment, on the contrary, which is conditioned and supported by non-being" (1975, p. 42).[108]

Quite apart from phenomenological considerations, other reasons can be advanced in support of negative facts. Interestingly, Russell (1918) was willing to countenance such facts precisely at the time in his career when he was perhaps most influenced by Wittgenstein. That Russell would hold this view as late as he did is particularly surprising in light of what he says concerning disjunction:

> There are, of course, two propositions corresponding to every fact, one true and one false. There are no false facts, so you cannot get one fact for every proposition but only for every pair of propositions. All that applies to atomic propositions. But when you take such a proposition a '*p* or *q*', 'Socrates is mortal or Socrates is living still',

[108] Sartre's views are considerably more complicated than this, especially given his willingness to say that there is a certain respect in which negativity is conferred upon states of affairs by consciousness. Negativity is "made to be" by a consciousness that always transcends itself and takes as its object something *other than* itself. As he puts it, "...transcendence is the constitutive structure of consciousness; that is, that consciousness is born *supported* by a being which is not itself" (1975, p. 23). A fuller discussion of Sartre's so-called ontological argument may be found in Levvis (1980).

> there you will have two different facts involved in the truth or falsehood of your proposition '*p* or *q*'. I do not suppose there is in the world a single disjunctive fact corresponding to '*p* or *q*'. It does not look plausible that in the actual objective world there are facts going about which you could describe as '*p* or *q*'...You must not look for an object you can call 'or', and say 'Now, look at this. This is "or"'(1918, pp. 71-72).

Here Russell is in full agreement with Wittgenstein: the truth-value of the disjunction is wholly determined by the truth-values of its disjuncts, there are no disjunctive facts, and there is no object corresponding to the word "or" which may be the constituent of any fact. Even the claim that two propositions correspond to each fact is one with which Wittgenstein would agree, provided "proposition" is interpreted as synonymous with "propositional sign."[109]

Russell does not provide an argument for his view, so it is hard to tell how far he is willing to travel with Wittgenstein in these matters. He does say that one will "get into trouble" (1918, p. 72), if one attempts to analyze "P or Q" in any way other than that described here. It is quite likely that troubles that would arise for the theory of inference weigh upon Russell. *If* one thinks "P or Q" is made true by something other than what makes P true, or by what makes Q true, or (assuming inclusivity) both by what makes P true and by what makes Q true, *then* one is committed to the thesis that:

> (A) It is possible that P or Q is true, but that "P or Q" is not true.

[109] For Wittgenstein tokens of the propositional signs P and ~P have the same sense as well as the same meaning, even though--in a sense to be described below--they are used to express or assert different propositions. This will become clearer below when we consider Wittgenstein's definition of a proposition as a propositional sign in its projective relation to the world. In an important respect there may be, for Wittgenstein, innumerable propositions "corresponding" to a given fact, depending upon the type of projective relation or propositional attitude tokened in a particular thought or utterance. Wittgenstein's attempt to find the sole logical constant is part of a strategy to whittle down the number of necessary projective relations. That strategy rests upon questionable assumptions concerning the relation between parsimony and ontology.

This already sounds somewhat paradoxical; however, acceptance of (A) requires the truth predicate within the noun clause in the first disjunct to be taken distributively; consequently, one cannot generate a paradox simply by placing "P or Q" in that conjunct in the formal mode. It would only be permissible to restate (A) as:

(B) It is possible that P is true or Q is true, but that "P or Q" is not true.

The point is that the truth of P or of Q (or even of both P as well as Q) is a necessary but not a sufficient condition for the truth of "P or Q." Obviously, if this is so, then distributive laws in mathematics and logic must be regarded as illegitimate; that alone would suffice to bring despair to the author of *Principia Mathematica*. But consider, too, the consequences of taking (B) seriously. Assume to be actual what (B) maintains is possible, namely:

(C) P is true or Q is true, but "P or Q" is not true.

What makes the second conjunct of (C) true? One *wants* to say that it is made true by neither P nor Q being the case, however it follows from the fact that P's and Q's truth is necessary *but not sufficient* for the truth of "P or Q" that their falsehood may be sufficient yet not necessary for the falsehood of "P or Q." It is not necessary for P to be false or for Q to be false or even for both to be false in order for "P or Q" to be false.[110] Russell's (and Wittgenstein's) adversary is thereby committed to the thesis that:

(D) It is possible *both* that P is true and Q is true, *and* that "P or Q" is not true.

How this is possible need not detain us; presumably it requires P and Q *somehow* to be true in the "absence" of the object designated by "or." Here what is interesting is that since it is not necessary for P or for

[110] I am assuming bivalence throughout this discussion, so that "is not true" and "is false" are synonymous. This is a safe assumption so long as we are dealing with Russell's views on the subject.

Q to be false in order for "P or Q" to be false, one cannot infer from the second (embedded) conjunct of (D)--via one of De Morgan's Laws--both that P is false and Q is false, thereby achieving a contradiction in conjunction with the first (embedded) conjunct of (D).[111] The commitments of Russell's adversary (for example, to (A)) appear on the surface to be paradoxical. But then upon examination we find *they are not even that*, because they undermine the forms of inference necessary for demonstrating their paradoxical nature. This bears further explanation.

The above considerations suffice to show that, according, to the view which reifies disjunction, none of the following sequents would be valid: P]- (P v Q); Q]- (P v Q); (P & Q)]- (P v Q); ~(P v Q)]- (~P & ~Q); ~(P v Q)]- (~P v ~Q). Proponents of that view must hold that it is possible for the *formulae* corresponding to all five of five sequents to be simultaneously false (or that their negations form a consistent set). Yet, using a *standard* truth table, the conjunction of their negations can be shown to be inconsistent; and by using fairly standard rules of inference that very formula can be shown to produce a contradiction.[112] Needless to say, such procedures (employing a standard truth table or engendering a *reductio* via rules like *modus ponens* or *modus tollens*) would be regarded as wholly question-begging, since on the view under consideration *operations* upon formulae do not preserve the propositions expressed by the formulae upon which such operations (or transformations) are performed. That is to say, the view under consideration has it that propositions are individuated purely in terms of

[111] De Morgan's Law applied to the second conjunct--i.e., ~(P v Q)--would yield ~P & ~Q. Using the first conjunct of (D) we may derive: ◊[(P & Q) & (~P & ~Q)] and consequently ◊(P & ~P) and ◊(Q & ~Q). Here the claim is not that P and Q are bivalent, but that each and its contradictory can be true simultaneously. These contradictions cannot be derived, if it is not necessary for P or Q to be false for "P or Q" to be false.

[112] In fact, a standard truth table will show that the negations of any of the formulae corresponding to these sequents are contradictions (if material implication is used in place of the derivation sign).

the formal features of formulae used to express them.[113] So, for example, the *conjunction* of the five conditionals (corresponding to the sequents referred to above) into a single formula would result in a string that contains *more content* than that contained in the list of non-conjoined sequents. The conjunction sign, in this instance, introduces additional reference than that contained merely in the list.

The fact is that if one holds that the disjunction sign is a referring term but retains the (now) standard conception of the other operators, then the view in question leads to contradiction and paradox. If, on the other hand, one treats *all* operators as referring terms, then the view being considered becomes immune to such criticism, but only because that view then entails that *inference itself* is impossible, since no operations upon (or transformations of) formulae could lay claim to being truth-preserving. Taxonomies of propositions in purely formal terms appear to be too fine-grained to support what seem quite naturally to be valid inferences. *If* one is inclined to think there are such things as valid inferences, then one is likely to see in the above considerations grounds for drawing a semantically relevant distinction between sentences and formulae and the statements made *by* them. And *if* one is inclined to make that distinction, one is likely to regard any thesis that runs so far in the opposite direction--such as the thesis that the disjunction sign is a referring term--as having received its

[113] This view has had its defenders even outside what is traditionally regarded as the formalist camp. We saw in an earlier chapter that even Frege at one point was willing to say that the difference in order between formulae such as P v Q and Q v P sufficed for them to have different senses. More recently the view has found expression in Fodor's (1980) formality condition, according to which differences in content correspond to structural differences among tokens within a language of thought. The structures of these tokens should not be confused with the surface structures of natural language strings; there are, if anything, to be identified with something akin to a Chomskian deep structure. (However, see arguments by Harman (1973) in support of the claim that structures in a language of thought must be isomorphic to those within natural language.) Fodor (1994) has tempered his view by abandoning the methodological solipsism central to his computational semantics.

due *reductio*. But it is perfectly possible for the would-be opponent to bite the bullet here, and to say there is indeed no such thing as valid inference. There is nothing that precludes wedding the referential account of operators to a conventionalist account of inference. We need not stop to consider the prospects of such a marriage here. That validity and invalidity might be a matter of convention would have been an idea repugnant to Russell, but it is not a view that is unintelligible.

What is surprising is that Russell would discharge the idea that the disjunction sign refers, but accept (albeit with hesitation) that the negation sign is a referring term. Surely Russell was aware of the problems this view holds for the theory of inference. These very concerns had led Wittgenstein to insist upon the bipolarity of the proposition and a distinction between showing and saying. Russell resisted these moves preferring instead to bolster his relational theory of judgment.

In the lectures published as *The Philosophy of Logical Atomism* Russell considers the opinion of a student, Demos, who holds that "when we assert 'not-*p*' we are really asserting that there is some proposition *q* which is true and is incompatible with *p*..."(1918, p. 76). So, for example, the sentence "This chalk is not red" is used to assert that there is some proposition (namely, "This chalk is white") with which it is inconsistent and which happens to be true. One uses the negative form, because one is ignorant of the actual proposition that is true, or because one is interested in the falsehood of a given proposition (1918, p. 76).

Russell's objection is that "it makes incompatibility [a] fundamental and objective fact, which is not so much simpler than allowing negative facts" (1918, p. 76). Russell provides two arguments. First, to analyze negative propositions in this way simply reintroduces molecular propositions. To say "This chalk is not red" is just to say "There

is *some* proposition which is true *and* is incompatible with 'This chalk is red'" (1918, p. 76). The result is a *conjunctive* fact, and presumably conjunctive facts are as problematic as disjunctive ones.[114]

Second, incompatibility cannot be a fundamental and objective fact, as the theory appears to entail, since incompatibility is a relation that holds between propositions not facts. "It is clear that no two *facts* are incompatible" (1918, p. 77). And, thus, Russell resigns himself to the existence of negative facts.

Wittgenstein would not have found these arguments convincing. Concerning the second argument: Russell may be right that no two *facts* are incompatible; however, the same cannot be said of *possible* facts. Russell's own contention is a bit like comparing apples and oranges. If it is a fact that a given ball is round and it is fact that it is red, then those two facts cannot be incompatible, since they cannot both occur. However the occurrence of some possible facts precludes the occurrence of other possible facts. So the fact that a ball is red precludes its being green. It is to the objectivity of mutually exclusive possibilities that one becomes committed upon accepting Wittgenstein's distinction between sense and meaning. The *sense* of "The ball is red" consists of a set of possible facts differing in terms of the coloration of the ball. The sentence "The ball is red" *means* that the ball is red (provided it is true) or that it is some other color (if it is false). If we bear in mind that for Wittgenstein *meanings* are actual facts and states of affairs, we can see that Russell fails do justice to the sense side of the sense/meaning distinction. Why he would do so is not clear, especially since his willingness to countenance abstract and potentially uninstantiated entities like properties counts against an over-concern with postulating intensional entities. Here though the possibilities

[114] For example, sentences taking the form, respectively, of P and P & P would have to treated as having different truth-conditions, as not entailing one another, etc.

belong to actual existent objects; we are not discussing "free floating" real but non-existent objects. Possible facts are not, for example, Platonic entities of any sort. Anyhow, if Russell's second argument is intended as a *reductio*, it fails, since it is not absurd to countenance there being objective incompatibilities *in this sense*.

Regarding the first argument: Russell maintains that positing objective incompatibilities leaves one with molecular facts; however if the sense/meaning distinction is born in mind, then at most one is committed to the objectivity of possibility (i.e., to objects that actually exist possessing possibilities for combination).[115] Possible facts and states of affairs are objective in that they are not mind-dependent, however that does not in any way entail that what is merely possible *is* actual or existent. Russell seems to elevate what is merely possible to the same level as what is possible *and* actual. By collapsing the distinctions between sense and meaning, on the one hand, and between what is merely possible and what is actual, on the other hand, Russell is left in the sort of quandary that left Moore positing entities with being but not existence. Like Moore, he is left asserting there *is* both what is and what is not. The truth however is that the affirmative and negative propositional signs share the same sense and (following the *Notebooks* use of the word) the same meaning, and it is their meaning (i.e., what actually occurs) that determines their truth-value. Wittgensteinian semantics thus offers an alternative to this morass.

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[115] One point of interest is the inconsistency of Russell's two arguments. If the second argument were to be sound, then the conjunctive fact to which we referred in the first argument would be a fact whose constituents are propositions. Recall that the conjunctive fact was represented by "There is *some* proposition which is true *and* [it] is incompatible with 'This chalk is red'" (1918, p. 76). But for Russell propositions cannot be facts (1918, p. 77); *a fortiori* there cannot be conjunctive facts. Russell would have done better to unpack the word "incompatible" in modal terms--perhaps as "...and it is necessarily not 'This chalk is red'". This would have permitted him to show that the negation had not been eliminated at all.

We have considered some of the arguments that might be offered in support of negative facts and have noted both the difficulties of the view as well as the reasons why Wittgenstein would have thought positing negative facts unnecessary. We have yet to see any sort of positive argument in support of the thesis that the sentence-forming operators do not function as referring terms. We have also yet to see any positive characterization of their semantic role.

Commentary on the argument for the *Grundgedanke* is varied. McDonough (1986) devotes an entire chapter to the subject, but nowhere is the *Grundgedanke* presented as anything other than a basic assumption.[116] Black (1964) suggests two sources for Wittgenstein's fundamental idea. One is his view on the interdefinability of logical connectives; the other, deeper, source is related to "the impossibility of

[116] See McDonough (1986) pp. 35 and 39. McDonough presents the *Grundgedanke* for sentence-forming operators as a premise in an argument designed to show that P and ~P have the same sense. Given the greater generality of the *Grundgedanke*, such an argument would beg the question. The historical evidence cited in Chapter One suggests that Wittgenstein worked out his answer to the problem of negation (i.e., the bipolarity of the proposition) prior to the *Grundgedanke*. Indeed, we have demonstrated that conclusions concerning the sense and meaning of P and ~P can be reached without using the *Grundgedanke* as a premise. McDonough's views will not receive much attention in this work, as they fail to accommodate the sense/meaning distinction so important to Wittgenstein. Instead McDonough draws a distinction between what he refers to as the sense_1 and sense_2 of a proposition. The former he defines as a proposition's "projection, or representation of that which is relevant to its truth value" (1986, p. 39). Obviously this is vague enough to refer to either the *sense* or the *meaning* of a propositional sign. (His use of "projection" is questionable too, as will become clearer in the next section.) The "sense_2" of a proposition he defines as an *attitude toward* a proposition (1986, p. 28), so that P and ~P have identical sense_1's but opposite sense_2's. There is little evidence in the text to support such a reading of "sense," except when Wittgenstein speaks of the negation sign as *reversing the sense* of a propositional sign (1922b, 5.2341). That and the surrounding passages of the text, however, are concerned with the nature of logical operations generally, and in that context it is clear that *reversing the sense* of a proposition means something like *adopting a different attitude towards a given subset of possible facts or states of affairs*; specifically it involves: *taking a given member of the subset of the complement of P to be true.*

depicting the form of representation" (1964, p. 174). McGuiness (1974) traces the *Grundgedanke* historically back to Wittgenstein's ideas concerning the bipolarity of the proposition and to the need for genuine propositions to make a discrimination among facts.[117] There is much truth to Black's and McGuiness's suggestions, but the treatment each gives the subject is largely incomplete. What is the relationship between interdefinability, the impossibility of representing logical form, and bipolarity?

We will begin with what seems to be the most explicit argument for *something like* the *Grundgedanke* (for sentence-forming operators) occurring within the *Tractatus*. The argument occurs in the series of comments following *Tractatus* 4.06, and it appears primarily to be concerned with the negation sign:

> A proposition can be true or false only in virtue of being a picture of reality.
>
> It must not be overlooked that a proposition has a sense that is independent of the facts: otherwise one can easily suppose that true and false are relations of equal status between signs and what they signify.
>
> In that case one could say, for example, that '*p*' signified in a true way what '*~p*' signified in a false way, etc.
>
> Can we not make ourselves understood with false propositions just as we have done up to now with true ones?--So long as it is known that they are meant to be false.--No! For a proposition is true if we use it to say that things stand in a certain way, and they do; and if by '*p*' we mean *~p* and things stand as we mean that they do, then, construed in the new way, '*p*' is true and not false.
>
> But it is important that the signs '*p*' and '*~p*' *can* say the same thing. For it shows that nothing in reality corresponds to the sign '~' (1922b, 4.06-4.0621).

First note that 4.06 (the first paragraph) is a remark about the nature of truth. A proposition is true if it pictures or depicts or shares a structure isomorphic to actual facts or states of affairs. The

[117] See also McGuiness (1988), pp. 307ff.

point is reiterated in 4.062 (the fourth paragraph), in which Wittgenstein says, "a proposition is true if we use it to say that things stand in a certain way, and they do" (1922b, 4.062). In 4.061 (the second paragraph) we hear Wittgenstein's rejection of of the sort of relational theory of judgment attributed earlier to Moore. To "suppose that true and false are relations of equal status between signs and what they signify" involves the countenancing of false facts. To eliminate the need to do so Wittgenstein draws a distinction between *Sinn* and *Bedeutung*, and it is to this that he is referring in the first sentence of that paragraph. "[A] proposition has a sense that is independent of the facts" (1922b, 4.061) just means that the sense of a proposition consists in a set of *possible* facts not all of which can be actual. It does not mean that senses are to be identified with Platonic entities or mental contents.

Corresponding to the sense/meaning and form/structure distinctions, there is, needless to say, the distinction between showing and saying. All this provides the backdrop to the remainder of 4.062 which supposedly provides grounds for believing that "nothing in reality corresponds to the sign '~'" (1922b, 4.0621). Purportedly 4.062 does this by demonstrating that "the signs *'p'* and *'~p' can* say the same thing" (1922b, 4.0621). Whether it does establish that the two signs can say the same thing, and whether *that* entails that the negation sign does not function as a referring term remains to be seen.

In 4.062 the question arises whether it is possible to "make ourselves understood with false propositions just as we have done up till now with true ones...[s]o long as it is understood that they are meant to be false" (1922b, 4.062). This question Wittgenstein assimilates to that of whether it would be possible for information to be conveyed using the negative propositional sign in much the same way as it is conveyed when the positive one is used. Wittgenstein's view is that since

the negative propositional sign can *function* to convey truth, the very idea of ~P representing *in a false way* (or of it representing false facts) is to be rejected. Although Wittgenstein does not expressly say so, it is likely he would view the negation sign under these circumstances as analogous to Frege's assertion sign (a sign for which Wittgenstein could see no use; cf. 1922b, 4.442). The *absence* of the "~" symbol would then be what indicates negation. The sort of case Wittgenstein asks us to imagine is comparable to the sort of thing that occurs on April Fool's Day in the United States: on that day it is the custom to treat sentences like "Your shoe is untied" as meaning nothing other than what "Your shoe is tied" means on the other days of the year. (Sarcastic remarks provide another example; consider a parent's remark to a teenager: "...So, you're going to drive the Mercedes to Spring Break...".[118] That the very same state of affairs can be represented by the negation sign or its absence suffices, according to Wittgenstein, to show that the semantic role of the negation sign is determined solely by the use or interpretation given to it by language-users. If it were an element containing reference, then its presence or absence would make a difference.

The argument is not convincing. First, convention is always involved in the selection of names for objects; that I can call John "Jim" does not mean "John" has no referent. The argument sidesteps the real issue entirely. The question, it seems, would simply become one of whether the *absence* of "~" from a propositional sign--now interpreted as the operation of negation--is to be interpreted as a referring term. If the sarcastic tone or silence of a parent can be used to express negation, why cannot such silence or sarcasm be interpreted as pertaining to the fact that the teenager is *not* to take the Mercedes to Spring Break? (In a similar vein Pierre's absence from a cafe might be depicted by

[118] These two examples were suggested to me by Margaret Ayotte Levvis.

leaving a blank space in the shape of Pierre's silhouette somewhere within a painting of the cafe.) It almost seems as if Wittgenstein is leaning too heavily upon the narrower notion of pictorial structure as opposed to the broader notion of logical structure, so that sameness of content in spite of difference of structure counts as evidence of the sort needed. It is as though an actual physical element were needed. But clearly the absence of "~" does not necessarily constitute an absence of any symbol: blank spaces on a page or canvas, moments of silence, etc. *can* function as symbols.

Second, the whole idea that the negative proposition can replace the affirmative one without loss of function stems from the claim that any attempt to communicate by means of false propositions results in true ones. The false proposition is then assimilated to the negative one receiving an alternate interpretation. However it is quite questionable whether one could communicate *the very same thing* by means of false or negative propositions, even if they are reinterpreted. Typically there are many ways a proposition may be false, but only one way that it may be true. Consequently, the reinterpreted false or negative proposition would suffer from what might best be called an *underdetermination of content*. For example, "My desk is made entirely of mahogany" is made true by only one thing, namely, the fact that my desk *is* made entirely of mahogany. But it can be made false by any number of things: by its being made (partially or entirely) of oak, or cherry, or pine, etc. Suppose now that one belongs to a linguistic community that treats all utterances as false. If someone were to utter "My desk is made of oak," the listener would understand by that what English speakers understand by "It is false that my desk is oak." But the listener would not know what material the desk *is* made of. The target meaning remains undetermined.

This problem cannot be overcome by constructing an elaborate con-

junction such as "My desk is made of oak, and it is made of cherry, and it is made of pine,...". What would the final conjunct of this sentence be? There are two possibilities. First, after listing all the possible materials out of which a desk may be constructed, one might add the clause "...and those are all the possible materials out of which desks are made." But if this is true, then it will not be interpreted as such by the members of our imaginary linguistic community. They will not be in a position to infer by a process of elimination that the speaker means what English speakers mean when they utter "My desk is made entirely of mahogany."[119] A second possibility would be to add the clause "...and those are not all the possible materials out of which desks are made." This appears at first sight to be a better suggestion, since it would be interpreted as false, yielding what English speakers express by "...it is false that those are not all the possible materials out of which desks are made." The problem is that negation is expressed in our hypothetical language by the *absence* of a negation sign. Consequently, the *presence* of "not" in "...and those are not all the possible materials out of which desks are made" cannot negate that from which the negation sign is absent. If P in the hypothetical language is equivalent to ~P in English, then ~P in the hypothetical language is equivalent to ~P in English as well. As Black (1964) points out, "repeated applications of [negation in the hypothetical language] reduce to a single application of it (1964, p. 180). So, the second attempt to complete the elab-

[119] The sort of practice described hear is actually customary among speakers of Malagasy in Madagascar. Speakers typically provide less information than is requested of them. For example, it would be typical for someone wanting to know whether there are fresh mangoes at the market to be told "If you go to the market, you won't find bananas." The relevant sociolinguistic research may be found in Keenan (1977); a discussion of its philosophical relevance is to be found in Levvis (1987). Malagasy provides numerous counter-examples to the sort of view of *conversational implicature* advanced by Grice (1975). Such counter-examples are relevant to semantic theory, because a purely formal semantics (such as Frege's or Davidson's) must be supplemented by a Gricean account of implicature.

orate conjunction fares no better than the first.[120] It follows that the principal assumption underlying Wittgenstein's argument is false.

The two lines of criticism introduced above pose a dilemma for Wittgenstein. Either the *absence of the negation sign* serves as a symbol (as we might treat a blank space on a page), or it does not. If it does serve as a symbol, then the fact that as a matter of convention negation *can* be expressed in that manner does not permit us to conclude that the negation sign fails to refer (rendering the argument invalid). If it does not serve as a symbol (if it really is the *absence of* any symbol), then it is false that the same content may be communicated by a language that is entirely affirmative as opposed to one that is both affirmative and negative (thus rendering the argument unsound).

In spite of its shortcomings, the argument of *Tractatus* 4.0621 is driven by an assumption that may well be relevant to the semantics of molecular propositions. And it is this assumption that plays a crucial role in a second and stronger argument for the *Grundgedanke*. If the number of constants could be viewed as variable without loss of content, *given the way determinancy of sense requires element/object isomorphism*, it would follow that their presence or absence neither adds to nor detracts from the empirical content of a sentence. The problem with the argument at 4.0621 is that it attempts to eliminate a *single* connective. The argument from the interdefinability of the connectives, however, seeks not to eliminate single connectives but a whole group of connectives at once. It is quite evident that this can be done. The first two columns of the following table represents the possible combinations of truth and falsehood with respect to two propositions P and Q. The sixteen columns represented in Table I show the possible values that may be assigned to molecular propositions containing P and Q.

[120] Matters go unchanged if a distinct symbol is introduced rather than the absence of a symbol; cf. Black (1964), pp. 179-180.

P	Q	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
T	T	T	T	T	T	T	T	T	T	F	F	F	F	F	F	F	F
T	F	T	T	T	T	F	F	F	F	T	T	T	T	F	F	F	F
F	T	T	T	F	F	T	T	F	F	T	T	F	F	T	T	F	F
F	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F

Table I

Column b, for example, represents the semantic properties of inclusive disjunction. Column e represents those of material implication when P is the antecendent and Q is the consequent. Column h represents those of conjunction. Columns a and p, respectively, represent molecular propositions that are tautologous and contradictory.[121]

Now it so happens that each of the columns can be expressed by formulae containing only the connectives "~" and "→" (thereby eliminating disjunction and conjunction), or the connectives "~" and "v" (eliminating material implication and conjunction), or "~" and "&" (eliminating material implication and disjunction). For example, using just "~" and "→" column b (the column for disjunction) may be expressed by ~P → Q. One could use this formula to assert the *very same thing* as is asserted by P v Q. Similarly, that column could be expressed using only "~" and "&": ~ (~P & ~ Q). The point is that at least certain logical connectives may be defined in terms of other logical connectives.

The second of Wittgenstein's arguments, which begins at *Tractatus* 5.4, exploits this fact about the sentence-forming operators. There he says,

> At this point it becomes manifest that there are no 'logical objects' or 'logical constants' (in Frege's or Russell's sense).
>
> The reason is that the results of truth-operations on truth-functions are always identical whenever they are one and the same truth-function of elementary propositions.

[121] Wittgenstein's table appears in slightly different form at *Tractatus* 5.101. The table I have used is closer to that used by Lemmon (1965), p. 70 and Haack (1978), p. 28.

> It is self-evident that v, → are not relations in the sense that right and left etc. are relations.
>
> The interdefinability of Frege's and Russell's 'primitive signs' of logic is enough to show that they are not primitive signs, still less signs for relations.
>
> And it is obvious that the '→' defined by means of '~' and 'v' is identical with the one that figures with '~' in the definition of 'v'; and the second 'v' is identical with the first one; and so on.

> Even at first sight it seems scarcely credible that there should follow from one fact *p* infinitely many *others*, namely *~~p*, *~~~~p*, etc. And it is no less remarkable that the infinite number of propositions of logic (mathematics) follow from a half dozen 'primitive propositions'.
>
> But in fact all the propositions of logic say the same thing, to wit nothing (1922b, 5.4-5.43).

The key remark here is that "[t]he interdefinability of...'primitive signs' of logic is enough to show that they are not primitive signs, still less signs for relations" (1922b, 5.42). The reason the question concerning indefinables (or primitive signs) is important is that, as indicated earlier, ineliminability is taken to be a criterion of ontological commitment. That assumption is clearly at play within the argument. On Wittgenstein's view, it is purely an arbitrary or pragmatic matter *which* operations are treated as basic:

> The number of fundamental operations that are necessary depends *solely* on our notation.

> All that is required is that we should construct a system of signs with a particular number of dimensions--with a particular mathematical multiplicity (1922b, 5.474-5.475).

And it is the interdefinability of the connectives--i.e., their potential for elimination--that demonstrates their arbitrary or pragmatic nature. Indeed, Wittgenstein believes it is possible to derive all operations from a *single* logical operation. At 5.5 he introduces this operation saying,

> Every truth-function is a result of successive applications to elementary propositions of the operation

'(---T) (ξ,...)'.

> This operation negates all the propositions in the right-hand pair of brackets, and I call it the negation of those propositions (1922b, 5.5).

Here the contents of the left-hand set of brackets corresponds to a column within a truth table; the blank spaces correspond to F's. Specifically, it corresponds to column o of the the table provided above. The brackets to the right contain a set of propositional signs. The operation in question involves the simultaneous negation of all the members of that set. So if the set consists of P and Q, then the matrix represents what in English is expressed by "*Neither* P, *nor* Q." Thus the operation corresponds to what is usually referred to as the Sheffer stroke: P↓Q.[122] This formula, one can quickly see by using a truth table, is logically equivalent to ~P & ~Q, ~(P v Q), or ~(~P → Q). That P↓Q is logically equivalent to formulae containing the other operators does not suffice to show, however, that the other operations may be defined in terms of it. To do that it is necessary to show that the matrices corresponding to each of the connectives may be generated by repeated applications of "↓" alone. In other words, it is necessary to show logical equivalences hold between those matrices and formulae con-

[122] Wittgenstein introduces a variant symbolism almost immediately at 5.502. That symbolism facilitates his introduction of the *general form of proposition* at *Tractatus* 6 and his discussion of numbers in paragraphs 6.01-6.03. For the sake of simplicity the discussion here shall be formulated in terms of the stroke notation.

On a historical note, Wittgenstein's selection of the stroke notation occurs as early as the 1913 *Notes on Logic* where he maintains "[t]he function p↓q is merely a mechanical instrument for constructing all possible *symbols* of *ab*-functions" (1913b, p. 103). Although the search for the *sole logical constant* is largely motivated by Wittgenstein's concern with what he regarded as Russell's and Whitehead's piecemeal introduction of the constants in *Principia Mathematica*, the fact that the stroke notation is explicitly linked to the *ab*-functions and, so, to concerns over bipolarity helps shed considerable light upon the argument for the *Grundgedanke*. What I intend to show below is that the *Grundgedanke* for sentence-forming operators *follows from* the thesis that all propositions are contingent. It is only in that context that the role of the sole logical constant can truly be appreciated.

taining only propositional variables and the symbol for joint negation. This *can* be done. P↓P is equivalent to ~P. (P↓Q)↓(P↓Q) is equivalent to P v Q. (P↓P)↓ (Q↓Q) is the logical equivalent of P & Q. The matrix for material implication is shared by [(P↓P)↓Q]↓[(P↓P)↓Q]. Finally, the formula corresponding to the matrix, found in column g, for logical equivalence or biconditionality may be treated in the following way. Bear in mind that that matrix is equivalent to (P → Q) & (Q → P). The first conjunct of this formula is [(P↓P)↓Q]↓[(P↓P)↓Q]. The second conjunct is [(Q↓Q)↓P]↓[(Q↓Q)↓P]. Now we have noted above that (P↓P)↓ (Q↓Q) represents the conjunction of P and Q. Treating the conjuncts of the biconditional as substitution instances of P and Q yields:

{{[(P↓P)↓Q]↓[(P↓P)↓Q]}↓{[(P↓P)↓Q]↓[(P↓P)↓Q]}} ↓ {{[(Q↓Q)↓P]↓[(Q↓Q)↓P]}↓{[(Q↓Q)↓P]↓[(Q↓Q)↓P]}}

which requires twenty-three operations using the stroke notation to produce that particular matrix. (The same matrix can be reached using *thirty-four* operations, if one translates the logically equivalent ~[(P → Q) → ~(Q → P)] from which the conjunction sign has been eliminated.)

We do not have to accept Wittgenstein's (and Russell's and Quine's) assumption that primitive terms convey ontological commitment in order to reach the desired conclusion. In fact, at this point in the argument it is no longer clear that Wittgenstein does accept this criterion, since, if consistently applied, "↓" would have to be treated as a referring term; but certainly Wittgenstein does not regard it as that. The assumption that should--and apparently does--operate within the argument is that which hails from the Picture Theory's thesis that determinancy of sense is to be guaranteed by the isomorphism between the elements (or referring terms) within a propositional sign and the objects that are the referents of the propositional sign. Clearly, if the number of operators can be varied, even though the number of referring terms *must* remain invariant, then it follows that the operators are not referring terms.

This argument is much stronger than the first one. To begin with, its conclusion *is* the *Grundgedanke* for logical operators, *not* the more specific claim concerning negation alone. Obviously *that* conclusion can be deduced from this one. Next, the argument *is* valid: if all of a language's referring terms must be invariable, but none of a language's connectives are invariable, then none of a language's connectives are referring terms.

The problem with this argument is that it is a *petitio principii*. The argument is designed to show that the logical operators are not referring terms. That task is not so different from determining the formal interpretation--i.e., the matrix corresponding to--each operator. Yet the argument presupposes the very matrices that stand in need of justification. For the simplest example of how this occurs consider the fact that every stroke operation subsequent to the first involves (at the very least) the operation of double negation. For example, we said that (P↓P)↓ (Q↓Q) is logically equivalent to P & Q Informally (P↓P)↓ (Q↓Q) may be translated: "It is not the case not-P and not-P, and it is not the case not-Q and not-Q" (or "*Neither* neither P nor P, *nor* neither Q nor Q"). To regard the formula involving the stroke notation as equivalent to P & Q, it is necessary to do two things: (a) the two negations in each of the subordinate clauses (*not-P and not-P* and *not-Q and not-Q*) must be regarded as redundant, i.e., so that the conjunctions in which they occur are interpreted as equivalent to ~P and ~Q respectively, and (b) the stroke with the widest scope must be regarded as negating both ~P and ~Q, and the negations of these (~~P and ~~Q) must be regarded as equivalent to P and Q. This begs the question in two ways. In (a) treating the two negations as redundant requires that the conjunction sign already be regarded as adding nothing to the referential conditions of the subordinate clause(s) as a whole. The assumption that ~P & ~P is made true by the very same thing as makes ~P true (or

that P & P is made true by the very same thing makes P true) is an assumption Wittgenstein's opponent would reject. The formulae containing the conjunction sign do not share the same referential conditions, let alone the same truth conditions, with the formulae from which the conjunction sign is absent. It would be false, on this account, to regard ~P & ~P (etc.) as having the same matrix as ~P (etc.).

Next, in (b) the negations of ~~P and ~~Q are held to be equivalent to P and Q. In each case the negation sign with the widest scope reverses the truth-value of the formula it negates; consequently, the two negation signs *doubly negate*, canceling one another out. But Wittgenstein's adversary would hardly treat ~~P and P as equivalent, since if the sign "~" refers, then ~~P would contain (at least) one more referent than P. Again, formulae (or sentences) that differ in referential conditions must differ in truth conditions. So, again the question is begged by treating the matrices for P and ~~P and Q and ~~Q, respectively, as equivalent.

There are, no doubt, many ways to draw the *petitio*, given the various equivalences that are deemed possible. One in particular is worth citing, however. On Wittgenstein's view the matrices for P and ~P contradict one another. But if one regards the negation symbol as having reference, then it is possible to regard, as Moore once did, P as a constituent of ~P. In that case, the truth of ~P would not preclude the truth of P. Here again the question is begged, since the matrices for P

and ~P would not be deemed contradictory.[123]

There must be a better argument against this sort of view! Regardless of what one thinks of the semantic theory of the *Tractatus*, it cannot be that it hangs on such terrible arguments. (As I suggested at the end of the previous section, even the semantics for atomic propositions rests upon the account that can be given for those propositions that are molecular, so there is considerably more at stake here than the the semantic theory for logical operators.) It is frustrating that a view *so* bad cannot be knocked down straightaway. And the view serving as foil *is* bad: one does not want to sanction inferences from ~P to P, nor does one want objects designated by "v" "running around" as Russell puts it. (Imagine the grant applicant: "But I'm studying the Morning

[123] This circularity has not gone unnoticed. Although he does not explicate it quite as I have above, Black alludes to it and maintains that if Wittgenstein's "metaphysical preconceptions *forced* this view of language upon him, so much the worse...for the metaphysics" (1964), p. 17. Black thinks that the necessary but apparently impossible elimination of the connectives is a *reductio* of certain metaphysical assumptions. If anything, the present chapter of this dissertation attempts to show that the metaphysical claims of the *Tractatus* are derived as conclusions of arguments. The argument runs *from* semantic premises (*re* the bipolarity of the proposition, the distinction between showing and saying, the Picture Theory) *to* metaphysical conclusions (*re* modality, simple objects, a distinction between *Tatsache* and *Sachverhalten*, logical objects, etc.), and from these *to* further semantic conclusions concerning the analysis of statements of scientific laws, propositional attitude ascriptions and statements with normative or evaluative content.

Others, working within Idealist and phenomenological traditions have cited such circularity as evidence to the effect that the use of operators carries ontological import and are expressive of the contents of experience (cf. Price (1953), p. 124, Dufrenne (1963), pp. 37ff, and Kaminsky (1969), p. 142ff). Since a non-circular argument for the *Grundgedanke* is to be discussed below, these philosophers' objections will be side-stepped here. Since the evidence for the opposing view is largely phenomenological (as we saw earlier in discussing Sartre's views), it is not surprising to find that most of its advocates hail from those traditions. My impression of these philosophers' views (aside from the fact that they seem unaware of his non-circular and strongest argument, to be discussed below) is that they do not do justice to Wittgenstein's distinction between showing and saying, and thus to the extent to which Wittgenstein can account for how experience can be *about* negativity, conditionality, etc. What is shown *can* be considered as a component of experience. This will become clearer below.

Star *and* the Evening Star; surely the study of such relations warrants more funding.") We should remember that the best Russell could offer against the view is that it is counter-intuitive. Against Russell's intuitions, however, there is poised the sort of phenomenological data cited earlier: one may very well want to describe the *content* of one's awareness as consisting in, for example, Pierre's *not* being in the cafe. Similarly the semantic content of sentences such as "You will practice, and you will practice!" and "You will practice!" may *seem* to differ even though the former is logically equivalent to the latter. It is tempting to try to minimize the ontological import of the phenomenological data by assigning *de dicto* interpretations to the sentences in terms of which it is expressed. That is to say, one wants to treat such sentences as expressions of a subject's *internal representation of* mind-independent facts. Thus two persons--one expecting to find Pierre at the cafe and the other not--have before them the same object or fact (namely, the cafe), but their internal representations of that object differ. But even if one were then able to go on and explicate the relevant differences in internal representations, Wittgenstein would be left with an insurmountable problem. Any dichotomy between *de re* and *de dicto* that adds the sorts of elements that are traditionally treated under the headings of force or connotation to what the mental representation is *about* will be incompatible with the Picture Theory's requirement of isomorphism. The structure or content of the propositional sign or mental representation cannot differ in any way other than that required to account for the possibility of false judgments. To introduce some matter of force (e.g., by treating "You will practice and you will practice!" as synonymous with "*It is (doubly) asserted that* you will practice" or "I assert (twice) that you will practice") certainly goes beyond this. The same is true of connotation (e.g., by treating it as synonymous with "You will practice--that is, do something I find desirable.").

Introducing *any* subjective element will have the same consequences. After all, whether one practices and practices is made true (or false) by factors quite independent of whether a particular speaker happens to assert that or find valuable that one should practice.

Wittgenstein needs a better argument, and he has one. As Black (1964, p. 174) points out, the deeper grounds for the *Grundgedanke* lie with the impossibility of depicting the form of representation.[124] We should take care to remember precisely what this means. The *form* of a picture or propositional sign must not be confused with its structure. It is not that which numerous philosophers have sought to demonstrate as formalizable in terms of a metalanguage (e.g., Carnap (1937), Tarski (1937)), sometimes in what they mistakenly believe to be direct opposition to Wittgenstein's view. The form of a propositional sign (as opposed to its structure) is what conveys its sense (rather than its meaning). The relevant passages follow *Tractatus* 4.12:

> Propositions can represent the whole of reality, but they cannot represent what they must have in common with reality in order to be able to represent it--logical form [*logische Form*].
>
> In order to be able to represent logical form, we should have to be able to station ourselves with propositions somewhere outside logic, that is to say outside the world.
>
> Propositions cannot represent logical form: it is mirrored in them.
>
> What finds its reflection in language, language cannot represent.
>
> What expresses *itself* in language, *we* cannot express by means of language.

[124] Although Black asserts this to be the basis of the *Grundgedanke*, and even though he does discuss the impossibility of depicting the form of representation, he does not demonstrate how the one is a premise in an argument for the other. (As noted earlier, Black is willing to say the whole metaphysics of the *Tractatus* founders on the problem of circularity.) The fact is that I have not run across any commentaries that have demonstrated this, even though a link between the two subjects is often hinted. Most commentators treat the *Grundgedanke* as justified on the basis of the economy with which it dispatches ontological worries. This is certainly question-begging in a show-down between non-Idealistic realists, like Russell and Wittgenstein, on the one hand and Idealists and phenomenalists on the other.

> Propositions *show* the logical form of reality.
> They display it (1922b, 4.12-4.121).

The form of an elementary proposition, we saw earlier, consists in the combinatorial possibilities of its components. This set of possible configurations corresponds to the set of possible relations that may obtain among the objects so depicted. This set constitutes the sense of the propositional sign. The relation between form and sense is expressed by Wittgenstein at 4.12 by saying language and reality share a common logical form.[125] We have already seen why the sense or form of a non-molecular propositional sign cannot be depicted: in order for P to assert **P**, it cannot simultaneously assert the various conditions that would make P false (conditions which belong to its sense).

We saw earlier that the set of formulae constituting the form of a non-molecular proposition is determined by the number of elements it possesses as well as the formation rules governing those elements. Recall our earlier discussion of how the sign **Ω¥Δ** possesses a form consisting of the set of possible configurations: {**Ω¥Δ**, **ΩΔ¥**, **¥ΩΔ**, **¥ΔΩ**, **Δ¥Ω**, **ΔΩ¥**}. These configurations represent the possible states of affairs that constitute the sign's sense. Now when we turn to a molecular proposition, we find that the possible states of affairs comprising its sense grows exponentially. Ignoring the sub-sentential elements momentarily, the possible combinations of states of affairs equals 2^n (n = the number of atomic formulae within the molecular proposition). In the case of Table I, for example, the fact that there are only two such formulae is reflected in there being four rows in the table. We say that the possible states of affairs comprising the sense of a molecular proposition grows *at least* exponentially, because in each case the

[125] As mentioned earlier, the extension of the word "form" to refer to the sense of a sentence seems harmless; if anything, it underscores the isomorphism of the Picture Theory.

propositional variables have as their substituends atomic formulae with compositional complexity. Each of the F's in Table I represents a variety of possible states of affairs. If the propositional variable P represents ΩΨΔ, then P's being false may consist in any of the following: {ΩΔΨ, ΨΩΔ, ΨΔΩ, ΔΨΩ, ΔΩΨ}. Consequently, each row containing an F could be expanded; for example, the entries in the first two columns of the fourth row in Table I, which correspond to P and Q both being false, are an abbreviation for Table II

P	Q
ΩΔΨ	F
ΨΩΔ	F
ΨΔΩ	F
ΔΨΩ	F
ΔΩΨ	F

Table II

In order for a table to perspicuously represent the sense of a propositional sign, it would need to contain lines for each of the proposition's falsifying conditions. So, in order to perspicuously represent the sense of a molecular proposition containing P and Q, it would be necessary to replace each row in Table II with a series of rows representing the falsifying conditions of Q. Suppose Q is made false by any states of affairs represented by the propositional signs in the following set: {ΦΓΗ, ΦΗΓ, ΓΦΗ, ΓΗΦ, ΗΓΦ}. It would take five rows to represent what appears in an abbreviated form on the first line of Table II. Table III represents the greater multiplicity.

P	Q
ΩΔΨ	ΦΓΗ
ΩΔΨ	ΦΗΓ
ΩΔΨ	ΓΦΗ
ΩΔΨ	ΓΗΦ
ΩΔΨ	ΗΓΦ

Table III

Thus for any molecular proposition containing *n* atomic formulae (P, Q, R, etc.) for which there exist a number of falsifying conditions (pf_1, pf_2, pf_3,..., pf_n; qf_1, qf_2, qf_3,..., qf_n; etc.), a table containing [2^n x (pf_n x qf_n, etc.)] would be needed to display the sense of the proposition.[126] Let us call this the *minimal* truth table, since it contains the fewest number of coordinates capable of expressing the combinatorial possibilities of atomic propositions. If such a table were to contain a column for *each* atomic proposition, then each line would constitute a complete description of a possible world (1922b, 4.26). The lines of a minimal truth table for a *finite* set of atomic propositions will provide a complete description of the possible facts (*Tatsachen*) for which the atomic states of affairs (*Sachverhalten*) are constituents.

Let me be quite clear about the fact that Wittgenstein nowhere uses the phrase "minimal truth table" within the text, and in fact nowhere does he employ truth tables that exhibit the components of elementary propositional signs. He seems to explicitly *deny* the possibility of doing so at 5.55: "Elementary propositions consist of names. Since, however, we are unable to give the number of names with different meanings, we are also unable to give the composition of elementary propositions" (1922b, 5.55; cf. 5.555). I interpret this and subsequent remarks (cf. 5.551) as expressing Wittgenstein's belief that the discovery of simple objects and the determination of elementary forms is an empirical matter, whereas his own concerns are with matters *a priori*. His comments should not be taken to mean that it is impossible in principle to come up with elementary forms. In the 1929 "Remarks on Logical Form" he goes so far as to say:

[126] This should not be taken to mean that Wittgenstein thinks one can *say* or *depict* what is shown by the truth table. Saying or depicting always involves a discrimination *within* reality, but outside of a truth table containing variables for each atomic proposition *there is nothing*. It is presumably for this reason that Wittgenstein does not avail himself of a metalanguage containing modal operators.

> [W]e can only substitute a clear symbolism for [an] unprecise one by inspecting the phenomena we want to describe, thus trying to understand their logical multiplicity. That is to say, we can only arrive at a correct analysis by, what might be called, the logical investigation of the phenomena themselves, i.e. in a certain sense *a posteriori*, and not by conjecturing about *a priori* possibilities (1929a, p. 32).

My reason for introducing the *minimal* truth table is that it alone is capable of exhibiting the structure/form distinction to which elementary propositions owe their bipolarity, and it is the thesis of bipolarity, as I shall explain shortly, that serves as the major premise in Wittgenstein's argument for the *Grundgedanke*.

The question now becomes one of how the columns following the original atomic propositions or propositional variables are to be interpreted. Wittgenstein's view, now the standard view, is that a subset of the columns *express* the manner in which certain connectives are to be understood; column b in Table I, for example, is taken to express disjunction thereby defining the truth-functionality of "v" within the propositional calculus. If one were not concerned with how the columns of the table are to be interpreted *vis a vis* natural language (e.g., "v" as the inclusive "or" of English), then one could simply *stipulate*, for example, that column b shall be labeled "v" and that "P v Q" constitutes a well-formed formula *that simply has the semantic properties exhibited by that column*. Since the column is determined *solely* by the "truth possibilities" (1922b, 4.28) of elementary propositions, and by nothing more, it follows that the stipulated operator in no way affects the truth conditions of the formula in which it is contained--something it presumably *would* do, if it were to have reference.

The only question the argument leaves unanswered pertains to the relationship between the stipulated operators and the connectives of natural language. There is a problem here. If one simply *stipulates* that the semantic properties of P and Q in column b shall be designated

by "v" or that those of column m and k (the negations of P and Q respectively) shall be designated by "~", then certainly nothing other than P's and Q's own truth possibilities determine the function of "v", "~", etc. But it is open to the opponent to claim that *these* symbols have nothing whatsoever to do with the expressions of natural language that supposedly are their analogs. The reason why this is important at all, the objector might argue, is that it is in natural language that one expresses the contents of one's experience, and the contents of one's experience is *of* Pierre's *not* being in the cafe, *of* practicing *and* practicing, *of* being *either* a knight of faith *or* a knight of infinite resignation, etc. The objection, then, is that the words which we use to express *what* we experience are not the cauterized connectives of a logical calculus.

It is an interesting fact that Wittgenstein does not discuss this objection anywhere. We would expect Wittgenstein to dismiss this issue if his attitude toward natural language were that of a Frege or a Tarski, both of whom believed natural language to be inferior to a logical calculus with a formal semantics. But Wittgenstein's attitude is different. As we saw in an earlier chapter, his view is that natural languages are in perfect logical order: they contain propositions that have a determinate sense, they preserve truth through valid inferences, etc. The purpose of logical *analysis* is to reveal the deep logical structure of most ordinary language.[127] The objector wants to drive a wedge between natural language and that for which the *Tractatus* offers a semantic theory; but no such wedge can be admissible for Wittgenstein, since, for him, Tractarian semantics is supposed to be applicable to any language--any representational system--at all.

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[127] Or, to qualify this somewhat, it reveals the deep logical structure of sentences whose currency is not counterfeit due to the presence of philosophical--that is, metaphysical--nonsense (e.g., sentences like "Everything must have being").

Although Wittgenstein does not pursue the matter explicitly, the *Tractatus* does have the resources needed to handle the problem. These resources consist in the sole logical constant (described above) and what he would eventually refer to as the *general form of the proposition*. The strategy involves using the sole logical constant to show that *all* propositions with a sense share this general form; if this can be done, then the *Grundgedanke* must be true.

What is the general form of the proposition? Wittgenstein introduces the notion at *Tractatus* 4.5, it is pursued in the remarks following 5.46, and we get an impression of the importance Wittgenstein assigns to it when it reappears at *Tractatus* 6 (one of the seven central passages that form the spine of that work). *Tractatus* 4.5 runs:

> It now seems possible to give the most general propositional form: that is, to give a description of the propositions of *any* sign-language *whatsoever* in such a way that every possible sense can be expressed by a symbol satisfying the description, and every symbol satisfying the description can express a sense, provided the meanings of the names are suitably chosen.
>
> It is clear that *only* what is essential to the most general propositional form may be included in its description--for otherwise it would not be the most general form.
>
> The existence of a general propositional form is proved by the fact that there cannot be a proposition whose form could not have been foreseen (i. e., constructed). The general form of the proposition is: This is how things stand (1922b, 4.5).[128]

To say that the general propositional form consists in a proposition's ability to say how things stand is not particularly enlightening. If the general propositional form is supposed to supply us with an account of the essence of a proposition (as the second paragraph above suggests; cf. also 1922b, 5.471), but all we are told about it is that propositions tell us *how things are*, then we are no further than we would be

[128] *"Es verhält sich so und so"*--C. K. Ogden translates this "Such and such is the case" (1922a, 4.5).

were we to be told simply that propositions state what is true.[129] Wittgenstein himself would be critical of the passage later: "[a]t bottom, giving 'This is how things are' as the general form of propositions is the same as giving the definition: a proposition is whatever can be true or false" (1958, 136).[130] Wittgenstein's case is not helped, because this is not a point of contention in the debate over the *Grundgedanke*; someone who holds that the constants do refer would maintain that sentences in which they are contained are made true by something.

Tractatus 4.5 does, however, point the way beyond. In the last paragraph we are told that "there cannot be a proposition whose form could not have been foreseen" (1922b, 4.5). *Tractatus* 4.51-4.53 provides us with somewhat further explication of the point:

> Suppose I am given *all* elementary propositions: then I can simply ask as what propositions I can construct out of them. And there I have *all* propositions, and *that* fixes their limits.
>
> Propositions comprise all that follows from the totality of all elementary propositions (and, of course, from its being the *totality* of them *all*). (Thus, in a certain sense, it could be said that *all* were generalizations of elementary propositions.)
>
> The general propositional form is a variable (1922b, 4.51-4.53).

What is crucial here is the idea that what can be expressed by a language is determined *wholly* by its elementary propositions--that somehow the full expressive powers of a language are *contained in* sentences free of any operators. *All* propositions with a sense can be "constructed"

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[129] To be accurate Wittgenstein should have said that propositions state what *could* be true.

[130] The later Wittgenstein is concerned with more than the fact that it is uninformative to proclaim "This is how things are" as the general propositional form. The crux of his criticism is that *even this* is a sentence of ordinary language, and it gets its meaning from its use in ordinary contexts; cf. (1958, 134-137).

out of elementary propositions. Now how is this made possible? Clues are to be had in an earlier portion of the *Tractatus*. The passages immediately proceeding *Tractatus* 4 seem to have a direct bearing upon those immediately proceeding *Tractatus* 5 (i.e., 4.5-4.53, quoted above); 3.4-3.42 tell us:

> A proposition determines a place in logical space. The existence of this logical place is guaranteed by the mere existence *of the constituents*--by the existence of a proposition with a sense.
>
> The propositional sign with logical co-ordinates--that is the logical place.
>
> In geometry and logic alike a place is a possibility: something can exist in it.
>
> A proposition can determine only one place in logical space: nevertheless *the whole of logical space must already be given by it*.
> (Otherwise negation, logical sum, logical product, etc., would introduce more and more new elements--in coordination (1922b, 3.4-3.42; emphasis added)).

Here we are told that there is a relation between the fact that the subsentential elements of an atomic proposition determine its sense (4.5, the first paragraph) and the fact that "negation, logical sum, logical product, etc." do not introduce new elements (i.e., referring terms) into the propositional signs in which they figure. When Wittgenstein says that a proposition determines a *place in logical space*, he means that it corresponds to a particular set of possible states of affairs. That set of possible states of affairs is the propositional sign's sense. But now what does it mean to say that although a proposition determines only one place in logical space, it "nevertheless the whole of logical space must already be given by it" (1922b, 3.42)? The *whole* of logical space would be what is represented by the minimal truth table introduced above!

Every elementary proposition belongs to the minimal truth table.

Thus the truth-possibilities expressed by it are something all elementary propositions share in common. Thus the matrices are inherent in the elementary propositions themselves by virtue of their mathematical multiplicity. We might say that it belongs to the very nature of a given elementary proposition that it be capable of occurring within compound propositions that are correlated with the various matrices. Thus we may speak not only of the forms of elementary propositions *per se* (with reference to the possible combinations among the sub-sentential elements), but of the general form of all elementary propositions, that is, of their potential to be elements within compound propositions. The minimal truth table, therefore, is an expression of the general propositional form. On the ontological side, just as the form of an elementary proposition *per se* corresponds to a set of possible states of affairs that constitute the proposition's sense, there corresponds to the general form of the proposition the set of all possible combinations of states of affairs or what Wittgenstein often refers to as *the limits of the world* (1922b, 5.6-5.61).

One way to construe the debate over the logical constants is by considering whether the minimal truth table is *complete*. Do the matrices presented there contain all of the possible truth possibilities for elementary propositions. Wittgenstein's opponent would have to deny that this is the case, maintaining instead that the minimal truth table does not suffice in terms of the requisite multiplicity. To achieve the requisite multiplicity it would be necessary to introduce additional matrices for what are presumed to be additional elements. In effect, the opponent would object that the expansion of Table I that results in the minimal truth table fails to provide for the constants at all. The problem, the objector might argue, can be traced down to treating ~P as a sign that merely goes proxy for some yet to be determined affirmation; if P is identical to **ΩΨΔ**, then ~P is *not* identical to some member of

{ΩΔ¥, ¥ΩΔ, ¥ΔΩ, Δ¥Ω, ΔΩ¥}, but rather to Ω¥Δ~.[131] Here negation is represented as an element among elements. Since none of the matrices of the minimal truth table are based upon signs containing the requisite number of elements, the minimal truth table must be dubbed incomplete.

It will not do for Wittgenstein to simply rehearse the arguments directed against Moore's relational theory of judgment that were cited earlier, even though the view described here bears considerable similarity to it. For one thing, the current problem is a larger one than simply the problem of negation, since all types of molecular proposition are at issue.[132] Nevertheless, if Wittgenstein's argument against this view is to be understood properly, the conclusion of his argument against Moore--namely, the thesis of the bipolarity of the proposition which entails that a proposition must effect a discrimination within reality--must be taken as a basic premise in the argument for the *Grundgedanke*. We must assume that all propositions are contingent, that is, that any proposition with a sense is possibly true and possibly false. Now one necessary condition for a truth table being complete is that it, as symbols go, is *senseless*. This should not be regarded as a form of criticism. A complete table is senseless, because it does not effect a discrimination within reality, due to the fact that such a table contains matrices for *all* possible truth-functional compounds, leaving no proposition with sense outside of it In order for the argu-

[131] How Ω¥Δ~ is to be interpreted is unclear. Phenomenologically it seems, at least to this writer, that negation affects the *entire* proposition and that it does not "interact" merely with the elements of the proposition. The opposing position seems to be committed to the idea that negation "bears upon" objects in some way. What remains vague is how ~ is related to the other elements in Ω¥Δ~. The reader is invited to make up his or her own mind as to the syntactical rules governing the new formula.

[132] Of course, the problem of what makes molecular propositions *false* is not unrelated to the problem of negation, since one wants to express the falsifying conditions for molecular propositions by using the negation sign. One part of the criticism presented below is that Wittgenstein's foil simply cannot have it this way.

ment for the *Grundgedanke* to go through, it will suffice to show that Wittgenstein's truth table is complete, but that his opponent's fails to satisfy this necessary condition.

That the opponent's view cannot generate a complete truth table results from the fact that the introduction of subsequent operations, like negation, introduces ever more *elements* (1922b, 5.44). In order for a propositional sign to effect a discrimination within reality, it must be possible to say what has the potential to falsify it as well as what has the potential to make it true. If new elements are introduced for each operation, then this condition cannot be satisfied. Consider what makes P false: presumably something expressed by means of ~P. But this cannot be so, since ~P contains P. What makes ~P false? It cannot be what makes ~~P true, since (again) the former is contained in the latter. Nor can it be whatever makes P true; since **P**, on the contrary, is a necessary condition for the truth of ~P (since, on this view, **P** is contained in ~**P**).[133] If P is consistent with *both* ~~P *and* ~P, then some further account of what makes ~P false is needed. But surely Wittgenstein's opponents are hanged by their own ropes if they attempt to do so by means of what seems to be the one remaining possibility, namely by saying it is made false by **P** *but not* ~ being the case.[134]

Or, consider the disjunction P v Q. What makes it false? Presumably, it is made false by what makes ~(P v Q) true. But this cannot be so, since the truth of the former is contained in that of the

[133] That these criticisms do not constitute any sort of attack upon a straw man can be appreciated on the basis of the phenomenological data. Wittgenstein's opponent could not say, for example, that "Pierre is not absent from the cafe" and "Pierre is in the cafe" express the same content.

[134] Technically speaking, the foregoing discussion contains a mistake. If we grant Wittgenstein's tenet that different objects are to be symbolized by different names (the strategy that allows him to dispense with quantifiers in favor of logical products and sums), then the formula ~~P would have to be considered ill-formed. If the negation sign furthest to the left introduces a new object, then some alternative symbolism--e.g., ¬~P--would need to be used.

latter. What makes ~(P v Q) false? As above, it cannot be what makes ~~(P v Q) true, since ~~(P v Q) *contains the truth* of ~(P v Q). Can it be whatever makes P v Q true? Again, P v Q is as much a component of the formula ~(P v Q) as it is of the formula ~~(P v Q), so some further account of its falsehood is necessary. To say it is made false by **P v Q** *but not* ~ simply generates more problems.

The problem should now be quite apparent: any attempt to specify falsifying conditions requires introducing new elements and, so, new elementary propositions whose own falsifying conditions are not specifiable in any vocabulary thus far introduced. It is not at all clear how falsifying conditions could ever be stated given such a view; however *if* it were possible to provide the falsifying conditions by introducing a formula containing a new element, then an infinite regress would result. *That* would suffice to render the table incomplete, since there would always be some formula that presumably has sense but is *incapable* of being presented on the table. This is not simply a pragmatic difficulty. For Wittgenstein's adversary a table containing *n* elements will always need *n* + 1 elements to be complete.[135]

Lest it be maintained that the argument applies solely to the negation sign, so that its referential nature might be renounced while that of the other connectives be retained, it should be born in mind that similar arguments pertain to all the connectives. If one accepts the interdefinability of the logical constants, it follows straightaway that what holds for negation will hold for the other connectives. One need only translate the formulae into the necessary vocabulary. However, as noted earlier, such a strategy would be regarded as ques-

[135] We can now see just how much truth there is in Black's (1964, p. 180) criticism mentioned earlier. The problem is not simply that every operation of negation subsequent to the first is simply redundant (although that is an appropriate remark to make within the context in which it was introduced earlier. The problem *here* is that there is no possibility of redundancy whatsoever: Neither ~~~P nor ~~P can be synonymous to ~P, since both introduces additional elements.

tion-begging by Wittgenstein's opponent. Nevertheless it is still possible to introduce problematic examples. What makes (P v Q) false?[136] Presumably it is made false by whatever makes ~P & ~Q true. But, on the view being considered, that fact contains P and Q as constituents, and they are necessary (if not sufficient) conditions for the *truth* of P v Q. Or, suppose it is maintained that what makes P v Q false is that P obtains *and* Q obtains *but* v does *not*. This desperate move can hardly be considered a solution, since it introduces additional entities (corresponding to *and*, *but*, and *not*), and it fails to eliminate the apparent reference to v. Any attempt to state falsifying conditions simply produces another sentence or formula consistent with the original.

These considerations allow us to dispense with any need to accommodate additional matrices that would arise from treating the constants as referring terms. Such a table will fail to be complete due to its inability to represent the senses of propositions. But is the truth table, as envisioned by Wittgenstein, complete? Is it capable of expressing all sense. To see Wittgenstein's reason for thinking that it does, we must come to terms with his claim that "[a] proposition can determine only one place in logical space: nevertheless the whole of logical space must already be given by it" (1922b, 3.42).

Here is where the earlier discussion of Wittgenstein's concerns with the sole logical constant become relevant. The key to Wittgenstein's remark concerning the *whole* of logical space being "given by" individual propositions lies in his belief that "[a]n elementary proposition really contains all logical operations in itself" (1922b, 5.47). This remark, and a related remark to the effect that "[a] posi-

[136] As with the case of negation, using the disjunction sign more than once is misleading. If we accept Wittgenstein's claim that different objects are to be represented by different names, then a different symbol will need to be introduced for subsequent uses of what corresponds to disjunction. I take it that Wittgenstein's opponent has no answer to the question of what makes an individual v a member of the class of v's.

tive *proposition* necessarily presupposes the existence of the negative *proposition* and vice versa" (1922b, 5.5151), are most fruitfully interpreted in light of the thesis of bipolarity and the distinction between sense and meaning consequent upon it. What we know from our earlier discussions of bipolarity is that for something to count as a propositional sign at all, it must hold within it the possibility of being negated; and what we have just seen is that propositional signs must be capable of being negated in such a way as to make it possible for both a proposition and its denial to effect a discrimination within reality. The latter possibility is secured by the fact that an elementary proposition has both structure and form, meaning and sense. Consider, then, a set of atomic propositions containing just two members, P and Q. It must be possible to negate both members of this set. But this is none other than the operation performed by the Sheffer stroke. As we have already seen that its application suffices to produce each of the matrices in Table I associated with the usual connectives, and it can be proven that its application to various sets of formulae can produce each of the matrices making up the table.[137] Consequently, it is capable of generating the minimal truth table. This is what Wittgenstein has in mind when he tells us that "[a]n elementary proposition really contains all logical operations in itself" (1922b, 5.47). As one commentator aptly puts it, "it is implicit in the affirmative proposition 'P' that 'P' can be negated, conjoined with others and so on" (McDonough, 1986, p. 76).[138] Bipolarity is essential to proposition, and so it is in the essence of the proposition itself that the minimal truth table is grounded.

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[137] The reader will be spared this.

[138] McDonough's (1986) exposition of the *Tractatus* contends that the *Grundgedanke* is a premise in an argument designed to show that all genuine propositions are contingent. Here is another point at which we are at odds; if anything, we have demonstrated that matters are the other way around.

So what would suffice to show that the minimal truth table is complete? What would suffice, for example, to show that a table with sixteen matrices exhausts the truth possibilities of two elementary propositions? In the case of the competing view incompleteness was hailed by the inconsistencies arising from the attempt to state falsifying conditions for propositions. We saw that the attempt to provide falsifying conditions for ~P produces the undesirable consequence of P being consistent with both ~P and ~~P. Inconsistency is a mark of incompleteness, because it leaves us unable to provide a definite matrix for a given formula: we just do not know under these circumstances when to say a proposition is true or false. Consequently, any propositional sign that might occur within such a table will lack a determinate sense. For this reason the table countenanced by Wittgenstein's would-be opponent is incapable of expressing the senses of the formulae it contains; *a fortiori*, it is incapable of expressing *all* senses of propositions.

I understand Wittgenstein to be arguing that the fact that determinate matrices can be produced by the application of the Sheffer stroke (the use of which is sanctioned by the very *nature* of propositions) to sets of elementary propositions demonstrates (somehow) that his table is complete. However, it does not follow from the fact that *if a table is inconsistent (or incapable of providing determinate matrices), then it is incomplete* that *if a table is consistent (or capable of providing determinate matrices), then it is complete.*[139] Yet Wittgenstein seems to think that it follows straightaway--*a priori* (1922b, 5.47 and 5.551)--from the fact that determinate matrices can be generated in this way, that what is expressed by the general form of the proposition (i.e.,

[139] Bear in mind that the canons of argumentation employed in this dissertation are precisely what are at issue here. That these are cannons is due largely to the acceptance of Wittgenstein's views in the philosophy of logic. Hence, the fact that the above inference is invalid by Wittgenstein's own lights is significant. No questions are begged above; rather the consistency of Wittgenstein's own view is the issue.

what we have identified with the general form of the proposition) is complete.

Wittgenstein's argument is invalid, but it is nevertheless a *strong argument*. In the interest of charity I would suggest the following. In spite of Wittgenstein's claim that the *whole of logic* (which he assimilates to the whole of the philosophy of logic[140]) is *a priori*, his argument should be considered an *abductive* one and should be evaluated accordingly.

The word "abductive" was originally coined by Peirce (1931), of course, to denote a form of non-deductive inference common to arguments offered in science in favor of theoretical claims, that is, claims that appear to refer to unobservable entities to which one must advert in order to explain observable phenomena. A *good* abductive argument takes the form of affirming the consequent (which is deductively invalid). But it is sanctioned nonetheless by the fact that the consequent affirmed constitutes good probabilistic grounds in support of the theory. Rather than dismissing Wittgenstein's argument as an invalid deductive argument, let us consider the possibility of it being a strong abductive argument of the form:

> (1) If the minimal truth table is complete, then it will exhibit consistency in such a way as to make the construction of determinate matrices possible.
>
> (2) The minimal truth table does exhibit consistency in such a way as to make the construction of determinate matrices posible.

therefore,

> (3) The minimal truth table is complete.

Whether the argument is strong or not depends on whether the evi-

[140] This assimilation is forced upon him by his treatment of Russell's Paradox. Recall his criticism that Russell and Whitehead (1910) use expressions of natural language. *There* is the root of Wittgenstein's conception of incompleteness.

dence appealed to in the consequent of (1) makes probable what is expressed in the antecedent of (1) and makes improbable whatever theories compete with the antecedent of (1). Our sample of competing theories consists only so far in *one* theory for which internal consistency is problematic. Yet we are considering this strategy only because Wittgenstein's view and that of his would-be opponent are not being assumed to be jointly exhaustive. (If they are jointly exhaustive--a claim I am not sure how to defend--then Wittgenstein's conclusion *would* follow on deductive grounds.) Since it is hard to imagine competing theories, the sample size should not be considered particularly problematic. That consistency is a property of Wittgenstein's table but not a property of his opponent's *does* seem relevant. It seems to this writer that the burden falls upon Wittgenstein's critics to come up with alternative accounts for which we would not find inconsistency surprising. If we grant Wittgenstein his assumption that sense *must* be determinate, this does not seem likely.

If we combine the conclusions of the two legs of the argument, we have, I believe, Wittgenstein's argument for the *Grundgedanke*. The conclusion of the first half is that *if the logical operators are referring terms, then any truth table in which they figure will be incomplete*. The conclusion of the second half just is that *if the logical operators are not referring terms, then the resultant truth table (i.e., the minimal truth table) is complete*. Because an incomplete truth table is one in which formulae or sentences lack sense, the matter of completeness speaks to the very essence of the proposition. Thus it stems from the very nature of representation itself that "there are no 'logical objects'" (1922b, 4.441 and 5.4).

I should like to conclude this discussion of the *Grundgedanke* by touching upon three issues. The first concerns a possible objection that might be raised against the account provided above. The second

concerns the semantic status of tautologies and contradictions; and the third pertains to the ontological problem raised at the end of the previous section over the relationship between *Sachverhalten* and *Tatsachen*.

To begin with an objection might be introduced that the account provided here of the general propositional form in terms of the minimal truth table is not consistent with *Tractatus* 6. There we are told:

> The general form of a truth-function is $[p,\xi,N(\xi)]$.
> This is the general form of a proposition (1922b, 6).[141]

This passage initiates a discussion of the thesis that *all* propositions, of whatever complexity, are truth-functions of repeated applications of the basic logical function (the Sheffer stroke) to sets of elementary propositions. The symbol in *Tractatus* 6 is to be understood, as Russell indicates, as representing "whatever can be obtained by taking any selection of atomic propositions, negating them all, then taking any selection of the set...now obtained, together with the originals--and so on indefinitely (1922, p. xv). So it sounds as if the general form of a proposition is to be identified with this function or with the totality of its values (which would be identical to the totality of propositions). In either event it would not seem to be identical to the minimal truth table. If we think of the general form of the proposition in terms of the latter, then the minimal truth table expresses but a subset of the general form.[142]

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[141] I have deleted the bars Wittgenstein places above the variables, due to the technical problems in replicating them.

[142] Determining what is and is not consistent with Wittgenstein's view is not facilitated by the different things he happens to say about the general propositional form. Perhaps the greatest challenge facing the interpreter is the fact that he refers to the general form in one place as a *variable* (1922b, 4.53), elsewhere as a *constant* (1922b, 5.47), and finally as *function* (1922b, 6); and Russell all but says the general form consists in the *values* yielded by the expression at *Tractatus* 6 (a point consistent with *Tractatus* 3.312ff.). One senses in the difficulty Wittgenstein has in articulating the nature of the general form that his thoughts on the subject were incomplete.

I do not think this objection is problematic. First, it should be remembered that the formulae that we associate with the matrices, with the exception of those associated with an atomic proposition's negation, require for their production *numerous* applications of the fundamental operation. The production of formulae corresponding to the matrices *requires* a procedure such as that described here. Second, it is a mistake to think that operations beyond those necessary for producing the minimal table produce new *truths*. What they produce are new *formulae* or *sentences* whose matrices match one or another of the original sixteen that make up the minimal table. The continued use of the fundamental operation beyond the number required to produce formulae whose truth possibilities are reflected by the minimal truth table does not introduce additional *semantic* distinctions, only additional syntactic ones. This fact is largely born out by the treatment given to the logical propositions.

One of the major implications of Wittgenstein's view is that tautologies and contradictions lack sense. That they are senseless (*sinnlos*) stems from their lack of contingency. Lacking contingency, they are incapable of effecting the discrimination requisite of any picture (*Bild*) of reality:

> A tautology leaves open to reality the whole--the infinite whole--of logical space: a contradiction fills the whole of logical space leaving no point of it for reality. Thus neither of them can determine reality in any way (1922b, 4.463).

Thus,

> Tautologies and contradictions are not pictures of reality. They do not represent any possible situations (1922b, 4.462).

That there are such sentences is unavoidable: they are two of the matrices produced by the fundamental operation. That they exist thus belongs to the very nature of the proposition. Since they are a part of

language (1922b, 4.4611), but because they lack sense (1922b, 4.461), it is necessary provide some sort of account of their nature. In an earlier chapter we briefly considered Wittgenstein's account of them in terms of prototypes which function to *show* how particular expressions are used. We can now see how this *new* conception of showing is forced upon Wittgenstein. This is an important extension of the semantics of the *Tractatus*, and it is easily misunderstood. It is tempting, for example, to assimilate it to the other forms of showing referred to in the *Tractatus*; as a consequence one is left with the impression that the nature of *showing* is entirely vague. However, as I mentioned earlier, there are three quite distinct, concepts of showing at work in the *Tractatus*. Because they share certain features in common, they are easily confused.

The first concept of showing was introduced to explain how a propositional sign conveys its sense. In this instance what is shown is dependent upon the relations among the sub-sentential components of the propositional sign. This new concept of showing, which arises in consideration of the role of the logical propositions, pertains more to inter-sentential relations. That P & ~P is always false shows that both conjuncts cannot be asserted at the same time so as to produce any proposition with sense. That P v ~P is always true shows that either disjunctcan be asserted at any time so as to produce a proposition with sense. More importantly for the theory of inference, the fact that a tautology is achieved by such conditionals as, for example, ~(P & Q) → (~P v ~Q) shows that if the antecedent is true, then the assertion of the consequent is sanctioned--indeed that what is contained in the consequent is *implied* by what is contained in the antecedent. The fact that (~P v ~Q) → ~(P & Q) is tautologous too, making the two formulae interderivable, shows that either or both may be asserted at the same time without loss of truth; the conjunction of the two formulae is nei-

ther a contradiction, nor a tautology. Although important questions remain to be considered, the significance of this treatment of logical rules and logical laws is significant.[143]

Commentators (Coffa, 1993, pp 160-167; McDonough, 1986, pp. 89-95) have been quick to point out that this treatment of rules and laws undermines Carroll's (1896) Paradox of Achilles and the Tortoise. The paradox consists in the fact that if one wants to infer via, say, *modus ponens*, one must tacitly assume $\{[P \& (P \rightarrow Q)] \rightarrow Q\}$ is true before one is entitled to infer Q from P and $P \rightarrow Q$. But then one would also have to assume $\{\{[P \& (P \rightarrow Q)] \rightarrow Q\} \& \{[P \& (P \rightarrow Q)]\}\} \rightarrow Q$, and so on *ad infinitum*. Those who take the paradox seriously hold that the rules and laws of logic stand in need of epistemological justification. Against this view Wittgenstein maintains "[l]ogic must look after itself" (1922b, 5.473).[144] This should not be taken to mean Wittgenstein advocated Russell's (1912, pp. 70-73) view that logic provides us with *self-evident* truths. To the contrary, Wittgenstein says,

> Self-evidence, which Russell talked about so much, can become dispensable in logic, only because language itself prevents every logical mistake.--What makes logic a priori is the impossibility of illogical thought (1922b, 5.4731).

The rules and laws of logic neither need justification, nor need to be regarded as self-evident (to intuition or acquaintance), because they are implicit within the very nature of propositions themselves.

We had a chance to consider Wittgenstein's claim that an illogical

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[143] A point concerning terminology: a logical rule is a tautologous formula whose main operator is the material implication sign; a logical law is a tautologous formula whose main operator is the biconditional sign. *Modus ponens*, $\{[P \& (P \rightarrow Q)] \rightarrow Q\}$, is an example of the former; the particular DeMorgan's Law cited above, $\sim(P \& Q) \leftrightarrow (\sim P \vee \sim Q)$, is an example of the latter.

[144] To give you some idea how early this idea occurred to him, this comment is the very *first* to occur in the World War I *Notebooks* (1914b, p. 2). At this point in time the *Grundgedanke* had occurred to him but needed working out. The 1914 "Notes Dictated to Moore in Norway" begin with a consideration of the the same topic

language is an impossibility earlier in connection with his rejection of Russell's Paradox. We now know that that claim actually involves two distinct theses: (1) a function cannot be its own argument, and (2) logical rules and laws are implicit within the nature of propositions themselves. (If one were not prepared to distinguish these claims, the *overall* argument described in this dissertation would appear question-begging.) But, by way of criticism, it seems quite ludicrous to assert that valid inferences are ours merely by virtue of the language we speak! As desirable as it might be to think that there are *a priori* grounds for not testing students or holding dissertation defenses, no one can deny that invalid inferences do occur. Lucky is the logic teacher who never has a student for whom *modus ponens* or *modus tollens* seems unnatural. *If* Wittgenstein's view entails that logical mistakes are impossible, then in the end it fares no better than Moore's theory of judgment. And even if his view implies that the only good argumentation is deductive argumentation (that is, that there are not good forms of non-deductive reasoning), it is faced with difficulties, since such a claim does not ring true. Clearly there are good non-deductive forms of inference; witness the various inductive and abductive forms of inference that contribute to the success of science.

The objection we have been considering, however, is an attack upon a straw man, as it misconstrues the role the logical propositions play within the context of inferences. Wittgenstein's view is not that invalid inferences are impossible.[145] Surely his view comes to this: tautologies are no more nor less a possibility of our language than contra-

[145] He does, however, seem to suggest that the theory of probability is founded upon the possibility of deduction (cf. 1922b, 5.15-5.156). As this is not a claim to the effect that non-deductive reasoning does not occur, but is rather a claim about the relation between deductive and non-deductive forms of reasoning, it need not be considered objectionable here. Whether contentious or not, the claim that the probability calculus is founded upon the propositional calculus plays a role in numerous texts (for example, Skyrms, 1975, pp. 130 ff.).

dictions or sentences subsumable under the other matrices. Valid reasoning is no more nor less a possibility for language users than invalid reasoning. These *possibilities* are what are implicit in language. Language does not provide us with the impossibility of error but with the possibility of *proving* that an error has occurred (if one has occurred) by means of a mechanical test--namely, by constructing a truth table (1922b, 6.126-6.1265). Wittgenstein does not make the point abundantly clear, nor is his contention that an illogical language is impossible free of ambiguity. But, I believe, his principal point is that even if one were to utter something tautologous or contradictory (or were to perform an invalid inference), the possibility of one doing so arises from the fact that such sentences are related essentially to other sentences for which sense is determinate. The very language one speaks exposes the contradiction *as* contradiction. In the *Tractatus* a counterweight to the logical atomism may be found in a certain holism of sense that is expressed by means of the minimal truth table.

At bottom, the idea that logical laws and rules are statements for which evidence *should* be provided rests upon a misconception of their subject matter. To think they require evidence involves assimilating their subject matter to that of factual (hence contingent) propositions, because it involves countenancing the possibility of their falsehood. But it is misleading to say that, for Wittgenstein, these sentences or formulae express necessary *truths*. Strictly speaking, their 'assertion' cannot be regarded as the assertion of a proposition or statement at all, since all statements or propositions must be contingent, and these are clearly not that. This much is demonstrated by the truth table.

What then are they? Wittgenstein's conception of the logical propositions bears at least a cursory resemblance to the type of analysis later offered by positivist writers. Hahn, for example, contrasts "[t]he old conception of logic" according to which "logic is the account

of the most universal properties of things, the account of those properties which are common to all things" (1933, p. 45) with the newer conception of logic according to which:

> logic does not by any means treat of the totality of things, it does not treat of objects at all but only of our way of speaking about objects; logic is first generated by language. The certainty and universal validity, or better, the irrefutability of a proposition of logic derives just from the fact that it says nothing about objects of any kind (1933, pp. 45-46).[146]

While Wittgenstein would agree with the claim that tautologous and contradictory propositions do not "treat of objects," as well as with Hahn's and other positivists' construal of logical propositions as being *about* (in at least some respect) "our way of speaking of objects," he would disagree that it is possible to speak about language--or at least about what is *essential* to language--in the same way as it is possible to speak of extra-linguistic objects and states of affairs. We will postpone a discussion of Wittgenstein's reasons for rejecting the possibility of a meta-language such as proposed by Carnap (1936) and Tarski (1936) until the next chapter where we will be in a position to describe his distinction between senselessness and nonsense and his view concerning statements about the *essence* of propositions. Let it suffice for now to say that senseless sentences have a *use* (though that use is not assertion), but nonsensical sentences do not. Tautologies and contradictions (or rather utterances and inscriptions of them) fare better than sentences that are nonsensical, inasmuch as they *show* (1922b, 6.12) or *demonstrate* (1922b, 6.121) how expressions may be used. In particular, they show which propositional signs may be used to assert the truth given that certain *other* propositional signs may be used to assert the truth. So, for example, the fact that the matrix for $P \rightarrow P$ is tautologous shows that if one is entitled to assert P at t_1, then (other things

[146] The same view is expressed almost *verbatim* by Carnap (1930, p. 143) and Ayer (1936, p. 79).

being equal[147]), one is entitled to assert P at t_1.

What distinguishes Wittgenstein's view from that of the positivists is that his view of the logical propositions (and the rules and laws that are formulated in terms of them) is much less *rationalistic*--much less *cognitivistic*--than theirs. One does not find in Wittgenstein any of the adoration typically assigned to the so-called truths of logic and mathematics. Rather than pronouncing analyticity (and the *a priori* in general) as the domain of *pure* knowledge, we find even the early Wittgenstein laying great stress upon the *practical* use of sentences. It is worth recalling some of the passages cited earlier that found their way into the *Tractatus*:

> [I]n, real life a mathematical proposition is never what we want. Rather, we make use of mathematical propositions *only* in inferences from propositions that do not belong to mathematics to others that do not belong to mathematics.
> (In philosophy the question, 'What do we actually use this word or proposition for?' repeatedly leads to valuable insights) (1922b, 6.211).
>
> In order to recognize a symbol by its sign we must observe how it is used with a sense (1922b, 3.326).
>
> A sign does not determine a logical form unless it is taken together with its logic-syntactical employment (1922b, 3.327).
>
> If a sign is *useless*, it is meaningless. That is the point of Occam's maxim.
> (If everything behaves as if a sign had meaning, then it does have meaning (1922b, 3.328)).

These passages do not equate meaning and use, but it is clear that Wittgenstein wants to place great stress upon the use or employment of signs. As we will see in the next section, only when we understand what is made manifest in the employment of signs--namely, the way the will effects a projective relation between signs and world--do we have an understanding of the essence of the proposition.

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[147] Obviously P cannot contain indexical elements that make the time of the utterance relevant to its truth value.

Although the tautologies and contradictions are incapable of establishing any projective relation (due to their inability to effect a discrimination among facts), they do have a use: they provide a device that determines when other (sensical) propositional signs can be used. Construed as devices or instruments the logical propositions need not be viewed as expressing abstract propositional knowledge. They are tools. As with tools generally, one need not *think* about the tool one is using in order to use it. An understanding of the logical propositions and the rules and laws stemming from them is *implicit* in the use of propositions that do have sense. Against the idea that the logical propositions provide any sort of pure or abstract knowledge, there stands Wittgenstein's view that it is not even necessary for the rules of syntax or grammar to ever be explicitly stated or consciously entertained by language users (1922b, 3.334 and 6.122).[148] As one commentator aptly puts it, "what is gained here is a kind of practical knowledge, the knowledge of how to do something...knowledge of how to operate with certain symbols" (Edwards, 1985, p. 55).[149] Rather than calling tautologies and contradictions propositions at all, it would have been more accurate for Wittgenstein to say that utterances of them give expression to a certain *ability* one has with respect to signs. To understand that a given combination of signs is a tautology or a contradiction is to possess a kind of *know-how* rather than any form of propositional knowledge (i.e., knowledge *that* such-and-such is the case).

As mentioned earlier, Wittgenstein's discussion of these matters is not always consistent. The very reference to tautologies and contradictions as *propositions*, and the ascription to them of *truth* and

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[148] A logically perspicuous language is supposed to facilitate this. At *Tractatus* 6.122 we are told "we can actually do without logical propositions; for in a suitable notation we can in fact recognize the formal properties of propositions by mere inspection of the propositions themselves."

[149] This claim is supported by *Tractatus* 6.12.

falsehood, is misleading. To speak of them as prototypes (*Urbilder*) (1922b, 3.315, 5.5351) involves viewing them as salient examples or exemplars of the use of expressions. The appeal to prototypes or exemplars is implicit in (*and explains*) Wittgenstein's otherwise obscure remark at *Tractatus* 5.454 that "[i]n logic there can be no distinction between the general and the specific." Variables, typically held (as in Russell's case) to be very general terms, are dummy or proxy terms whose usage is to be imitated. The utterance of a tautology constitutes the setting up of a certain sort of convention for the use of signs.

Upon returning to philosophy in 1929 Wittgenstein struggled to articulate his thoughts on this subject. According to Lee (1982), Wittgenstein asserted during his 1931 lectures at Cambridge that a tautology

> ...is a rule of grammar dealing with symbols alone, it is a rule of a game. Its importance lies in its application; we use it in our language. When we talk about propositions following from each other we are talking of a game. Propositions do not follow from one another as such; they simply are what they are. We can only prepare language for its usage; we can only describe it as long as we do not regard it as language. The rules prepare for the game which may afterwards be used as a language. Only when the rules are fixed can I use the game as a language.
>
> To a necessity in the world there corresponds an arbitrary rule in language (1982, p. 57).

This passage provides a crucial insight into the relation between the philosophies of the early and later Wittgenstein. It might reasonably have occurred either within the *Tractatus* or in the *Philosophical Investigations*. Wittgenstein's Cambridge lectures from 1930 through 1932 aimed primarily at explicating, with slight modification, the principal tenets of the *Tractatus*.[150] That he would employ the *game* metaphor in doing so gives some indication of the continuity between his

[150] This particular passage from the lectures seeks to clarify *Tractatus* 5.557 where Wittgenstein vacillates on the relation between logic and its application.

earlier and later philosophy: eventually the rule-like function of tautologies and contradictions in the early philosophy would be supplanted by that of the grammatical propositions of the later philosophy. In both the early and later philosophy rules are conceived of as being something other than bits of information or as *parts of* a rational system of propositions. The chief difference between the early and later philosophy consists in the fact that the former construes the tautologies and contradictions as rules *for* a rational system of propositional signs whose use answers to the form of objects and states of affairs in the world; the grammatical propositions of the later philosophy provide the rules for language games, and if they answer to anything, it is to what Wittgenstein later calls a *form of life.*

This final point about the *Tractatus* conception of logical propositions bears emphasis. It is not being claimed that the rules and laws that stem from them are mere conventions one may or may not adopt. Certainly the particular symbolism used (i.e., the vocabulary) is largely an arbitrary or pragmatic matter. But which inferences one is entitled to draw depends upon the relations that exist among the senses of propositional signs (1922b, 5.122), which means that it depends upon the relations that obtain among possible states of affairs in the world (1922b, 6.12). If one is to represent the world in thought or speech, *how* one thinks or speaks is constrained by the world itself.

We are now in a position to return to the metaphysical issue with which we closed the previous section. Earlier I suggested that the very intelligibility of Wittgenstein's logical atomism depends upon finding an answer to the question of how something composite may be related to something non-composite. The relevance of the question resides in the necessity to square an ontology of simple objects with the common sense and Newtonian conception of objects as infinitely divisible that appears to find expression in ordinary language. We noted earlier that unless

this question could be answered, Wittgenstein's claim that ordinary language is in perfect logical order would have to be abandoned. The most important consequence of this would be that Tractarian semantics could in *no* way be considered the semantics of ordinary language. While that consequence would not be disagreeable to someone like Frege or Tarski, it would be regarded as unfortunate by Wittgenstein, since he saw his task as one of explaining how representation *in general* is possible.

The solution resides in the ontological distinction between molecular facts (*Tatsachen*) and atomic facts or states of affairs (*Sachverhalten*), and the fact that the former are not reducible to the latter. Our talk about complex objects, on Wittgenstein's view, may be analyzed into sets of statements about *Tatsachen*, because the existence of a complex object *just is* the occurrence of a certain kind of fact. The first stage of analysis, we saw earlier, deploys Russell's Theory of Descriptions at precisely this juncture. If the facts adverted to at this stage contain objects that are complex, the assumption is they too shall be analyzed in an analogous fashion. This process continues until one adverts only to simple objects by means of elementary propositions. If we imagine a pyramid (as we are given, for example, at *Tractatus* 4.1252 and 4.1273[151]) with a complex object's name at the top (e.g., "Scott"), then the bottom of such a pyramid would consist of numerous (perhaps infinitely long) sets of atomic propositions in conjunction. Since elementary propositions are contingent, presumably their truth

[151] Wittgenstein uses the image of a pyramid to express what he refers to as the internal relations that exist among a series of forms (1922b, 5.125-5.1252). That passage provides at least a partial clue as to how analysis is to be conducted. I do not believe Wittgenstein's thoughts on this were complete. Certainly my own use of the pyramid analogy in the paragraph above goes beyond what *he* says (though not beyond what he *would* say).

would be indexed to times.[152]

The problem can be understood, then, as one of how *Tatsachen* can consist of *Sachverhalten*, without the latter consisting of further *Sachverhalten*. The answer lies in the fact that the spatio-temporal properties of *Sachverhalten* are emergent, as contemporary physics suggests, and the relation obtaining between them and the *Tatsachen* from which they are emergent is logical rather than spatio-temporal in character. This could not be the case if there were logical "objects" corresponding to the sentence forming operators or the identity sign. Let P, Q, and R represent *Sachverhalten*. The truth of their conjunction implies the truth of S which represents a given *Tatsache*. If one views the constants as referring terms, it is likely one views the *conjoining* of P, Q, and R and the *implying* of S by them as *processes* culminating in S. (Notice the equivocation this requires: conjunction and implication are treated both as relations among propositions as well as facts.) If this were the case, it would imply spatio-temporal continuity between P, Q, R, and S. Under these conditions, conceiving of the constituents of P, Q, and R as having, for example, extension in space appears inevitable. But if the *Grundgedanke* is true, the temptation to proceed along this line of thinking is removed. If one is also willing to find at least the possibility of truth in the basic tenets of relativity theory and quantum mechanics, one should not find Wittgenstein's appeal to simple, unanalyzable objects unintelligible. Thus the *Grundgedanke*, not only is central to the analysis of molecular propositions, but rescues the account of elementary propositions from the criticism raised earlier.

Although the logical atomism of the *Tractatus* is shielded from

[152] This makes the translation of *Sachverhalten* as *states* of affairs particularly appropriate. That a *Sachverhalt* is the *obtaining* of a situation underscores the fact that it is one of a set of possible states of affairs.

what seems to be a major criticism, a new criticism arises that might make one wonder whether the cure is worse than the illness. The logical relation that holds between different levels of analysis would seem to be that of strict implication: [(P & Q & R) ⇒ S]. This is because **P**, **Q**, and **R** are in some sense constituents of **S** (individually necessary and jointly sufficient for **S**). In effect the above formula expresses an identity statement or what is sometimes referred to as a bridge law. However if it is *necessarily* the case that (P & Q & R) imply S, then the sentence or formula that expresses such cannot be contingent and thus must be considered without sense. They must be treated as "mere representational devices" (1922b, 4.242). But in fact such statements do seem to express important--*necessary*--empirical truths. What Wittgenstein calls the *logical form of the world* appears to contain, not only the *possible* combinations of objects into states of affairs and the *possible* consistencies among *Tatsachen* that make *Sachverhalten* possible, but *necessary* relations between *Tatsachen* and *Sachverhalten.* The metaphysics of the *Tractatus* has a modal structure through and through!

Here we have the germ of the positivist rejection of metaphysics. Our concern is not so much with that, though, as with the possibility of a vicious inconsistency entering into Wittgenstein's semantic theory. That there are statements about the world that are necessarily true--indeed, that there are statements about the facts that make language (and representation generally) possible that are necessarily true (i.e., those that make up the *Tractatus* itself)--is inconsistent with the principal semantic theses considered of the *Tractatus* considered thus far. Russell notes this apparent inconsistency in his "Introduction" to the *Tractatus* saying, "Mr. Wittgenstein manages to say a good deal about what cannot be said" (1922, xxi). Wittgenstein's solution consists in introducing a further semantic category over and above what has sense (contingent empirical propositions) and what is senseless (tautologies

and contradictions). This further category consists in what is *nonsensical* (but not nonsensical in the way that strings failing to meet arbitrary syntactical rules are nonsensical). This topic will be dealt with below. Although the Tractarian account of sense is assisted by the account of senselessness, it does not seem to be the case that the weakness in the account of senselessness can be reconciled by an appeal to what is nonsensical. This, I believe, exposes the central flaw of Tractarian semantics. The stumbling point turns out to be none other than its most important feature: the essence of the proposition as consisting in a propositional sign's projective relation to the world. What points the way beyond Tractarian semantics is the inadequacy of the account of this projective relation and the problem this inadequacy poses for the semantic interpretation of propositional attitude ascriptions.

CHAPTER V

PROJECTIVE RELATIONS AND PROPOSITIONAL ATTITUDE ASCRIPTIONS

1. Introductory Remarks.

Up until this point we have been concerned with the semantics for sentences that either have sense or are senseless. Chapter III allowed us to bring to a close our consideration of the nature of sense by seeing how the Picture Theory must be expanded so as to include logical atomism. That chapter concluded by noting that atomism can be made intelligible only if we can make sense out of the idea that composite objects may consist of non-composite elements. That possibility is secured by a metaphysical distinction between *Sachverhalten* and *Tatsachen*. Such a distinction can only be drawn if the *Grundgedanke* of the *Tractatus* is true. Thus we saw that the Tractarian account of elementary propositions depends largely on the analysis that can be given of molecular and negative propositions. In Chapter IV we studied the argument for the *Grundgedanke*. Since the logical atomism depends on the *Grundgedanke*, and the *Grundgedanke* entails that there must be matrices for tautologies and contradictions which lack bipolarity, the account of sense must make room for what is *senseless* but no less a part of language. In this chapter we turn our attention to nonsense. The need to expand the semantics of the *Tractatus* arises once the essence of the proposition is laid bear. The essence of the proposition consists in the projective relation between propositional sign and the world that is effected by the will. In Section Two we attempt to clarify Wittgenstein's position concerning this topic. In Section Three our findings are applied to the analysis of propositional attitude ascriptions. There we see the sharp contrast that exists between Wittgenstein's view and Russell's theory of judgment. Once this has

been done we will be in a position in Section Four to explain Wittgenstein's remarks on solipsism. I had said in an earlier chapter that those remarks pose a significant challenge to the realist interpretation of the *Tractatus* throughout this dissertation. This problem dissipates once the semantic theory of the *Tractatus* is seen to quantify over *assertions* and other linguistic tokens. The remarks on solipsism, I shall argue, are but expression of what today we might call *semantic individualism.* In Section Five we turn to the *real* problems with Tractarian semantics. The usual criticism of the *Tractatus* centering around the Color Exclusion Problem is dismissed on the grounds that it fails to do justice to Wittgenstein's distinction between sense and meaning. More important criticisms await us concerning the Tractarian account of propositional attitude ascriptions and the nature of nonsense.

2. Projective Relations.

Tractatus 3.1-3.12 reads as follows:

> In a proposition a thought finds an expression that can be perceived by the senses.
>
> We use the perceptible sign of a proposition (spoken or written, etc.) as a projection of a possible situation.
> The method of projection is to think of the sense of the proposition.
>
> I call a sign with which we express a thought a propositional sign.--And a proposition is a propositional sign in its projective relation to the world (1922b, 3.1-3.12).

Just what is this *projective relation*, and how does it come about? Is the same or a different relation involved in both elementary and molecular propositions?

The principal clue we are offered is the claim at 3.11 that the method of projection is to think of the sense of the proposition. If one regards sense as some sort of abstract or Platonic entity, one will completely misunderstand the way in which the projective relation aris-

es. Let us begin by considering the case of elementary propositions.

The sense of an elementary proposition consists in a set of possible states of affairs. Somehow this range of possibilities must become the *object* of one's thought. But this immediately seems to be problematic, since one can only *say* (and so presumably *think*[153]) that one member of this set is true. To return to the symbolism employed in Chapters III and IV, let the sense of **Ω¥Δ** consist in the set: {**Ω¥Δ**, **ΩΔ¥**, **¥ΩΔ**, **¥ΔΩ**, **Δ¥Ω**, **ΔΩ¥**}. One does not, in saying or thinking **Ω¥Δ**, say or think that all the members of this set are possible. Their possibility is rather exhibited by one's employment of the syntactical rules governing the construction of **Ω¥Δ**; or, more accurately, the employment of those rules shows or exhibits the *form* of **Ω¥Δ**, and it is this form that corresponds to the sense of the proposition. We said in an earlier chapter that the form/structure distinction allows Wittgenstein to hold a position according to which a sentence may be regarded as *about* more than what is actual. We now need to retrieve that idea in order to explain what is involved in thinking about the sense of a sentence. We know that it does not consist in forming an explicit idea of it; the attempt to think explicitly about the full array of possibilities results in a disjunction with a different sense (corresponding to *its* form). That which is explicitly thought about (thought about *thematically*, to borrow a word from Heidegger, 1926, pp. 414-415) is that which is expressed by the structure of the propositional sign, i.e., what Wittgenstein sometimes refers to as a sign's content. Thinking about the sense of a sentence cannot be that sort of thing.

The question boils down to the way subjects are aware of *what is*

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[153] Wittgenstein draws no distinction between the way language and thought represent. In the *Notebooks* he maintains, "Thinking is a kind of language. For a thought to is, of course, a logical picture...and therefore it just is a kind of proposition (1914b, p. 82). A similar point is made in a 19 August 1929 letter written to Russell while a prisoner of war in Cassino, Italy; cf. Wittgenstein (1912), p. 131.

shown by a proposition possessing sense. Whatever kind of awareness it is, it presumably arises at the same time as the more or less self-conscious awareness one possesses of *what one is saying* (or of what one is having an occurent thought). Perhaps the explanation lies in what occurs at that moment. What occurs is the construction of a structure *according to the rules of syntax*. Applying the rules of syntax is something we *do*; it is a form of *action*. To be sure, the active nature of the representation process is stressed a various points in the *Tractatus*. Thus:

> We *make* to ourselves pictures of facts (1922a, 2.1, emphasis added).
>
> "A state of affairs is thinkable": what this means is that we can make for ourselves a picture of it (my translation of the German in 1922a, 3.001).[154]

So perhaps the type of account to be given is akin to the sort of account appropriate to explaining the kind of awareness one has of one's own actions.[155] It is beyond the scope of this dissertation, however, to give any sort of thorough phenomenological analysis of action--specifically, of linguistic action. That task has been *shared* by members of the analytic tradition (e.g., by the so-called speech act philosophers: Austin (1962), Searle (1969), etc.) as well as the phenomenological-

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[154] I have reverted to the Ogden translation for *Tractatus* 2.1; the Pears and McGuiness translation runs "We picture facts to ourselves." This loses sight of the active nature of picturing made evident in the German by the verb "*machen*." Neither translation does justice to it in 3.001. Ogden translates the phrase after the colon ("*Wir können uns ein Bild von ihm machen*") merely as "we can imagine it." This hardly does justice to the fact that this activity brings about a relation to *reality*.

[155] And, one might add, "...appropriate to the specific action of applying the rules of syntax." However, doing so invites one to misplace what is important; one looks to the rules rather than to the action. I would suggest this is precisely what happened to Moore when the topic came up in Wittgenstein's Cambridge lectures between 1930 and 1933. After asking "is not 'projecting with the common method of projection' merely a metaphorical way of saying 'using in accordance with standard rules of grammar'?" (1954, p 247), Moore dismisses the issue as at heart one of knowing how to *interpret* a rule, a very cognitive affair.

hermeneutic tradition (cf. Gier (1981) for a list of references to the works of Heidegger, Merleau-Ponty, Gadamer, Schutz and others). And, indeed, a great deal of Wittgenstein's *Philosophical Investigations* is devoted to the subject. The *early* Wittgenstein appears to devote very little time to the subject. The most extensive passages, which we shall examine momentarily, dealing with the nature of action are contained in the World War I *Notebooks* where the topic quickly gives way to a discussion of the *will* and of the subject who wills. The notes taken by Moore (1954), and Lee (1982) show little indication of this topic being taken up. The one exception is where Moore records Wittgenstein's comments that the method of projection can be likened to *being guided* in one's playing of an instrument by a musical score (1958, pp. 242-243). (Interestingly, the experience of being guided is given considerable attention in the *Philosophical Investigations* (170-177) where it is revealed as a number of related phenomena and as not always characteristic of language use.) What is interesting about the occurrence of any reference to being guided in the Cambridge lectures of 193-1933 is that it betrays an attitude toward language use (shared by the *Notebooks* and the *Tractatus*, but abandoned by the time of *The Blue and Brown Books*), namely, that using language is a form of *compliance* to what must be the case if representation is to occur in thought or language at all. The very acts of thinking and speaking, so essential to our nature, are forms of compliance. We have already seen that Wittgenstein thinks an illogical language is impossible; his comment at 3.031, cited earlier, can now be understood fully:

> It used to be said that God could create anything except what would be contrary to the laws of logic.--The truth is that we could not *say* what an 'illogical' world would look like (1922b, 3.031).

One is powerless to say what an illogical world would be like precisely because *saying* requires what is said to share with the world a common

logical form (1922b 4.12). It is the logical form imposed upon language by reality which constrains in every event what one *may* say. It is no wonder that the *Notebooks* enters into lengthy soliloquy over the effectiveness of the will and its relation to reality. On the one hand, the subject who acts seems to accomplish representation by means of a propositional sign that has both a structure and form; on the other hand, things could not be otherwise, since the forms of our sentences are determined by their senses, i.e, from the possible facts and states of affairs of which reality itself consists.

Unfortunately for our purposes the discussion of the nature of the will in the *Notebooks* pertains to the senses of propositions *in toto*. That is to say, it is concerned with how the will affects and is affected by the the senses of the class of all possible propositions (what we described as expressed by the minimal truth table), what Wittgenstein refers to as the *limits of the world*. It is in this context that the willing of the subject (or, rather, the *good* or *bad* willing of the subject (1922b, 6.43)) is identified as "a condition of the world, like logic" (1914b, p. 77). Some of these considerations will become important in Section Four, below, where we consider the remarks on solipsism. On the face of things, it does not seem they bear directly upon the question of the manner in which we are said to be able to think of the sense of a particular sentence. Indeed, the sort of compliance imposed upon one by the logical form of the world--the sort of compliance that has led some scholars to say such things as that "[i]n the *Tractatus* language is conceived from the perspective of a spectator, not that of an agent" (Edwards, 1985, p.79).[156]--seems out of place when considering what is done with *individual* propositions. For surely at the level of

[156] Edwards (1985, Chapter III) is concerned to show that Wittgenstein's "A Lecture on Ethics" (1929b) moves away from such a passive account of human language and thought. Clearly the active role of the language user looms large in the writings and lecture notes from 1929 onwards.

the individual proposition choices do occur as to what to assert or not assert. A propositional sign has a form *and a structure*, and the structure one selects to utter indicates what one thinks is actually true. One does not--cannot--assert all of the structures of a given form simultaneously.

There is of course the holism of sense that was outlined in the previous chapter. The set of all elementary propositions contains within it the possibility of *all* propositions whatsoever, including presumably the propositions of ordinary language. When one utters a sentence with a given structure (here let it be noted that we are speaking of sentences of ordinary language far removed from the elementary propositions into which they are analyzed) one is uttering a sentence that has a sense internally related the senses of the sentences into which it decomposes (by analysis) as well as the senses of those sentences into which it may figure compositionally (by operations). As we noted in the last chapter, we can speak of the sense of the sentence *per se*, but the array of possible facts or states of affairs of which this sense consists belongs to a wider array of possibilities which Wittgenstein refers to as reality itself (1922b, 2.06).

Is there anything in this that might help us? Perhaps so. What constrains what one *may* say is the sum total of possible (realized and unrealized) facts and states of affairs. Whereas the realization of any particular fact or state of affairs is a contingent matter, the full array of possibilities is not. They determine the totality of linguistic forms, which in turn determine the set of all possible utterances. According to Wittgenstein, since one cannot affirm or deny what is not contingent, the appropriate attitude to take toward reality as a whole is one of amazement or awe before the fact *that it is*. Thus the 6's of the *Tractatus* arrive at the dramatic conclusion:

> It is not how things are in the world that is mystical,

but *that* it exists (1922b, 6.44).

> To view the world sub specie aeterni is to view it as a whole--a limited whole.
> Feeling the world as a limited whole--it is this that is mystical (1922b, 6.45).

He had made the point earlier in more mundane terms:

> The 'experience' we need in order to understand logic is not that something or other is the state of things, but that something *is*: that, however, is *not* an experience.
> Logic is *prior* to every experience--that something *is so*.
> It is prior to the question 'How?', not prior to the question 'What?' (1922b, 5.552).[157]

While I do not want completely to discuss what is involved in viewing the world sub specie aeterni here, this much is relevant to our present concerns: it involves seeing oneself as importantly free from the contingencies of empirical reality. (We will examine Wittgenstein's reason for believing this to be so in the next two sections.) This is the idea behind his claim that:

> If I wrote a book called *The World as I found it*, I should have to include a report on my body, and should have to say which parts are subordinate to my will, and which were not, etc., this being a method of isolating the subject, or rather of showing that in an important sense there is no subject; for it alone could not be mentioned in that book (1922b, 5.631).
>
> The subject does not belong to the world; rather, it is a limit of the world (1922b, 5.632).

These passages, written at the peak of some of the worst fighting of World War I, express Wittgenstein's indifference to *how things are* in the world. Like many persons who undergo severe suffering, Wittgenstein coped with the experiences he underwent while manning a spotlight amidst heavy artillery shelling by psychologically 'removing' himself from the situation. (of course this bit of biographical information is not in-

[157] Presumably the "How" of the last line is equivalent to the question of how things *are* among what is contingent; the "What" pertains to what is possible.

tended to replace an argument for a 'metaphysical' subject, something we will consider later.) Being able to stare into the face of death fearlessly (which Monk, 1990, p. 138 describes as being of the utmost importance to him) could not have been accomplished without the world being viewed as having limitations, i.e., as not being able to exercise power over one's self or soul.

This attitude towards possible facts is correlated with an attitude towards propositional signs. *Tractatus* 6.4 asserts, "[a]ll propositions are of equal value." Just as one may be indifferent to which facts obtain, so may one be indifferent to which propositions are true. This possibility does not in any way preclude entertaining various attitudes towards propositions. One could continue to believe, remember, expect, etc., the truth of given propositions. What one could not do is entertain such attitudes as hoping, desiring, wishing, craving, disliking, etc., that a given proposition is true. (These are the so-called pro-attitudes that confer or express value.) When one subtracts the pro-attitudes from the propositional attitudes generally, one is left with a set of attitudes that are, we might say, *topic-neutral* with respect to their contents. They simply view one or another propositional sign as true or false (in the past, present or future). They come as close as possible to being states in which a propositional sign is considered simply *as a propositional sign with a potential for truth and falsehood.* That is to say, they come as close as anything can to being states in which one is aware *that* something or other is a proposition--*that* the structure asserted or believed is but one among a range of possible structures comprising the same form.

I suggest that to "think of the sense" of a propositional sign involves viewing the structure *one is using* as one possibility among many. It is to be aware *that* it is but a member of a class to which it is internally related. (This idea that the members of the set are internally

related appears to run contrary to what is deemed the Color Exclusion Problem, but really it does not, since each possible state of affairs is a possibility *of* the simple objects that are their constituents; Section Five, below, deals with this more explicitly.) Here the point is that the use of one structure in accordance with rules of syntax involves an awareness, no matter how marginal, *that* other structures subject to the same rules are possible. Of course one does *use* one of the structures of the set, since it corresponds to what one presumes is true, but it is the fact that its use occurs against the backdrop of these other possibities that accounts for its potential to draw a distinction between what is (presumed) actual and what is (presumed) possible but not actual. This may seem like a small point, but in fact what we have been describing *just is* how the discrimination within reality, of which we have spoken, is accomplished. Here it is useful to retrieve Wittgenstein's earlier metaphor: a proposition is like an arrow (1922b, 3.144), they divide the landscape of possibility. But because one actually uses one structure among the many, one's utterance has a certain direction: it points to *this* side of the landscape as being (what is presumed to be) actual.[158]

The projective relation thus involves *action within constraint*. The application of the rules of syntax are constrained by the logical possibilities being what they are (possibilities at which one can but marvel, since over them one has no control), but these logical possibil-

[158] Wittgenstein's metaphor at 3.144 has caused a great deal of confusion among commentators, especially when the commentator is tempted to unpack the metaphor in terms of what is usually called Wittgenstein's *directionality thesis* (1922b, 5.2341). One is tempted to unpack it by thinking of the arrow as moving toward what the speaker thinks is true. That is not correct; rather what the speaker thinks is true would have to be represented by an arrow that *intersects* the arrow of 3.144 responsible for effecting the discrimination within reality. For all the criticism directed against Carruthers (1989) in an earlier chapter concerning his quasi-Fregean conception of Wittgenstein's senses, he is correct on this point (cf. 1989, p. 31).

ities afford one the possibility of action, i.e., of uttering (for whatever purpose) a structure of a certain sort.

To counsel despair over the passivity and impotence of the will, when the will is afforded the possibility of action by the logical form of language and world, is unjustifiable.[159] So is the other extreme position which sees all logical possibility as stemming from an activity of the will (more will be said concerning this when be discuss the remarks on solipsism). Surely either extreme misinterprets Wittgenstein's point. If anything, Wittgenstein's view bears a cursory similarity to the view of Heidegger (1927) where *Dasein*'s being-in-the-world is characterized as a "thrown-thrownness" or a "projected projection."[160] (Sartre (1943) would latter use the terms "facticity" and "transcendence" in a similar vein.) Here the idea is that human action is always situated within a concrete context which affords the possibility of action. For example, in a discussion concerning the nature of signs (including signs in nature, e.g., that a storm is coming) Heidegger says,

> The sign is not only ready-to-hand with other equipment, but in its readiness-to-hand the environment becomes in each case explicitly accessible for circumspection. *A sign is something ontically ready-to hand, which functions both as this definite equipment and as something indicative of the ontological structure of readiness-to-hand, of referential totalities, and of worldhood* (1926, pp. 113-114, emphasis contained in the original text).

What Wittgenstein refers to as the *structure* of a propositional sign would certainly be regarded by Heidegger as something ready-to-hand, that is as something which has a use. On this Wittgenstein would agree (recall *Tractatus* 3.326-3.328 and related passages). What Heidegger refers to as the ontological structure of the ready-to-hand is consti-

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[159] As Ryle would later say, "we feel no inclination to lament that Gibbon's pen ran a fatal groove" (1949, p. 79).

[160] We know that Wittgenstein expressed considerable approval of this work in his conversations with members of the Vienna Circle. Just how much of it he read, and precisely what he agreed with we do not know.

tuted by a series of relations that holds between a tool in use and other entities--specifically, the relations between a tool in use and that *out of which* the tool is made (its constituents), that *towards which* its use is directed (its purpose), and that *for the sake of which* it is used (the person or creature for whom the purpose serves a purpose). The point is that the use of a tool takes place against a horizon in which other entities become "accessible for circumspection." Ultimately, for Heidegger, this system of significations includes what he here refers to as referential totalities and the worldhood [of the world], i.e., the fact *that* there is a world at all. For Heidegger the same very much holds true for linguistic signs that function essentially as tools. Linguistic expressions *signify* referential totalities and the world, but they do so not because a particular sign contains all this as part of its content; rather it does so by virtue of its *application* as something ready-to-hand. One suspects Heidegger would find little to disagree with in Wittgenstein's contention that "[w]hat signs fail to express their application shows" (1922b, 3.262). It is the application of the sign that relates the sign's structure to a context that includes its sense.

I believe we have put the nature of *projection* in the proper light. It involves discriminating within reality between what one thinks is actual and what one thinks is possible but not actual. This is accomplished by means of a concrete (hence uttered or inscribed or imagined) propositional sign that serves as a model (*Bild*) of a possible fact that is presumed actual by the speaker. The mechanics involved in letting a sign serve as a model are, as we know, two-fold: (i) names must go proxy for objects, and (ii) syntactic rules for combining names (in ways that reflect the possible relations among objects) must be devised or (since an illogical language is impossible) simply learned. It is important to stress here that the structure of the model serves as a

tool (its components being mechanisms[161]) *by means of which* reference and truth is accomplished. Otherwise, one is tempted to attribute to Wittgenstein the view that the structure or content of thought is an *immediate* object of awareness while the fact or state of affairs of which that structure is true or false (its *Bedeutung*) serves as a sort of *transcendent* object of awareness. This mistake is presumably what lies at the heart of Carruthers' (1989) misconstrual of Wittgensteinian *Sinne* as quasi-Fregean entities. Such an interpretation fails to do justice to the realist influence of Moore and Russell upon Wittgenstein, and in effect would render the *Tractatus* susceptible to the sorts of epistemological worries Moore directed against Bradley. For Wittgenstein, though, the structure--whether uttered or thought--has no sense or meaning *in itself*, but only as it is used by some subject. The structure is a stepping-stone to the world:

> The fact that the elements of a picture are related to one another in a determinate way represents that things are related to one another in the same way.
>
> Let us call this connexion of its elements the structure of the picture, and let us call the possibility of this structure the pictorial form of the picture (1922b, 2.15).
>
> *That* is how a picture is attached to reality; *it reaches right out to it* (1922b, 2.1511, emphasis added).
>
> It is laid against reality like a measure (1922b, 2.1512).

Although the structure of the propositional sign is in itself a fact, it is not that which one's awareness or discourse is *about*, as one would expect, given Wittgenstein's views concerning a theory of types: because a structure cannot contain itself (that being a physical impossi-

[161] In his Lent Term lecture of 1930 he is recorded as saying, "the proposition, having multiplicity, is therefore a complex. Its constituents are words. Have words meaning apart from their occurrence in propositions? Words function only *in* propositions, like the levers of a machine. Apart from propositions they have no function, no meaning" (Lee, 1982, p. 2). The passage is transitional, given its last sentence, but clearly the rest of is consistent with the way Frege's context principle reemerges in the *Tractatus*.

bility), a propositional sign cannot be *about* itself.[162] Because the structure serves as a mechanism only, it must be sharply contrasted with views which countenance the sort of mental content under attack by Moore. Bradley's ideas (1883), Frege's *Sinne* (1892a, 1918) (on either interpretation), Husserl's noema (1913) (if I understand that term correctly; cf. Aquila (1977, p. 115), while all playing a similar rôle, must be distinguished from Wittgenstein's thought-structures by virtue of the latter's not being some sort of intentional object.

Let us turn to the question of whether the projective relation is essentially the same for both atomic and molecular propositions. In one respect it would have to be. In the preceding paragraphs we basically treated the unanalyzed sentences of ordinary language as analogous to elementary propositions. (The fact that the nature of elementary propositions is usually explicated by commentators *by means of* ordinary sentences like "The cat is on the mat" is the flip side of the coin.) Our comments really pertained to *any* sentences subject to syntactic rules whatsoever. Let us just assume that the foregoing discussion holds for all linguistic tokens, whether elementary or ordinary and unanalyzed) that contain no sentence forming operators. But now what of sentences containing operators? The fact is that these sentences pose less difficulty than those from which operators are absent, since they even more obviously possess the holism of sense expressed by the minimal truth table. This just means that in the case of sentences containing operators it is not neccessary to *prove* that the component sentences--which in the elementary proposition's case is the elementary propositional sign itself (1922b, 5)--*contain* the potential of having all operations performed upon them. The existence of molecular propositions, on the

[162] This is undoubtedly what Wittgenstein is trying to express, somewhat unclearly, at 3.13 when he says, "[a] proposition includes all that the projection includes, but not what is projected..." It would have been clearer to say that the structure by means of which representation occurs cannot be what is represented.

other hand, presupposes the possibility of operations and their continual application.

For molecular propositions the sense *per se* is represented by the entire column containing the matrix for the operator with the widest scope. Since all propositions with sense are contingent, this column will contain both T's and F's. For example, the matrix for conjunction is TFFF. When one asserts P & Q, however, one is not asserting *that* P & Q *is false* under those conditions where one or more of the conjuncts is false; obviously, one is asserting that P & Q *is true*. The right thing to say is that one is asserting something that *would* be false under those conditions. These conditions belong to the sense of the propositional sign and not to what the speaker believes or asserts as being the *Bedeutung*.[163] Anyhow, there corresponds to any matrix a *modeling* of the facts. The particular connective (hence structure) one employs expresses, not only what one holds true, but the other logical possibilities one must countenance if one understands what one is saying.[164] The fact that one asserts P & Q rather than, say, P v Q shows that one countenances one range of possibilities (TFFF) rather than another (TTTF). Consequently, not only does the choice of structure effect a discrimination within reality (as reflected *within* the matrix), it brings about one modeling of the facts among many (as reflected by its being one matrix among many). In this direction lies the holism of sense exhibited

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[163] Needless to say, should P & Q turn out false, whatever the *Bedeutung* is will be represented by whichever F corresponds to the facts. We need to remember that the meaning of a propositional sign is independent of a speaker's intentions. The speaker's intentions to assert a particular fact is reflected in the structure she chooses. Strictly speaking, the view of the *Tractatus* is that what one means and what one intends to mean need not coincide. This is not paradoxical so long as we do not interpret *Bedeutung* psychologistically.

[164] This account of what is involved in thinking about the sense of a propositional sign is indistinguishable from an account of what it is to *understand* a sign and serves as an explication of the primacy of understanding over knowledge (introduced in the argument for the bipolarity of the proposition).

by the minimal truth table. The sole logical constant and the inter-definability of logical operations secures this status for the matrix. Thus, if anything, the "'experience' we need in order to understand logic" (1922b, 5.552) becomes more prominent in the case of molecular propositions. The fact that the selection of structure constitutes a selection of *one model among many* will become important below in our consideration of the remarks on solipsism.

The essence of the proposition, then, consists in the propositional sign taken together with its projective relation to the world (i.e., to reality in the wide sense). The projective relation is something *accomplished* by thinking of the sense of a sentence. That requires seeing the structure of one's utterance (or thought) as one structure among many. Thus a discrimination within reality is effected between what the speaker believes is actual and what she thinks is not actual but merely possible. No significant difference exists between atomic and molecular propositions on this count. At bottom, we have an account of the essence of the proposition that assigns a great role to human volition--to the *selection* of structures and models. This is something it shares with the anti-empiricism of the earlier relational theories of judgment. Unlike those relational theories, however, it countenances a representational medium. Yet, in contrast to other theories that countenance mental 'contents,' this medium cannot be said to be the immediate *object* of awareness or judgment. Furthermore, unlike the the earlier relational theories, *what* one can think or say is constrained by the logical possibilities, i.e., the logical form shared by language, thought, and world. Here we are as far as possible from Meinong's jungle and Moore's entities that have Being but not existence.

With the essence of the proposition on the table, a new difficulty arises for the semantics of the *Tractatus*. What is to be made of the sentences that comprise the theory itself? (This is the topic that ani-

mated the Vienna Circle discussions in 1930-1931, up until the presentation of Gödel's paper in 1931.) The theory purports to provide an account of the very essence of the proposition. The properties attributed to propositions (bipolarity, meaning and sense, the projective relation) are necessary properties, and the statements used to describe them would need to be regarded as necessarily true. Consider the sentence "All propositions consist in a propositional sign along with its projective relation to the world" which states the essence of the proposition. Let us call this P*. P* cannot be considered contingently true, since it seems to follow from the very nature of language itself. If one can utter P* (as Wittgenstein *has*) P* *must* be true. This fact is behind Wittgenstein's contention that "[l]ogic is transcendental" (1922b, 6.13) and unlike any of the natural sciences (1922b, 4.111).[165] But this puts the propositions of the *Tractatus* in a dubious light, since only propositions that are contingent have sense. And while there are senseless tautologies and contradictions within our language, P* cannot be regarded as one of them. P* simply lacks the structure of a tautology or contradiction, and presumably it cannot be *analyzed into* a string that is tautologous or contradictory.[166]

Yet statements like P* convey important truths. To accommodate this fact, Wittgenstein's semantics are expanded so as to include nonsensical (*unsinnig*) sentences. The sort of nonsense of which the *Tractatus* consists should not be confused that with the kind of nonsense that consists, say, of a jumble of words: "Blue John taller smelly if."

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[165] Here too we have the source of his claim that "[i]n philosophy there are no deductions: *it* is purely descriptive" (1913b, 106). It cannot contain deductions, because deduction occurs among sentences that have sense.

[166] Baker (1987) attempts to show that *using* a sentence to deny sentences have certain essential semantic properties amounts to uttering something that is *pragmatically incoherent*. If the Picture Theory were true, affirming P*, on her view, would come close to being an empty tautology. For criticism of her view from the perspective of the later Wittgenstein, see Levvis (1992).

They are, he tells us, rungs of a ladder one must throw away after it has been climbed (1922b, 6.54).

In order to arrive at a greater understanding of Wittgenstein's conception of nonsense, we should look more closely at what he says about other kinds of statements (besides those found in the *Tractatus*) that purport to be necessarily true. It seems strange on the one hand that the *Tractatus* would contain an account of *necessity* in terms of the logical necessity contained in tautologies and contradictions, while on the other hand characterize its own statements as *in some sense* necessary or *a priori*. We need to unpack what this sense is. The other major 'non-contingent' forms of statement that he considers are statements of scientific laws and moral maxims. Both turn out to be nonsensical too.

Moral maxims, taking the form of categorical imperatives, he dismisses out of hand. As he puts it, "[w]hen an ethical law of the form, 'Thou shalt...', is laid down, one's first thought is, 'And what if I do not do it?'" (1922b, 6.422). There is a great deal that could be said about the meta-ethics of the *Tractatus* and *Notebooks*, indeed the bulk of the passage just cited has to do with the concepts of punishment and reward (which he claims cannot be consequences of an action but must somehow reside in the action itself).[167] Here let it suffice to say that it appears he dismisses the possibility of such maxims on the grounds that such 'laws' are incompatible with existence of human freedom, that is, with the exercise of the will. Readers familiar with Kant's *Foundations* (1784) will no doubt be suspicious of this claim, and will want to argue that Wittgenstein conflates two different types of statement that might be expressed by "S *must* do x." The claim can be interpreted as descriptive (that is, one that expresses a psychological law

[167] My opinions concerning the meta-ethics in these two works is contained in Levvis (1994).

pertaining to the production of human behavior), or as prescriptive (i.e., one that states how one ought to act when faced with a choice of actions). Clearly, if it is a statement about how one *will* act, it is contingent and susceptible to counter-example, but what if it is a prescriptive claim? A lengthy discussion of Wittgenstein's ethics (indistinguishable from his views on religion, art and culture) is out of the question here. Suffice it to say that for Wittgenstein even if "S must do x" is a prescriptive claim, it is in some way contingent. If S must do x, then doing x must, he says, carry some kind of reward. But given his view that the subject of the will is not a part of empirical reality, "ethics has nothing to do with punishment and reward in the usual sense of the terms" (1922b, 6.422). Reward and punishment, happiness and unhappiness, cannot be events that occur in the world; they must "reside in the action itself" (1922b, 6.422).[168] Wittgenstein goes even further to say that goodness and badness cannot reside in the physical action itself but in the good or bad exercise of the will (1914b, p. 87). (Basically he argues that to will *is* to act; 1914b, p. 87). The will, which we have already seen is the source of projection, is not a part of the world but a necessary condition for talking or thinking about it. What is good or bad in the world, the *hardness* of the "must" in "S must do x" *depends* on the will. And whether the exercise of the will is good or bad depends--*on the will*. Wittgenstein's account of moral statements assimilates them either to (i) statements of psychological law, in which case they are either (a) subject to counter-example or (b) if truly law-like, subject to the criticism directed against scientific laws (that we are about to consider), or (ii) statements concerning the will from which the contingency of the good and bad flows. Clearly it is the second of these alternatives that Wittgenstein takes

[168] Wittgenstein is like a deontologist who tries to describe his view in consequentialist terms, while at the same time renouncing ethical rationalism.

most seriously (1922b, 6.423). Given the status of the will, this just means "[i]t is impossible to *speak* about the will in so far as it is the subject of ethical attributes (1922b, 6.423, emphasis added).

Wittgenstein's views regarding what appear to be scientific laws are found primarily in *Tractatus* 6.3-6.372. That set of passages ends with the remarkable claim that:

> [t]he whole modern conception of the world is founded on the illusion that the so-called laws of nature are the explanations of natural phenomea (1022b, 6.371).

For Wittgenstein there can be no scientific laws--no categorical statements about facts or events in the physical world that are exceptionless--because "outside logic everything is accidental" (1922b, 6.3). All the facts that occur in the world are accidental (1922b, 6.41). The generality attributable to categorical statements "means no more than to be accidentally valid for all things" (1922b, 6.231).

Believing this to be the case, *some* sort of account of the nature of sentences like "Water boils at 100c" must be given. Without going into arguments concerning essentialism, rigid designation or matters concerning trans-world identity, let us assume this is a candidate for a scientific law and that it (might) express a necessary *a posteriori* truth. What sort of account of it would Wittgenstein give? As it turns out, in these matters Wittgenstein is a disciple of Hertz. (It is from Hertz's conception of a dynamical model in *Principles of Mechanics* (1899) that Wittgenstein draws his thesis concerning the need for there to be an isomorphism between pictorial elements and objects represented; cf. *Tractatus* 4.04.) With respect to scientific laws, Wittgenstein derives from Hertz the idea that statements of such laws function primarily as either formation rules for other statements that *are* about particular objects, or as statements about the *forming* of such rules. In one of the most sustained discussions concerning any single topic in the

Tractatus, he says,

> ...Newtonian mechanics...imposes a unified form on the description of the world. Let us imagine a white surface with irregular black spots on it. We then say that whatever kind of picture these make, I can always approximate as closely as I wish to the description of it by covering the surface with a sufficiently fine square mesh, and then saying of every square whether it is black or white. In this way I shall have imposed a unified form on the description of the surface. The form is optional, since I could have achieved the same result using a net with a triangular or hexagonal mesh. Possibly the use of a triangular mesh would have made the description simpler: that is to say, it might be that we could describe the surface more accurately with a coarse triangular mesh than with a fine square mesh (or conversely), and so on. The different nets correspond to different systems for describing the world. Mechanics determines one form of description of the world by saying that all propositions used in the description of the world must be obtained in a given way from a given set of propositions-the axioms of mechanics. It thus supplies the bricks for building the edifice of science, and it says, "Any building that you want to erect, whatever it may be, must somehow be constructed with these bricks, and with these alone (1922b, 6.341).

Interpreting Wittgenstein's passage is not easy. The claim that the axioms of mechanics introduce a form of description that is in some way optional *might* strike a chord with our earlier discussion of molecular propositions as providing one model among many. It is tempting, using Quinean hindsight, to say that theories are *groups* of molecular sentences, and that there is nothing except the size of the linguistic unit that distinguishes our earlier considerations from the present one. Just as the smaller unit might effect a discrimination within reality, so might the larger unit. That, however, is not Wittgenstein's view. His is that a theory--specifically, the statement of a law--has the same sort of standing as the arbitrary *conventions* underlying language use. Since syntactic conventions reflect nothing more than speakers' choices (preferences, tastes, etc.), they are appropriately thought of as expressions of the will; consequently they fall within the domain of the

nonsensical.[169] In criticism, it can be argued that it is difficult to see how Wittgenstein can sustain this claim, since surely the structure of *any* proposition whatsoever reflects a choice on the part of the speaker, and *these* are not nonsensical.

Furthermore, how could "Water boils at 100c" be the mere expression of an arbitrary convention? Surely we could change our conventions, and the facts would stay the same. Suppose, for example, we are a people who only count to 90. We do not measure lengths over 90 meters, weights over 90 grams, temperatures over 90c, etc. The word "boiling" is nowhere in our vocabulary; instead we have a word "choiling" which denotes--for people who use "boiling"--*almost boiling*. This difference in the 'mesh' clearly cannot entail there is no such thing as water boiling at 100c; *that* cannot be the result of an arbitrary convention. So, on the face of it, Wittgenstein's view seems highly implausible.

Matters seem to worsen when we consider that Wittgenstein *admits* he regards these different possible frameworks as referring to real objects in the world. This is why he says, "[t]he laws of physics, with all their logical apparatus, still speak, however indirectly, about objects of the world" (1922b, 6.3431). Objects in the world contain various possibilities for combination, and a diverse number of facts (including such facts as being water or being hot) are produced by their

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[169] Janik and Toulmin (1973) provide an excellent discussion of Wittgenstein's concerns with style, taste, and culture. Wittgenstein's own aesthetic sensibilities moved in the direction of austerity and lack of unnecessary adornment, a fact not unrelated to his distinction between showing and saying. In a 4 September 1917 letter to Paul Engelmann concerning a poem by Uhland of which he approved, he had written: "And this is how it is: if only you do not try to utter what is unutterable then *nothing* gets lost. But the unutterable will be--unutterably--*contained* in what has been uttered" (quoted in Monk, 1990, p. 151).

Many of Wittgenstein's comments, ranging from 1914 to 1951, concerning style and culture have been collected under the title *Culture and Value* (1984).

combinations. What the net allows, if the metaphor may be pursued, is for some rather than other facts to be caught in its mesh. The proper way to state Wittgenstein's view would be by saying the conventions one adopts allow one to speak about certain aspects of the world as opposed to others. Consequently, it would not be appropriate to ascribe to him some sort of radical Idealist position according to which the contents of a theory are wholly conventional. That being so, how are we to make sense out of Wittgenstein's thesis that scientific laws are a kind of nonsense? Let us try to unpack the imagery of 6.341 a bit.

Let us refer to the different 'meshes' or schemata in the following way. The schema employing a fine square mesh will be schema S, whereas that employing a triangular mesh will be schema T. Schema S will employ a grid containing two axes whose coordinates are $a_1 \ldots a_n$ and $b_1 \ldots b_n$. The language of schema S users will contain the predicates "is black" and "is white." One may then say, "$\{a_1, b_1\}$ is black" and so forth. (I do not think Wittgenstein's example is very well constructed, since it allows for the possibility of indeterminacy in those case where a square is only partly black. Perhaps the difficulty could be avoided by replacing the predicates with "contains some blackness" and "contains some whiteness.") Schema T will less fine grained. Where there are four distinguishable units within schema S's $\{a_1\text{-}a_2, b_1\text{-}b_2\}$, Schema T will contain only two. Let us *name* each of the squares in this quadrant of S: *w*, *x*, *y*, and *z*. The language of S will then allow one to assert (deny, conjoin, disjoin, etc.) such sentences as "*w* is (or contains) black(ness)." The language of T, on the other hand, will contain fewer possible sentences, because it will employ only two names where S employs four.

We can now raise the problem anew. Why is it not possible to treat scientific laws as ranging over *sets* of entities, such that sentences like "*w* is (or contains) black(ness)" are contingently true?

Unless evidence to the contrary can be evinced, it would seem Wittgenstein's thesis that scientific laws do not have sense should be rejected. That would leave us in a precarious position in trying to make intelligible his conception of nonsense.

It seems to me that Wittgenstein would argue that there is something misleading about the way the example unfolded above. The 'conjuring trick' (as he might later say) occurs at the stage at which we supposedly *name* the different quadrants *w*, *x*, *y*, and *z*. The fact is that *these are not names of objects*. We can see that this is the case, if we consider what the real objects are that are referred to by the sentences of S and T. The real objects are the black spots on the white surface. If anything, reference to them is contained in the predicates of sentences like "*w* is (or contains) black(ness)." (Of course the predicate, which refers to the fact or property of being black, would have to be analyzed in some fashion to arrive at *singular terms* referring to objects.) We might say that a sentence like "*w* is (or contains) black(ness)" is systematically misleading, inasmuch as the grammatical subject *appears* to refer to some kind of object, but in fact no such object exists. The terms *w*, *x*, *y*, and *z* are really a part of the coordinate system. If they refer to anything, they refer to quadrants of the grid itself. But the quadrants of the grid are not the objects to which we are allowed to refer *by means of* the grid.

This account helps us to make sense out of Wittgenstein's imagery. Applying his view to actual statements of (purported) scientific laws is not so easy however. The grammatical subject of "Water boils at 100c" does not appear to be comparable to the terms *w*, *x*, *y*, and *z*. Water *is* something. If Wittgenstein's view is defensible, it will have to be argued that sentences like the above are somehow equivalent to sentences that express syntactic rules or that they attempt to state something about the setting up of these rules (that is, about the projective rela-

tion) that makes the modeling of facts by means of structures possible.

This is possible. Perhaps anticipating an objection, Wittgenstein reminds his readers "that any description of the world by means of mechanics will be of the completely general kind. For example, it will never mention *particular* point-masses: it will only talk about *any point-masses whatsoever* (1922b, 6.3432). We will not be able to see why this is relevant without a better example of a scientific law than "Water boils at 100c." Strictly speaking, this is not a statement of a law at all. We see this if we translate it into the predicate logic. Allowing W to denote "is water" and B to denote "boils at 100c," it may be translated as $(x)\ (Wx \Rightarrow Bx)$. Here the strict implication symbol is used to capture the idea implicit in regarding the original sentence as a law that being water *necessarily* implies being able to boil at 100c. If being water does necessarily imply being able to boil at 100c (which we will assume for the sake of argument), then for Wittgenstein it must be possible to *define* water in terms of the later property or in terms of combinations of objects (e.g., H_2O) that make such a property possible. The strict implication disappears upon analysis, as it must since the relations among the objects referred to in the analysis must be purely contingent.

What is missing from "Water boils at 100c" is any reference to the forces *acting upon* water in virtue of which it boils at 100c. Scientific laws relate one series of facts or events to another series of facts or events; they do not simply consist of definitions. While still overly simplistic (though not too simplistic for our purposes), a better example would be "If H_2O molecules are subjected to *k* force, their molecular bonds will break." This sentence has the requisite qualities of being general, predictive and it ranges over fact or events that are not identical to one another: being an H_2O molecule is not the same fact that being kinetic energy happens to be. If we allow H to de-

note "is H_2O," K to denote "is subjected to *k* force," M to denote "is a molecular bond of," and B to denote "will break," then our law can be translated: (x) (y) {[(Hx & Kx) & Mxy] ⇒ By}. As with our earlier sentence, reference to water is made in the antecedent *and* the consequent since y presumably is a constituent of x; and, as with the original, the consequent makes reference to boiling, i.e., the breaking of molecular bonds. However a more explicit definition of K would reveal that the antecedent refers to objects that the consequent does not. (Here it is helpful to remember that the ontology was carried by the predicate "is black" in the original example.) To be subjected to *k* force is to be acted upon by some 'entity' that exerts such force. (For our purpose we do not need to consider the nature of this entity; doing so would require going into detail concerning the phenomena that define mean kinetic energy.) We may say that K ranges over objects k_1, k_2, k_3,..., k_n, and that none of these are values of x.

The problem with which Wittgenstein is concerned now begins to emerge.[170] The scientific law asserts a necessary connection between two types of facts (or events or objects): the objects that are K necessarily affect the objects that are H in a certain way. Indeed, they affect them in such a way that the existence of objects that are H depend upon those that are K, since once its molecular bond is broken an object that is H will cease to exist. This is problematic, because different types of facts (*Tatsachen* containing non-coextensive sets of objects as constituents) must be contingent for their existence upon nothing other than the contingent relations that obtain among their constituents. This situation would be reflected in language by the fact that the truth of a proposition about one type of fact would cease to be independent of the truth of a proposition about the other kind of fact. But since ele-

[170] The reader is asked to remember that the following comments are part of an attempt to explicate, not defend, Wittgenstein's view. Criticism will be offered in Section Five below.

mentary propositions must be logically independent of one another, so must the molecular propositions which decompose into them.

Now the question concerning how the imagery of *Tractatus* 6.341 is to be applied to genuine statements of scientific law can be posed by asking what in the scientific law corresponds to the terms that refer to the quadrants of the grid in Wittgenstein's passage. Our job might be facilitated by formulating a sentence with the structure of a law using that imagery. Following the same general pattern, we know that to the left of the strict implication symbol there must be reference both to the schema and to the objects to which the schema refers, while to the right of it there must be reference to the the objects themselves or to parts of the objects themselves. As a rough approximation, we might say "Given any white surface with black spots (objects) and schema S, then necessarily a certain quantity of blackness (0%-100%) will be found in *w*, *x*, *y*, *z*, etc." The point, I think, is that the schema determines the kind of property ascribed to *w* and the other quadrants. Having an expanse of blackness of a certain percentage is determined by the size and shape of the quadrant (which admittedly belongs to the schema itself). The predicate "is 80% black" is (*partly* at least) a reflection of the schema that is employed in describing the surface. The qualification here concerns the fact that "black" within the predicate does pick out an object or an aspect of an object. The *system* that permits prediction, however, employs predicates of a more specific nature (as "is 80% black" is more specific than "is black"). As I understand Wittgenstein, he may be regarded as a kind of instrumentalist with respect to these predicates: they make calculation and prediction (concerning some domain of objects), but they do not in themselves carry any ontological commitment. Such a view does not seem implausible; predicates interpretable along instrumentalist lines are a working part of the natural sciences (Friedman, 1981). And Wittgenstein's version of it is vague

enough to escape specific criticisms directed against more worked out forms of instrumentalism (for example, against Reichenbach's (1938) views on the relation between abstracta and concreta). Our own criticisms will be saved until Section Five below. Even though we have tried to cast Wittgenstein's views in as favorable light as possible, there is considerable confusion contained within them to which we shall turn later.

We are now in a position to explain the nature of nonsense. The nature of nonsense can be elusive, because in order to figure out what it is we need to rely upon Wittgenstein's analysis of sentences that state scientific laws, yet on countless occasions he asserts the utter dissimilarity of science and philosophy. As we will see, a certain asymmetry does exist in the way each contains nonsense, but it is negligible.

Nonsense arises when one attempts to say the unsayable. Specifically, it arises when one attempts to convey a necessary truth that is not tautologous. More specifically yet, it results from an attempt to express in an inappropriate way the necessary conditions for language use and for thinking. While the *Tractatus* consists from start to finish of nonsensical sentences, the central most important is perhaps that which occurs at 3.12 where the essence of the proposition is given as a propositional sign in its projective relation to the world. When we unpack the concept of projection, we find at the heart of language and thought the *willing* subject. We find *choices* concerning which structure among a proposition's form is to be uttered. Such choices must be made, inasmuch as representation requires a *concrete* structure. The *production* of utterances, inscriptions, thoughts and other propositional signs is not *merely* a part of the phonetic, syntactic or pragmatic features of language; rather it belongs to the very essence of language, to the very possibility of representation. A child incapable of

using some structured medium for the purpose of representation is not otherwise able to represent to itself the facts or states of affairs of this world. (This is a fact that will become even more relevant below when we consider Wittgenstein's remarks on solipsism.) Representation presupposes the human will.[171]

If we were to conjoin all the theses that constitute Tractarian semantics and represent the theory as a whole by *W*, we might say that the *occurrence* of any propositional sign with sense necessarily implies *W*; hence, to maintain the correctness of Tractarian semantics is to hold true: (P) (P $\Rightarrow$ *W*). Here P ranges over propositional signs (i.e., linguistic tokens) that possess sense. *W* contains all that must be true, particularly those claims about the role of the will, *if* a given proposition is to have a sense. Of course, this formula is itself nonsensical (which corresponds to the fact that the *Tractatus* not only contains nonsense but also nonsensical sentences about nonsense, e.g., 4.124), and is thus contained in *W*. We might call this *Wittgenstein's* (as opposed to Russell's) *Paradox*. If the sentences of the *Tractatus say* anything at all, they say (of themselves) that they are nonsensical. If they are nonsensical, they do not *say* anything at all. Hence, if the sentences of the *Tractatus say* anything at all, they do not say anything at all. The self-referential nature of *W* precludes its inclusion in the logical use of language. This is why Wittgenstein says "[a] philosophical work consists essentially of elucidations (*Erläuterungen*)" (1922b, 4.112), and it goes a long way toward explaining the non-argumentative style of the book. Since inferences can only hold among sentences with a sense, it would be misleading at best to *argue* for Tractarian semantics. We will have an opportunity to consider the implications of all

[171] Of historical significance is the influence upon Wittgenstein of Schopenhauer's *On the Fourfold Root of the Principle of Sufficient Reason and on the Will in Nature* (1881). See Janik and Toulmin (1973), pp. 120ff for discussion.

this in Section Five.

We may now ask, just *what* distinguishes the nonsensical expressions of the *Tractatus* from such nonsense strings as "red up down white only only?" The nonsensical expressions of the *Tractatus* are *about* something; indeed, they are about something very important. Like the nonsense string written here, though, they have no use *within* the domain of rational discourse. This distinguishes them from sentences that either have a sense or are senseless. Yet unlike the gibberish above, which we might term *bad* nonsense, the possibility of *good* nonsense resides in the nature of language itself.[172] If Tractarian semantics is true, the attempt to put the necessary conditions for the possibility of any representation whatsoever into words will inevitably produce something that has neither sense, nor is senseless, nor is bad nonsense like that mentioned above. Such utterances are, quite literally, *expressions*--they spring from one's *desire* or (better) *willingness* to say what cannot be said. To the extent that these utterances look like ordinary sentences that do have sense, they are misleading. We saw this from the very beginning when we were examining the imagery found in *Tractatus* 6.341. Recall how the description of the white surface with black spots incorporated what appear to be singular terms (*w*, *x*, *y*, and *z*); later it was determined that these are not genuine referring expressions at all. Similarly, in the case of actual scientific laws we find predicates

[172] This sort of distinction is commonplace among Wittgenstein's commentators. Hacker divides the pie even further, distinguishing overt (bad) from covert (good) nonsense and then subdividing the latter into misleading and illuminating nonsense (1972, p. 18). As Hacker puts it, "[i]lluminating nonsense will guide the attentive hearer or reader to apprehend what is shown by other propositions which do not purport to be philosophical; moreover it will intimate, to those who grasp what is meant, its own illegitimacy" (1972, p. 18). This is what distinguishes Wittgenstein's *Tractatus* (with its own ontology) from the great metaphysical works of philosophers such as Hegel. Viewed in this light we might say--in contradistinction to Whitehead's famous claim about Plato--that all of Western metaphysics is but a preliminary note to Wittgenstein.

which must be interpreted instrumentally. These expressions cannot be analyzed out by means of Russell's Theory of Descriptions or by any other technique, for at bottom there is nothing contingent into which they may be analyzed. To the extent that these expressions are *about* anything whatsoever, they are about the activity of the willing subject. That is to say, they are about the projective relation itself.

3. Ascriptions of Propositional Attitudes.

One of the most intriguing passages in the *Tractatus* is that occurring at 5.542:

> It is clear...that 'A believes *p*', 'A has the thought *p*', and 'A says *p*' are of the form '"*p*" says *p*': and this does not involve a correlation of a fact with an object, but rather the correlation of facts by means of the correlation of their objects (1922b, 5.542).

The most striking feature of this passage is the way any reference to the *subject* who thinks, believes or says P is removed. Given all we have said about the role played by will in establishing a projective relation between propositional sign and world, the removal of any reference to the subject is rather startling. The passage does not become any less puzzling in light of what now seems to be its standard interpretation by commentators. Typical is the following:

> [T]o say that a person believes that p is to say (or, rather, to show) that the propositional sign '*p*' (which is a fact) represents or mirrors the fact that *p* (see 5.542). The original form of words which *prima facie* is about the person *A* in this way turns out to be about a *proposition* which is somehow connected with *A*. This proposition is taken by Wittgenstein to be a part of the "subject" *A*...(Hintikka, 1958, p. 159).

The usual response to *Tractatus* 5.542 is to treat it as expressing a view similar to a Humean bundle or cluster theory of the self. It is interpreted as similar in spirit to the view expressed by Russell and Whitehead (1910), according to which the uttering of a sentence is "...part of the series of events that constitutes the person" (1910, p.

661; as quoted in Copi, 1958, p. 164). But of course a propositional *sign* by itself is not a proposition; so even if the uttered sign is a constituent of the language user, it is hardly possible to *reduce* our talk about propositions and propositional attitude ascriptions to talk about propositional signs. Even if the cluster theory is correct, there must be some story to tell in answer to the question, "To *whom* are propositional attitudes ascribed?" We would want *some* kind of account of how the utterance-producing portion of a person is related to the other cognitive and conative portions of a person.[173] So it would seem to be necessary to refer to a subject *A* in some manner or other, even if we replace talk of *A* as a unity with talk of *A*-parts. Is it not the case that it is simply *false* that the sign P says **P**, but rather that a *speaker* says **P** *by means of* P?

Let us get clear on precisely what sort of view Wittgenstein is attacking. The context of the passage makes clear that he is attacking the kind of theory of judgment advocated by Moore and Russell (see 1922b, 5.541). These are relational theories of judgment. We have examined Moore's theory at some length in Chapter I. Russell's views have come up on numerous occasions. Some further description of his theory of judgment is in order here, as it is primarily Russell (1912) with whom Wittgenstein arguing.

Like Moore (1899), Russell believes that there can be an unmediated relation to the objects of awareness and judgment; this is accomplished by way of the special psychological relation of acquaintance which we described back in Chapter III. On this view the propositional attitude ascription "Othello believes Desdemona loves Cassio" is to be analyzed as asserting a relation (believing) with four terms (Othello,

[173] This challenge is readily acknowledged by Fodor (1983) who, by virtue of the mental sententialism he has so adamantly defended, deserves to be regarded as the foremost proponent of *Tractatus*-like semantics. His and Lepore's (1992) recent defense of atomism (or, rather, attack on the arguments *for* holism) confirms this.

Desdemona, the loving of...by..., and Cassio. Othello is related by the believing relation to these three other things.[174] Russell's view can be contrasted with Moore's in that several objects, rather than a unitary proposition (fact) serve as the object of belief. This permits Russell to account for falsehood without recourse to "objective falsehoods" (1912, p. 125).

Believing that Desdemona loves Cassio cannot *merely* consist in a series of relations to Desdemona, Cassio and the relation of loving, since those are related in *a certain kind of way*. The sentence "Cassio loves Desdemona" contains the same three constituents, but fails to express what it is that Othello believes. How are the constituents of what is to believed to be related (by Othello) in the proper sort of way? And how are they related so as to distinguish *what* Othello believes from what is contained in such gibberish (bad nonsense) as "loves Cassio Desdemona?"

The Russell of 1912 maintains (somewhat metaphorically) that the objects of Othello's belief (and objects of our belief about Othello's belief) are "knit together" in the appropriate way by the subject who judges (1912, p, 126). Any judgment involving a two (or more) place predicate requires an ordering of the terms by the judging subject. Thus, for Othello, Desdemona stands in the loving relation to Cassio, and not vice versa. Othello orders the terms of his belief thus: Ldc This permits Russell to accommodate falsehood by positing contingent relations among objects that really exist. (Apparent references to unreal objects are, as mentioned earlier, analyzed away using the Theory of Descriptions.) So if Othello's belief is false, there is no need to

[174] Actually these are not all known by acquaintance, as Desdemona and Cassio are not objects of acquaintance at all. References to persons are to be analyzed as involving knowledge by description, but for simplicity's sake this will be ignored since knowledge by description depens upon knowledge by acquaintance. Our reference to *the relation of* Othello to Desdemona and Cassio should be understood in this way.

construe his belief as involving a relation to the objective falsehood or false fact of Desdemona loving Cassio (which on Moore's account would have Being but not existence).

Similarly, our judgment of Othello as believing that Desdemona loves Cassio involves the ordering of four terms. We affirm *of* Othello (o) that he stands in the believing relation (B) to Desdemona (d) loving (L) and Cassio (c); hence: B(oLdc).[175] The analysis stands in stark contrast to Wittgenstein's view, since it includes reference to the subject of belief (Othello).

As is well known, Russell was working diligently on the unpublished manuscript *Theory of Knowledge* in 1913. Over a period of weeks he had sustained an average of twelve pages per day. The work was intended to develop the principal lines of *The Problems of Philosophy*. Wittgenstein was extremely critical of *Problems* (which he denounced as a shilling-shocker, i.e., something designed merely to line Russell's pockets). Of the new work Wittgenstein was no less critical. In June of 1913 Russell had received a letter from him outlining a criticism which Russell later remarked in a letter to Ottoline Morell as being "an event of first-rate importance in my life" (as quoted in Eames, 1984, p. xvi). It was, in fact, to cripple Russell's work. It had such an effect that "I saw that I could not hope ever again to do fundamental work in philosophy. My impulse was shattered, like a wave dashed to pieces against a breakwater" (Eames, p. xxvi).[176] While we do not have a full account of the exchanges between Russell and Wittgenstein, we do have a letter postmarked to Russell in June of 1913 in which Wittgenstein as-

[175] The power of this view comes into focus when quantification is introduced, since the scope of the quantifiers enables Russell to accommodate *some* of our true ascriptions of false beliefs to others (something Moore was unable to do). Since we are dealing with ascriptions where it is assumed all the terms exist, we need not pursue the matter here. As we will see, though, Russell cannot account for true ascriptions of false beliefs in which all the terms *do* exist.

[176] This letter is dated 4 March 1914.

serts

> ...I can now express my objection to your theory of judgment exactly: I believe it is obvious that, from the proposition "A judges that (say) *a* is in relation R to *b*", if correctly analyzed, the proposition "a R b.v. ~a R b" must follow directly *without the use of any other premiss*. This condition is not fulfilled by your theory (in 1912, p. 122).

Since the letter is dated two months after Russell's letter to Ottoline Morrell, we can infer that this is not quite the way Wittgenstein had expressed his criticism originally. Russell must not have expressed *to Wittgenstein* how significant he felt the latter's criticism to be until later. A 22 July 1913 letter from Wittgenstein to Russell responds to the news:

> ...I am very sorry to hear that my objection to your theory of judgment paralyses you. *I think it can only be removed by a correct theory of propositions* (in 1912, p. 122, emphasis added).

What was the original objection? Most of what we know about what transpired between Wittgenstein and Russell during this time can be garnered from Wittgenstein's (1913b) "Notes on Logic." These "Notes" are actually a series of manuscripts, prepared by Russell, based upon conversations with Wittgenstein. (Russell had intended to use them as an aide in conveying Wittgenstein's ideas to audiences at Harvard during his Lowell Lectures.) One significant passage stands out:

> Every right theory of judgment must make it impossible for me to judge that this table penholders the book. Russell's theory does not satisfy this condition (1913b, p. 103).

The passage would eventually evolve into *Tractatus*: 5.5422:

> The correct explanation of the form of the proposition, "A makes the judgement *p*", must show that it is impossible for a judgement to be a piece of nonsense. (Russell's theory does not satisfy this requirement (1922b, 5.5422).

Together these passages give us a pretty clear picture of the na-

ture of Wittgenstein's objection: Wittgenstein believes that whatever can be *said*, *thought*, *believed*, etc. must be capable of having a sense. That is the import of the original comment in his letter to Russell that "from the proposition "A judges that (say) *a* is in relation R to *b*", if correctly analyzed, the proposition "a R b.v.~a R b" must follow directly *without the use of any other premiss*" (1912, p. 122). While the tautology does not say anything, it does express (in an abbreviated fashion) the sense of the proposition. The point is that the bipolarity of the proposition must be a precondition that must be met by anything that is a candidate for judgment. In order to demarcate what is and what is not a propositional attitude ascription, it is therefore necessary to have "a correct theory of propositions" (1912, p. 122). Russell's theory is inadequate precisely because it allows nonsense to be judged, asserted, and so forth.

Now in what manner of speaking does Russell's theory permit judgments regarding nonsense? Is Wittgenstein talking about *good* or *bad* nonsense? The answer, it seems to me, is that Wittgenstein's view in this matter evolved. In the early goings he seems to be concerned with *bad* nonsense, that is, with strings that may be considered bits of gibberish. Such, for example, is "this table penholders the book" (1913b, p. 103).

We see this to be the case, if we examine the way in which "Othello believes Desdemona loves Cassio" is formalized, viz., as B(oLdc). We said earlier that *what* Othello believes involves an ordering of terms thus: Ldc. What happens to this ordering once Ldc is embedded within B(oLdc)? It no longer appears as evident. Othello does not merely stand in the believing relation to L and d and c. Othello believes *that* Ldc. How is the unity that characterizes *what* Othello be-

lieves to be preserved?[177]

Russell has no answer to this question, although in 1913 he toyed with the idea that the logical form of what is believed (what Wittgenstein refers to as *structure*) might well be added to the objects of belief. We are, Russell maintains, able to have "acquaintance with the form of the complex" (1913, p. 99). Indeed, at this time Russell is willing to countenance acquaintance with numerous kinds of "logical objects" (1913, p. 99), including such objects as are referred to by "such words as 'predicate', 'relation',...'or', 'not', 'all' and 'some'" (1913, p. 101).

These particular passages date from 15 May 1913.[178] They mark the sharpest contrast between Wittgenstein's and Russell's views. We know from the opening remarks in Chapter IV above that elements of the *Grundgedanke* occurred to Wittgenstein at various times: the identity sign, variable names, and sentence-forming operators fell under his gaze at different times. By the third week of May the *significance* of the *Grundgedanke* had occurred to him. From the twentieth until the twenty-sixth of May Russell met regularly with Wittgenstein, and the showdown was underway. From then until the 19 June 1913 (when he posted the letter to Ottoline Morrell quoted above) the sad recognition spread upon him that his previous fundamental work in philosophy had been demolished.

There is little question that there were various prongs to Wittgenstein's attack. By May 1913 he had made known his arguments concerning the impossibility of an adequate theory of types to Russell; he had also explained why such a theory is not even necessary. Next, the various aspects of the *Grundgedanke* had been presented to Russell, as is

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[177] For a slightly different description of Russell's troubles, see Aquila (1977), p. 81.

[178] This is based upon the chronology provided with the text (1913, p. lii). The chronology is based upon Russell's daily letters to Ottolone Morrell.

evidenced by the way the topic peppers their correspondence. Here though would be the final straw: Russell's theory of judgment suffers problems *even if* there are logical objects, because the theory does not exclude the possibility of judging nonsense. The recourse made to acquaintance with logical objects (what Russell calls *logical intuition*) does not resolve his difficulties in the least bit. Let us say that among the objects of Othello's belief there are: Desdemona, Cassio, the relation of loving, and, now, the form *Ldc*. How are these objects related (i.e., to be related) to this form? The new analysis is compatible with the possibility of ascribing to Othello the belief that *Loves Ldc Cassio Desdemona* (which is *bad* (!) nonsense). Russell has simply added another object for which the original problem recurs. Shall we also add to the *objects* of Othello's belief the fact that L refers to loving, d refers to Desdemona, and so forth; shall we add facts concerning the way ordering occurs? It hardly seems that Othello is thinking about semantic theory. But by introducing formal concepts into the analysis of Othello's belief that Desdemona loves Cassio, it is difficult to see how this slippery slope is to be avoided. Not insignificantly, the inclusion of this sort of material would amount to the inclusion of *good* nonsense.

I said above that, with respect to the question of whether it was good nonsense or bad nonsense that was being attributed to Russell, that Wittgenstein's views evolved. It seems clear from the context in which the final criticism of Russell (*Tractatus* 5.5422, cited above) that it is the more serious nonsense that concerns Wittgenstein in the end. That remark is the second of three comments upon *Tractatus* 5.542 with which we opened this section of this chapter. However *after* Wittgenstein asserts that "'*A* believes that *p*'...[is] of the form '*p*' says *p* 91922b, 5.542), but *before* making his comment about Russell's theory of judgment at 5.5422, he writes:

> This shows...that there is no such thing as the soul--the subject, etc. as it is conceived in the superficial psychology of the present day.
>
> Indeed a composite soul would no longer be a soul (1922b, 5.421).

The "superficial psychology of the day" would be the naturalistic philosophy of mind gaining prominence with the advent of Social Darwinism. In spite of their willingness to posit the existence (or subsistence) of abstract entities, Russell's and Moore's relational theories of judgment share with this naturalism the idea that the subject is situated in the world in such a way as to be able to enter into contingent relations with the objects, facts, and states of affairs of which it may be aware.[179] It and the relations into which it may enter (believing, expecting, desiring, etc.) may, accordingly, be subjected to the very same treatment appropriate to any scientific investigation. Thus it is possible to analyze propositional attitude ascriptions *thoroughly* in terms of relations among objects.

However we saw in the previous section that, for Wittgenstein, discourse about the willing subject must be regarded as nonsensical, since it is the willing of the subject that makes representation itself possible. There can be no sensical or significant discourse about it whatsoever. One cannot *say* anything significant about any of the necessary conditions for representation.[180]

Let us distinguish between the ascriptive clause ("S believes..."

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[179] The term "naturalism" should be taken here to denote a commitment to the *methodology* of science rather than to a materialistic metaphysics. Clearly Russell, like Moore, was willing to countenance universals and other abstract objects that would not fit within a straightforwardly materialistic ontology. Except for a brief flirtation with Idealism, resulting from McTaggart's influence at Cambridge, Russell would remain committed to the philosophical relevance of the scientific method. Concerning his flirtation with Idealism, cf. Moorehead (1992) pp. 51-54.

[180] The idea is reminiscent of Sartre's claim that any attempt to capture the *subject* of consciousness *by means of* another act of awareness will be futile (1937, p. 41).

and the content clause ("...P") in "S believes that P" What is startling about Wittgenstein's treatment of the ascriptive clause is the way any reference to the subject of belief disappears. Given the fact that it is impossible for any of our discourse concerning the necessary conditions for representation to possess sense, Wittgenstein's move is not so surprising. If analysis seeks to elucidate a sentence's truth conditions by means of sentences with sense, any reference to the willing subject must be out of the question.[181] If sentences of the form "S believes that P" contain any truth whatsoever, the misleading reference to S must be removed. This does not mean that there is no S, in spite of Wittgenstein's claim that "there is no such thing as the soul--the subject, etc. as it is conceived in the superficial psychology of the present day" (1922b, 5.421)--a claim that must be interpreted in light of all he does (*try to*) say about the subject as such. What is misleading is the assimilation of S to an *object* that enters into contingent relations. Its relations--expressed by the formula (P) (P ⇒ W)--to the contingent facts that are signs are necessary ones.

The analysis cannot contain reference to the willing subject. What however of the rest of the ascriptive clause? What shall be made of the verbs "believing," "thinking," "saying," and the like? Because each is an act or mental act that involves representation, each contains or presupposes the projective relation. While that common feature of the attitudes cannot be stated in the analysis, it would seem that an adequate analysis would have to do justice to what distinguishes believing that P from desiring that P, or remembering that P from expecting that P, and so forth. Surely it is a *contingent* matter whether one has a particular expectation at a particular time.

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[181] To anticipate an objection: no, the willing subject does not do anything *but* will, so it is not possible to speak of it in other respects. Phenomena associated with the will, e.g., the occurrence of a certain desire are "of interest only to psychology" (1922b, 6.423).

Wittgenstein does acknowledge that there are diverse psychological phenomena, but he relegates them to a secondary position (1922b, 6.423). These phenomena are *objects* for empirical investigation, and as such are of little consequence to the author of the *Tractatus*. In the "Notes on Logic," for example, he says, "[j[udgment, question and command are all on the same level. What interests logic in them is only the unasserted proposition" (1913b, p. 96). We might say that what guides his analysis of propositional attitude ascriptions is a desire to delineate what is essential and necessary for representation from what is essential but not so necessary. The activity of the will is essential and necessary. So is the existence of a representational medium *of one sort or another*. The *specific* sign used is essential but not so necessary. That is to say, *that* a specific sign is used is essential, but *what* that sign is (so long as it contains the requisite isomorphism) is not. The specific propositional sign, we must recall, is a *fact*, a complex configuration of objects. It, like any other fact, can be described. Thus we have Wittgenstein's idea that it is possible to replace the misleading sentence "S says that P" with a less misleading one *about the complex* that says P: "P" says P.

At this stage it is worth asking whether Wittgenstein is being inconsistent with his dictum that *facts cannot be named*. I would suggest that *Tractatus* 5.542 does not put matters quite as Wittgenstein would like. In an earlier passage he expresses his worry over the manner in which even "'P' says P" is misleading:

> Instead of, "The complex sign *'aRb'* says that *a* stands to *b* in relation R," we ought to put: *"That* 'a' stands to 'b' in a certain relation says *that aRb"* (*"Dass 'a' in einer gewissen Beziehung zu 'b' steht, sagt, dass aRb"*) (1922b, 3.1432).

There is something very interesting going on here. Wittgenstein wants to say *what can be said* about the propositional attitudes of others.

However in the very attempt to do so he finds himself trying to say something about the projective relation itself. It is not insignificant that he tries to replace the original sentence (The complex sign...") with one that begins with the demonstrative *"Dass"* (which is italicized in the original German). While his strategy is not all that successful (since one could preface the sentence that replaces the original with *"The fact* that..."), it is clear what he is attempting to do. He is trying to *present* the symbol *in* its projective relation to a possible fact. ("[I]f only you do not try to utter what is unutterable then *nothing* gets lost. But the unutterable will be--unutterably--*contained* in what has been uttered."[182]) However, by Wittgenstein's lights a propositional sign with one structure cannot *say* what is said by propositional sign of another structure. That even his reformulation of the original sentence can be construed as containing what purports to be the name of a fact is symptomatic of the problem. The only way to capture in words the semantic properties of a propositional sign is by actually *using* the sign. It seems to me that Wittgenstein is acutely aware that he is trying to say what can only be shown. Indeed, *Tractatus* 3.1432 can be traced to a passage in the "Notes on Logic" where it is surrounded by comments on Russell's Theory of Types and considerations pertaining to why facts cannot be named (which, as we saw, is the decisive move in Wittgenstein's attack upon the thesis that a function can be its own argument) (1913b, pp. 96 and 98). The point--*the* crucial point--is that even the best attempt to analyze the ascriptive clause results in nonsense. The ascriptive clause of any propositional attitude ascription is nonsensical.

I am tempted to describe such a view as *disquotational*, but in a way that is dissimilar to Carnap (1947), Quine (1960), Davidson (1968)

[182] This passage, noted earlier asquoted in Monk (1990) p. 151, seems apt here.

or Stich (1983). Wittgenstein's view differs from those of the other philosophers, precisely because his view entails that no adequate (i.e., sensical) analysis can be given for the ascriptive clause in belief and other PA attributions. Each of these philosophers, in contrast, hold out hope for *saying what the propositional attitude ascription says*--that is, of adequately stating the truth conditions for "S believes that P." For example, in Stich's case, when *A* utters "S believes that P," *A* is to be understood as asserting that S is in a state similar to the one which would have played the central causal role were *A* were to have uttered "P" with a typical causal history (1983, p. 81). This sort of analysis is supposed to state the truth conditions for *A*'s utterance, and the reference made to the "central causal role" of the state that produces tokens of P is supposed to be consonant with a thorough causal analysis of S's belief state. The possibility of providing a causal analysis of S's belief state that is in any way philosophically interesting is precisely what Wittgenstein rules out by treating the ascriptive clause as nonsensical.

Nevertheless there is a striking similarity between Wittgenstein's view and certain of the views of the other philosophers. Again the comparison can be brought out by considering Stich's view. For Stich, the belief attribution serves as a kind of *skit* or *demonstration*. By saying "S believes that P" one in effect *shows* what one would say under certain circumstances. The idea is that if one is to convey something of what another believes or says, one must *do* something similar to what the believer or speaker *does*, viz., produce a concrete token of a certain sort. Although they are futile in the end, we see in Wittgenstein's attempts to reformulate the original propositional attitude ascription ("S believes that P") just this kind of approximation to what the speaker or thinker must *do* in order to say or think P. The propositional attitude ascription is an attempt at *showing* what another says or thinks.

Ironically, it manages to do so by being a misguided attempt at saying what can only be shown.[183]

So far we have only been examining the ascriptive clause within the propositional attitude ascription. We see now the depth to which they must be regarded as nonsensical according to Tractarian semantics. We have not examined the content clause. This requires coming to terms with *what* is shown by the ascription. Since the ascriptive clause is nonsensical, it is tempting to regard as nonsensical whatever is embedded within it. However, this will not do as an interpretation of Wittgenstein's view. At *Tractatus* 5.1362 we are told that "'*A* knows that *p* is the case' has no sense if *p* is a tautology." The context in which this passage occurs indicates that Wittgenstein is primarily concerned with knowledge and its limitations, so there is a certain amount of strain involved in exploiting it for our present purposes. I do not think, for example, that it should be interpreted as *denying* the thesis that the ascriptive clause is nonsensical. What *is* relevant here is that something of the original semantic status of P is preserved in spite of being embedded within the ascriptive clause. Indeed, there is textual evidence in the "Notes on Logic (1913b, p. 106) that the embedded sentence retains its original status. He says there, for example, that the P *embedded within* "S believes that P" cannot be a name of a proposition but must have sense like P itself (i.e., when P is not embedded).[184] So, apparently the content clause, P, may be either sensi-

[183] Criticism shall be reserved for Section Five below. Let me point out here, though, that one undesirable consequence of this position is that unless we limit our notion of the attributor *doing the same thing* with a token of P, P in "S believes that P" becomes truth-functional. This commits its proponents to analyzing the attribution as "S believes something, and P" where the attributor is construed as asserting or believing P. One way to avoid this is by introducing the appropriate counterfactuals

[184] Although we cannot pursue the issue here, the fact that the embedded and unembedded P's are equivalent is related to his later treatment in *On Certainty* of Moore's Paradox, that is, of the paradoxical nature of such sentences as "I believe P, but P is false."

cal, senseless, or nonsensensical, depending upon whatever status it happens to have when it occurs unembedded.[185]

That this is so actually constitutes fairly good abductive evidence for interpreting the *Tractatus* as committed, as described above, to a disquotational analysis for the ascriptive clause. A disquotational analysis can be true, only if the content clause shares the same semantic status as it has when it is not embedded; but if the content clause does not share the same semantic properties (i.e., sense and meaning), then a disquotational analysis must be false. Let me explain. Any disquotational analysis involves *exhibiting* a sentence token of the same semantic type as is to be attributed to some subject. The attribution is really a kind of prediction: to assert that S believes that P is to predict that under the appropriate circumstances S will utter or think tokens of P. (Think of the "that" in "S believes that P" as a demonstrative pronoun, so that the original ascription might be replaced by "S believes one of these: P!") So, the fact that Wittgenstein shares this view tends to confirm our earlier interpretation.[186] On the

[185] We exclude *bad* nonsense or gibberish from the list, since presumably we are dealing with sentences here.

[186] I want to emphasize that this is an abductive argument rather than a deductive one. Viewed deductively it would be an invalid argument in which the fallacy of affirming the consequent occurs. The argument has the form: (1) If Wittgenstein accepted a disquotational analysis for the ascriptive clause within a propositional attitude ascription, then he would have accepted the thesis that that clause has the same semantic status regardless of whether or not it is embedded; (2) he accepted the thesis that that clause has the same semantic status regardless of whether or not it is embedded; therefore, (3) Wittgenstein accepted a disquotational analysis for the ascriptive clause within a propositional attitude ascription. This is a good non-deductive argument, because the consequent of (1) *predicts* what we should expect to find, if our hypothesis (what is asserted in the antecedent of (1)) is true. That this is a *good* test of the hypothesis depends upon showing that advocates of the disquotational theory *would*, whereas its attackers *would not*, be committed to the thesis that the content clause has the same semantic properties whether embedded or not. Fortunately, we need only prove the weaker claim that *Wittgenstein* would not have accepted the thesis, had *he* not accepted the disquotational analysis.

other hand, had Wittgenstein not accepted a disquotational analysis, he would hardly have maintained that the content clause shares the same semantic properties whether or not it is embedded. In all probability he would have regarded it as nonsensical, since the content clause would need to be construed as a (presumably) non-truth-functional component embedded within a nonsensical clause. The semantic properties of the embedded clause would then be viewed as 'fused with' or 'parasitic upon' those of the clause within whose scope it falls. Being committed to *that* sort of claim comes with the territory when it stands opposed to disquotational analyses, since those analyses (and only those analyses) present the content clause as a *token* whose semantic properties are being *exhibited*. The alternative view would have to see the content clause as *mentioning* an item whose semantic properties may be instantiated or exemplified by tokens that are not embedded. Be that as it may, if Wittgenstein were not committed to a disquotational analysis, he *would* be committed to the idea that we cannot ascribe to anyone any belief (etc.) that is not nonsensical. Our attribution as a whole would be nonsensical, *and* what we attribute would be nonsensical. But this Wittgenstein cannot hold, since it would entail ascribing to S the possibility of believing or thinking or judging *nonsense*. Contrary to our intentions we would be ascribing *to* the subject nothing but nonsensical beliefs (etc.), since the analysis of *our* utterance of the ascription would again have to treat the clause as nonsensical.[187] But this, we know, is incompatible with Wittgenstein's criticism of Russell's Multiple Object Theory of Judgment (and so with most everything else that Wittgenstein believes). The fact that Wittgenstein is willing to assign the same semantic properties to the content clause regardless of whether or not it is embedded is, therefore, a good indication that his

[187] We will see in Section Five that second-order propositional attitude ascriptions turn out to be very problematic for Wittgenstein.

is a disquotational analysis of propositional attitude ascriptions.[188]

Throughout this section we have been trying to make sense out of Wittgenstein's scanty remarks about propositional attitude ascriptions. We were able to note his opposition to the relational theories of judgment of Moore and Russell, and were able to identify his criticism of Russell. This allowed us to move to a consideration of how propositional attitude ascriptions are accommodated within the context of Tractarian semantics. We saw that their analysis is two-fold. The ascriptive clause must be regarded as nonsensical, and the content clause must be deemed to share the same generic semantic properties as it would have were it not embedded within the ascription. This further afforded us abductive evidence to support the contention that Wittgenstein is committed to disquotational analyses for propositional attitudes. We turn now to an objection that can be raised against the interpretation of the *Tractatus* which has been provided in this and earlier chapters.

4. Accommodating the Remarks on Solipsism.

This dissertation has interpreted the *Tractatus* in a realist spirit. Even nonsensical sentences are said to have reference of some sort. Anyone who adopts this interpretation must square off against the remarks on solipsism. These remarks *appear* to cast the *Tractatus* in the dimmer light of an extreme form of Idealism or phenomenalism. The remarks form the subject matter of the 5.6's. Representative are the following:

> *The limits of my language* mean the limits of my world (1922b, 5.6).
>
> Logic pervades the world: the limits of the world are also its limits.
> So we cannot say in logic, 'The world has this in it, and this, but not that.'
> For that would appear to presuppose that we were exclud-

[188] We have, of course, throughout this discussion been concerned with *generic* semantic properties (to borrow a phrase from Fodor and Lepore (1992)) like *having a sense* or *being senseless* rather than *referring to Socrates* or *being true of the fact that Scott is the author of Waverly.*

> ing certain possibilities, and this cannot be the case, since it would require that logic should go beyond the limits of the world; for only in that way could it view those limits from the other side as well.
>
> We cannot think what we cannot think; so what we cannot think we cannot *say* either (1922b, 5.61).

> This remark provides the key to the problem, how much truth there is in solipsism.
>
> For what the solipsist *means* [*meint*] is quite correct, only it cannot be *said*, but makes itself manifest.
>
> The world is *my* world: this is manifest in the fact that the limits of *language* (of that language which alone I understand) mean the limits of my world (1922b, 5.62).

> The world and life are one (1922b, 5.621).

> I am my world (The microcosm) (1922b, 5.63).

> ...The subject does not belong to the world: rather it is a limit of the world (1922b, 5.632).

Indeed the very dependence of the world upon the attitude of the subject seems to be underscored by the famous remark of *Tractatus* 6.43 that:

> ...[t]he world of the happy man is a different one from that of the unhappy man (1922b, 6.43).

Nevertheless, any thoroughgoing optimism within Idealist or phenomenalist camps concerning the possibility of easily assimilating the *Tractatus* must be tempered by such remarks as that:

> [t]he world is independent of my will (1922b, 6.373).

and

> ...it can be seen that solipsism, when its implications are followed out strictly, coincides with pure realism. The self of solipsism shrinks to a point without extension, and there remains the reality co-ordinated with it (1922b, 5.64).

These sets of comments counsel caution in interpreting Wittgenstein. Clearly the first set gives prominence to the *activity* of the will, while the claim that the world is independent of one's will gives prominence to the *constraints* under which the will operates. Not surprisingly, I want to argue that the two sets of remarks can only be accommodat-

ed by the two-sided view of the will-under-constraint presented earlier. The difficult question, however, concerns how to *reconcile* the two. Is Wittgenstein's view coherent? The key lies in the final remark concerning the self of solipsism shrinking to a point without extension.

This passage is related to a 15 October 1916 passage of the *Notebooks* where Wittgenstein writes:

> This is the way I have traveled: Idealism singles men out from the world as unique, solipsism singles me alone out, and at last I see that I too belong with the rest of the world, and so on the one side *nothing* is left over, and on the other side, as unique, *the world*. In this way idealism leads to realism if it is strictly thought out (1914b, p. 85).[189]

When one reads the entries for the days leading up to this passage, one gets a feel for what Wittgenstein is after. 11 June 1916 marks the beginning of a lengthy soliloquy within the *Notebooks* concerning the nature of the subject who thinks and speaks. By that time the principal ideas of the *Tractatus* pertaining to sense and its relation to senselessness were in place. The last major topic to be worked out concerned the ontological status of objects and whether there could be simple objects. After considering both realist and phenomenalist characterizations of objects, he opts for an agnosticism that leaves the question of their nature to empirical science.[190] This has the effect of 'pushing' objects into the realm of what can be said. The issue of their status then becomes whether they are phenomena produced by the act of perception or whether they exist independently of the perceptual act. It is

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[189] This entry occurs six days after the passage that becomes *Tractatus* 5.64; cf. 194b, p. 82 for the original version of 5.64.

[190] The topic comes to a head on 22 June 1915 (1914b, pp. 68-71). After that there is a lapse in the notebook entries until 15 April 1916. Presumably there were one or more notebooks during this time, but they have been lost. Once the entries resume we find that Wittgenstein has settled for himself, not only the question of simple objects and atomic facts, but questions concerning the logical independence of elementary propositions. Then is when it occurs to him that "...the whole *Weltanschauung* of the moderns involves the illusion that the so-called laws of nature are explanations of natural phenomena" (1914b, p. 72

important to see that a certain *framework* has been established for the problem. Regardless of the answer, objects are to be counted among those things that may enter into contingent relations with one another. Regardless of whether objects are *phenomena* produced by perception (a bodily event that takes place among the contingent events of the world), they are objective in the sense that they exist independently of the *will* of the subject: "[t]he world is *given* me, i.e., my will enters into the world completely from outside as into something that is already there. (As for what my will is, I don't know yet.)" (1914b, p. 74).

It is worth remembering that these passages were written during some of the worst shelling of the war. On the very same day (8 July 1916) as the above comment, he writes: "[a] man who is happy must have no fear. Not even in the face of death. Only a man who lives not in time but in the present is happy" (1914b, 74). The development of his own character, a matter to which he gave the utmost importance, would coincide with identifying *himself* with something independent of the suffering and contingencies surrounding him. Whatever the subject of the will is, it "is not an object" that enters into contingent relations with other objects (1914b, p. 80). As he would say, "I objectively confront every object. But not the I" (1914b, p. 80).

To determine its nature he would attempt to isolate the will by a *via negativa*. This is the idea behind his remark that if he were to write a book, *The World as I Found It*, it would include reports on many things *but not the subject*. Among the things that the world contains are: objects and bodies, the observable behavior (including the verbal behavior) of others, one's own body, and one's own *psychological* properties (1914b, p. 82). Indeed among the final passages in the *Notebooks* we find him attempting to isolate the will from such conative phenomena as *having a wish* (1914b, p. 88). Even these belong to the world and are amenable to empirical investigation.

As a result of the *via negativa* Wittgenstein is able to isolate the willing subject--what he refers to as the *metaphysical subject* (1922b, 5.633)--as that which possesses one of two attitudes (*Stellungnahmen*) toward the world (1914b, p. 87). It is that which can experience the world *sub specie aeterni* (the correct way) or not. Experiencing the world this way involves, as was mentioned in an earlier section, experiencing oneself and the world as *independent* of one another. The world viewed "as a *limited* whole" (1922b, 6.45) is a world viewed in the correct way as being unable to affect one. The having of this attitude does not simply come over a person, it is an *act* one engages in (1914b, pp. 76-77). And, we should hasten to add, it is a particularly difficult act to perform in the face of an artillery barrage that may end one's life.[191]

In lieu of the *method* by which Wittgenstein seeks to isolate the metaphysical outcome as well as its particular *outcome*, it is ludicrous to interpret Wittgenstein as a solipsist in the classical sense. In the traditional sense of the word, solipsism holds that everything (including any other mind if exists) depends for its existence on one's own mind. What the method and its desired outcome are designed to reveal is that the will and the world are utterly independent of one another: "[t]here are two godheads: the world and my independent I" (1914b, p. 74).

Neither of two extreme views would be regarded as justified for Wittgenstein. On the one hand, the view that construes *everything* as subjective and dependent for its existence upon the mind or will of the

[191] Wittgenstein distinguishes between willing and being able to *exercise* one's will (1914b, p. 76). One can will to move one's arm, but not be able to move it. Similarly, I suppose, one could will *psychological* phenomena but not be able to exercise one's will, for example, when one is unable to remember a phone number. This is pure speculation, but perhaps Wittgenstein could have said even someone coming out of a coma, attempting to regain consciousness and not relapse into unconsciousness, is *willing* in his sense.

subject is unjustified. But no less unjustified is the view (which Wittgenstein terms *realism*) that takes the contents of the world as exhausting what there is, so that there is no willing subject distinct from the world as such. Although Wittgenstein often says such things as that *there is no subject* (1922b, 5.631), these must be treated merely as a way of speaking. The way in which he always qualifies this and similar statements shows that what he believes is that there is no subject *of which we may say anything.* In the words of the Wittgenstein of the *Philosophical Investigations*: "...a nothing would serve just as well as a something about which nothing could be said. We have only rejected the grammar which tries to force itself upon us here" (1958, 304).

This just leaves one nagging problem. How are we to interpret the remarks constituting the last paragraph of *Tractatus* 5.62, 5.621, and 5.63 which form the core of the remarks with which we opened this section? I would suggest that the matter become resolved if (1) we treat statements like "The world and life are one" (1914b, p. 77; 1922b, 5.621) which find there way from the *Notebooks* into the *Tractatus* as expressions of what Wittgenstein regards as *problematic* about the will and its relation to the world up until the solution (described above) is reached; and (2) we treat the claim at 5.62 concerning the fact that "the limits of *language* (of that language which I alone understand) mean the limits of *my* world" as an expression of what we shall call *semantic individualism.*

Sentences like "The world and life are one" (1914b, p. 77; 1922b, 5.621) and "...[t]he world of the happy man is a different one from that of the unhappy man" (1922b, 6.43; descended from 1914b, p. 78) should not be taken as expressions of Wittgenstein's final view on the relation of the will to the world. If one examines their position in the *Notebooks*, one finds that they occur prior to almost all of the rest of the entries on this subject. While this in itself does not provide

strong evidence that these do not constitute his final view, we would expect, if my hypothesis is correct, to find such comments located here and nothing like them located later in the *Notebooks*. An inspection of the text will bear this prediction out. This is not strong evidence, however, for the very reason that one can state a conclusion at the *beginning* of an argument. Perhaps what follows the occurrence of these remarks is the argument for them. I think this is *unlikely* in a text that has the form of a notebook or journal (since one tends to move on from one insight to the next and allow one's ideas to unfold naturally in such a context), but I can appreciate the reader's desire for stronger evidence.

Stronger evidence consists in the fact that later passages make clear that "life" (*das Leben*) refers to, neither the will nor the world, but to the *relation* of the one to the other. Nowhere is this more evident than when he is contemplating what he calls the *happy life*. That life is described as happy (*glücklich*) or unhappy (*unglücklich*) The text makes sufficiently clear that happiness and unhappiness consist in the subject's particular attitude *toward* the world. One can either view the world as a limited whole or not; one can view oneself as independent from the world or not. To do the former *is* to be happy; to do the latter is to be unhappy. At 6.43 Wittgenstein says:

> If the good or bad exercise of the will does alter the world, it can alter only the limits of the world, not the facts--not what can be expressed by means of language.
>
> In short the effect must be that it becomes an altogether different world. It must, so to speak, wax and wane as a whole.
>
> The world of the happy man is a different one from that of the unhappy man (1922b, 6.43).

The imagery of the world waxing and waning is particularly apt. We think of a distant object that can completely fill our gaze. The happy

person is able to attain a proper perspective.[192] This perspective does not change the facts (the sayable) but only brings their limits into view. It thereby brings into view the nonsensical.

The point is that when Wittgenstein speaks of the world and life being one, he is giving expression to what he thinks is problematic in life. He is expressing the fact that individual subjects have some control over the way they *represent* the world to themselves.

This brings us to our consideration of the claim at *Tractatus* 5.62 that "the limits of *language* (of that language which I alone understand) mean the limits of *my* world." The original German within the parenthetical remark (*der Sprache, die allein ich verstehe*) is ambiguous: should it be rendered as *the only language that I understand* or as *the language that only I understand*? Most commentators (Stenius (1964), Hintikka (1958), Black (1964)) view it the first way, whereas Anscombe (1959) views it the second way. The second (so-called *private language*) interpretation casts Wittgenstein as a solipsist. It suggests that the sayable is to be identified with what is sayable *by me*. It suggests that outside of what *I* say there is nothing to be said.

While Hintikka (1958, p. 157) does, I believe, sufficiently show the first translation to be the correct one (by demonstrating that *allein* always modifies the word it follows), there is a way that the two interpretations can be reconciled. It must be remembered that the passage within its context in the *Notebooks* arises in connection with the process of isolating the willing subject. That is to say, it arises as *Wittgenstein* tries to isolate *his own* will. The emphasis is upon his will and what *it* does. Now the fact of the matter is that Tractarian semantics quantifies over linguistic *tokens*--concrete structures--that are used by the *individual* subject for the purposes of representation.

[192] The use of visual imagery is played out at *Tractatus* 5.6331 (originally 1914b, p. 80).

This is what may be called semantic individualism. Representation is an individual will's accomplishment. This does not mean that each individual represents the world in a wholly different way. Rather it amounts to the more mundane claim that speaking and thinking is always done *by* individuals. Mundane it may be, but it underscores the fact that representation always presupposes (contrary to the linguistic Platonist) an *involvement in the world, and it contains a major implication: to wit, even if there were only one thinker or speaker in the world, representation would be possible*. That is the key to the remarks on solipsism, and it is the final piece of the Tractarian puzzle. Furthermore, it serves to distinguish the naturalism of the *Tractatus* from that of the *Philosophical Investigations* where all of the uses of language are viewed as *social* phenomena. That, however, is a subject "we must pass over in silence" (1922b, 7).

5. Criticism.

What are the main criticisms that can be raised against the *Tractatus*? The two most often discussed criticisms are (1) the unintelligibility of the supposition that there could be simple objects, and (2) the so-called Color Exclusion Problem. We have already dispelled the first of these problems. Before proceeding to the *real* difficulties besetting the *Tractatus* I would like to explain why I believe the Color Exclusion Problem is not so problematic either.

Some scholars take this problem quite seriously. For example, P. M. S. Hacker claims "[o]nce the intractability of this problem became clear, the main struts of the whole system collapsed" (1972, p. 86). Here is the typical description given of the problem:

> Consider an ordinary color attribution: one points to a (red) object and says, "This is red." It is hard to imagine a proposition less likely to be a truth-functional construction from other propositions, so the color proposition is a prime candidate for being an elementary proposition of the

> Tractarian sort. Yet it is not inferentially discrete, for if it is true (at t_1) that the object pointed to is red, then it is false (at t_1) that the same object is blue. Color words form a system; if a color is (truly) predicated of an object at a given time, then it can be inferred that none of the others can be predicated of that object at that time. From "This [object O] is red" it can be inferred that "This [object O] is not blue"; "This is not green"; "This is not yellow" and so forth. These inferences...undermine the Tractarian assurance that elementary propositions are logically independent of one another (Edwards, 1985, pp. 77-78).

For our purposes it matters not whether color propositions are candidates for elementary propositions; presumably color phenomena *can* be analyzed in terms of wave lengths of light. The temptation to regard them as elementary probably stems from the fact that color vocabulary typically is learned ostensively in the context of one's childhood rather than in a physics lab. I would guess that the conditions under which one acquires a particular vocabulary item has little to do with whether it is simple or composite and with whether its name is analyzable, especially for the early Wittgenstein.

What is important is why, and in what sense, elementary propositions must be logically independent of one another. Wittgenstein tells us at *Tractatus* 2.061 that "[s]tates of affairs are independent of one another," and at 2.062 that theme reemerges in the remarks on probability where he asserts that two elementary propositions give one another the probability of .5 (1922b, 5.152). When one proposition entails another, as when Q entails P, the truth-grounds for P are contained within those of Q (1922b, 5.121). Indeed the *sense* of P is contained in the sense of Q (1922b, 5.122). If elementary propositions were not logically independent there would be no terminus to logical analysis. That *would* be true, even if it would beg the question were it deployed as a

premise in the argument for logical atomism.[193] Should there be no terminus, however, it is difficult to see how *any* proposition could effect the requisite discrimination within reality that allows it to have a sense. Commenting on *Tractatus* 3.25-3.251, Black tells us "...only if a proposition has a unique and complete analysis can its sense be definite" (1964, p. 111). Unfortunately, in none of the literature on this subject is there to be found an account of the relation between the two conditions of *uniqueness* and completeness. Clearly it is that "[a] proposition has *one and only one* complete analysis (1922b, 3.25, emphasis added) that accounts for its effecting any discrimination within reality. A proposition for which more than one analysis is possible would not have a determinate sense. What is missing from the literature is any account of why one should believe that an infinitely long analysis would lack the requisite uniqueness. On the face of it, being infinitely long and being unique are not mutually exclusive. Perhaps one argument that could be offered is this: if analysis were infinitely long, then it would be an arbitrary matter at what point one "cuts off" the analysis; in that case there could be more than one analysis for a given proposition, resulting in indeterminateness. The argument would be a weak one if we were talking about entailments among *levels* of analysis, for then the sense of a proposition belonging to the more general level would *contain* that of the proposition belonging to the more particular level, and no indeterminateness would result. Here, however, we are talking about relations among propositions all belonging to the same level. Alternative analyses, in this instance, provide us with potentially very dissimilar cross-sections of one and the same stratum of

[193] As we saw in Chapter hree, extracting a non-circular argument from the *Tractatus* for the existence of simple objects is no small task. We must be careful not to conflate the metaphysical issue concerning simple objects with the purely logical issue that is about to be pursued--namely, that entailments among elementary propositions must be ruled out if analysis is to be *complete*.

reality. In the end, if sense is to be determinate, the idea of *entailment* must be restricted to relations between levels of analysis (these serve as definitions; cf. 1922b, 3.261), and to relations between molecular propositions belonging to the same level (as these sequents can be rewritten as tautologies). Where entailment *cannot* occur is among series of elementary propositions. So there must be an end to logical analysis. An infinity of propositions there may be, but they must be generated compositionally (through repeated operations) rather than decompositionally (through analysis).

Let us then grant Wittgenstein's claim that if there are to be elementary propositions, then they must not be able to entail one another. With that in mind let us return to the Color Exclusion Problem. The problem is one which Wittgenstein would raise in his 1929 essay "Some Remarks on Logical Form." The difficulty arises in consideration of *Tractatus* 6.375-6.3751:

> Just as the only necessity that exists is *logical* necessity, so too the only impossibility that exists is *logical* impossibility.
>
> For example, the simultaneous presence of two colours at the same place in the visual field is impossible, in fact, logically impossible, since it is ruled out by the logical structure of colour.
>
> Let us think how this contradiction appears in physics: more or less as follows--a particle cannot have two velocities at the same time; that is to say, it cannot be in two places at the same time; that is to say, particles that are in different places at the same time cannot be identical.
>
> (It is clear that the logical product of two elementary propositions can neither be a tautology nor a contradiction. The statement that a point in the visual field has two different colours at the same time is a contradiction) (1922b, 6.375-6.3751).

Notice how the problem arises. Assume that "This is red" (or something like it) is an elementary proposition. It appears to entail "This is not blue," But this, so it is maintained, involves entailment *among* elementary propositions. The problem reaches its culmination in the final

paragraph of 6.3751; the two statements within that parenthetical remark appear to contradict one another. The product of two elementary propositions can neither be a contradiction nor entail a contradiction, yet "This is red, and this is blue" either is a sort of contradiction or at least entails one, viz., "This is blue, and this is not blue."

The contradiction evident in that parenthetical remark is regarded by commentators, and indeed was regarded by Wittgenstein himself, as the worm at the core of the *Tractatus*. Scholars are consistent in attributing to Wittgenstein only two options: he may renounce the idea of there being simple objects, or he may modify the Tractarian account of the truth table in such a way as to make the product of (some) elementary propositions *senseless* (Allaire, 1959, p. 192; Hacker, 1972, p. 88). In 1929 Wittgenstein opted for the second of these choices. He believed the problem could be circumvented by introducing numerals into elementary propositions concerning phenomena that admit of degrees (1929a, p. 34), and by eliminating the line of the truth table (for the conjunction matrix column) that represents both conjuncts as true (1929a, p. 36). The column representing the conjunction would then represent such a proposition as false under all conditions--hence, senseless.[194]

The solution has been said to be susceptible to objection on the grounds that a presumably sensical expression such as "It is false that this is both red and blue" is the negation of, and is thus composed of, the senseless expression "This is both red and blue" (Allaire, 1959, p.

[194] At the end of "Some Remarks on Logical Form" Wittgenstein remarks that the construction of such sentences is *nonsensical* rather than senseless--a fact noted, and unassumingly taken for granted, by commentators (e.g., Hacker, 1972, p. 91). This is most peculiar however. For if their construction were nonsensical, why should Wittgenstein be willing to provide a matrix for them *at all*. The bulk of the article is designed to show how they are senseless. Perhaps this has something to do with Wittgenstein's denunciation of the article. It was originally to be presented before the Aristotelian Society; when the time came to give the paper, he elected not to do so, but to give a more or less extemporaneous discussion on the nature of infinity.

192). The presumption upon which this criticism is based is unfounded, since the negation of a contradiction would be a tautology--hence senseless too. Another criticism focuses upon the fact that there is an "absence of any account of the nature of the constraints upon the combinatorial possibilities of objects which are reflected in the syntax of language" (Hacker, 1972, p. 90). This, however, is a criticism based upon taking seriously Wittgenstein's claim at the very end of the article that such propositions are nonsensical. This, I have suggested, we need not do. But it is not my concern to analyze the pro's and con's of the solution offered in 1929, nor to evaluate the criticisms that have been offered. The fact is I do not believe there *is* a Color Exclusion Problem.

The *Tractatus* has the resources for dealing with the problem, and these resources do not consist in what is usually touted as the "Tractarian solution" to the problem. What commentators have regarded as the *Tractatus*'s solution stems from a misreading of 6.3751. Recall the claim that:

> the simultaneous presence of two colours at the same place in the visual field is impossible, in fact, logically impossible, since it is ruled out by *the logical structure* of colour (1922b, 6.3751; emphasis added).

It has generally been accepted that the reference to the logical structure of color is intended to suggest that "red" and "blue" do not denote simple objects (Allaire, 1959, p. 190; Hacker, 1972, pp. 87-88). Like the problem of apparent references to non-existent objects, on this interpretation the problem of the exclusivity of two colors disappears at the next level of analysis. Understandably, if one accepts this interpretation, one will want to say (as does Hacker) that "the suggested solution merely pushes the problem back one stage" (1972, pp. 87-88), since the question simply reemerges as one concerning the compatibility of two different *degrees* of the same color.

In all this the distinction between form and structure has been forgotten. While two true elementary propositions are logically independent of one another, the same cannot be said of different potentially true elementary propositions *that share the same sense*! Return to the symbolism used in Chapters Three and Four. Let us suppose that **ΩΨΔ** is an elementary proposition, and that the rules of syntax for the individual terms permit each of the members of the following set to be well-formed: {**ΩΨΔ**, **ΩΔΨ**, **ΨΩΔ**, **ΨΔΩ**, **ΔΨΩ**, **ΔΩΨ**}. The members of this set are not logically independent of one another; if they were we would have to abandon the bipolarity of the proposition.[195] (And then we would be in no better position than we were in with Moore's relational theory of judgment with all of its problems.) There *is* an incompatibility among the members of this set, and it happens to be a *pragmatic* one: one cannot *assert* **ΩΨΔ** at the same time that one *asserts* **ΩΔΨ** (or any other member of the set that comprises the form of **ΩΨΔ**). Both propositional signs are *facts--different* facts--that cannot occur at the same place at the same time. That incompatibility is what is secured by the logical structure and form of color. The Color Exclusion Problem disappears once we acknowledge that the semantic theory of the *Tractatus* ranges over linguistic tokens, i.e., concrete utterances, inscriptions, and the

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[195] The *Philosophical Remarks* contain the following illuminating passage:

> Syntax prohibits a construction such as 'A is green and A is red' (one's first feeling is that it's almost as if this proposition had been done an injustice; as though it had been cheated of its rights as a proposition), but for 'A is green', the proposition 'A is red' is not, so to speak, *an other* proposition--and that strictly is what the syntax fixes--but another [aspect of the] form of the same proposition.
>
> ...In this way syntax draws together the propositions that make *one* determination (1930, p. 86).

.It is important to see that, for Wittgenstein, the proposition is not to be identified with any particular structure. The proposition is really comprised of the whole set of possible structures (comprising the form) from which one may be selected to be uttered.

like. It is little wonder that Wittgenstein would later disown "Some Remarks on Logical Form."

Wittgenstein does of course say in the *Tractatus* that the truth of one elementary proposition cannot entail the falsehood of another elementary proposition. But surely this is not intended to hold true for the *potential* assertions that comprise the set of propositional signs comprising the form of ΩΨΔ. Propositional signs that share the same form (hence, sense) but differ in terms of truth-conditions *must* be an exception, otherwise the *Tractatus* is just an uninterpretable mess. What sense can we make of the idea that the truth of a proposition must be *contingent*, unless the state of affairs which makes it true is one of a set of mutually exclusive states of affairs? What sense would be left of the idea that propositions contain the possibility having *all* operations, including negation, performed on them? What Wittgenstein should have said at 2.062 is that "[f]rom the existence or non-existence of one state of affairs it is impossible to infer the existence or non-existence of another [*of different sense*]."

The point I am trying to make would later be articulated by Wittgenstein in the Philosophical Remarks (1930); recall the passage cited in Chapter One:

> I once wrote: 'A proposition is laid like a yardstick against reality. Only the outermost tips of the graduation marks touch the object to be measured.' I should now prefer to say: *a system of propositions* is laid like a yardstick against reality. What I mean by this is: when I lay a yardstick against a spatial object, I apply *all the graduation marks simultaneously*. It's not the individual gradua tion marks that are applied, it's the whole scale. If I know that the object reaches up to the tenth graduation mark, I also know immediately that it doesn't reach the eleventh, twelfth, etc. The assertions telling me the length of an object form a system, a system of propositions. It's such a whole system which is compared with reality, not a single proposition. If, for instance, such and such a point in the visual field is *blue*, I not only know that the point isn't green, isn't red, isn't yellow etc. I have simultaneously applied the whole colour scale. This is also

> the reason why a point can't have different colours simultaneously; why there is a syntactical rule against *fx* being true for more than one value of *x*. For if I apply a *system* of propositions to reality, that of itself already implies--as in the spatial case--that in every case only *one* state of affairs can obtain, never several.
>
> When I was working on my book I was still unaware of all this and thought then that every inference depended on the form of a tautology (1930, p. 317).[196]

In point of fact, what Wittgenstein was doing was to *retrieve* the conception of form and structure (and of sense and meaning) that he had first articulated in his 1912-1913 letters to Russell! The description of a *system* of propositions being laid simultaneously, like a ruler with all its graduation marks, against reality is nothing other than the method of projection described in the first section of this chapter! Wittgenstein had not made the mistake in the *Tractatus* for which he later berates himself. What has happened, however, is that he has become enmired in considerations concerning the *inferential* relations among the members of a propositional sign's form. He seems to have forgotten that the relation of a structure to the other members of its form is one of *showing*. The structure, subject to rules of syntax, shows its form. This is the first of the conceptions of showing, the one that pertains to all sentences possessing sense. Indeed, the *negated* proposition used in posing the problem does not even belong to the set comprising the form; the presence of the negation sign means *it* is not elementary at all. *That* proposition is arrived at by applying the mechanical operation of negation to an elementary proposition. It is only because ~P is defined over the complement of P within P's form that one is able to draw the problematic inference. To reach the "inference" from "This is red" to "This is not blue," one must do at least two things

[196] This passage comes specifically from notes of a discussion made by Waismann between Wittgenstein and members of the Vienna Circle on 25 December 1929. (How fitting that the Vienna Circle would be discussing the Color Exclusion Problem on Christmas day.) A portion of the passage is cited in Edwards (1985), p. 78.

outside of the elementary level: *define* ~P and perform the *operation* of negation on one of the members of the set so defined. None of this goes against the grain of the *Tractatus*. So, to a great extent, the Color Exclusion Problem is ill-formed.[197]

What then are the *real* problems with Tractarian semantics? Let us return to the analysis of propositional attitude ascriptions. We saw that Tractarian semantics is committed to a two-fold analysis for such sentences. The ascriptive clause must be regarded as nonsensical, whereas the content clause possesses whatever semantic properties it would have were it to occur as an unembedded linguistic token. So, the content clause can either have sense, be senseless or be nonsensical. But now let us consider *second-order* propositional attitude ascriptions. The sentence "John believes that Martha thinks that he is rich" would be an example. The ascriptive clause, "John believes...," would have to be treated as nonsensical (although it contains reference to a *psychological* state amenable to empirical investigation). The content clause, though, is problematic. Since it contains an ascriptive clause ("...Martha thinks..."), it should be regarded as nonsensical; but since that acriptive clause contains a content clause ("...he is rich") that possesses sense, we would need to regard the nonsensical ascriptive clause as in some way *containing* sense. This cannot be dismissed as unproblematic in the way, say, that a big man can "contain" a small finger is unproblematic. The intensional character of the embedded clause(s) cannot be overlooked. Wittgenstein is faced here with a real dilemma. Disquotational analyses tend to have an extensionalizing effect upon the sentence under analysis. Their goal is to replace reference to apparently non-truth-functional elements of a sentence with reference to objects or facts that are amenable to scientific investigation. On the

[197] Wittgenstein's view remains remarkably consistent with this in *The Blue and Brown Books* (1934), p. 56--a point remarked upon by Allaire (1959), p. 193.

face of things it would appear that Tractarian semantics is perfectly compatible with the possibility of doing so, since propositional signs are *facts* whose tokening may be exhibited by the propositional attitude ascription as a whole. But on Wittgenstein's view all that can be exhibited is the empty shell of the propositional sign itself. The *proposition* in its projective relation cannot be exhibited unless one says or asserts the proposition oneself. But in that case how is it ever possible to truly ascribe false beliefs to others? This is one of the difficulties that toppled Moore's theory of judgment. The analysis of "John believes that Martha thinks that he is rich" to which Wittgenstein is committed necessitates John believing *of himself* that he is rich, when in fact he may know that he is not rich and is ascribing to Martha a false belief.

Here it won't do for Wittgenstein to point to the futility involved in saying with one sign what another sign says. That is, he cannot simply point to the fact that the content clause of the ascription only shows but does not say what the person to whom the belief is ascribed believes. For in that case it would be impossible to truly ascribe what one believes to be a true belief to another. How could one ever *say*, for example, "Martha knows that I am rich" and consequently how could a sentence like "John believes Martha knows that he his rich" ever be accommodated by Tractarian semantics? The dilemma is unavoidable.

The source of the dilemma is the idea that one cannot *say* what is nonsensical. Wittgenstein had criticized Russell's theory of judgment on the grounds that it did not eliminate the possibility of judging nonsense. But either one must be able to judge nonsense, or one will have to deal with the dilemma just posed. Something has to give here, and it has got to be the conception of nonsense that runs through the *Tractatus*, because the possibility of truly ascribing false beliefs to

others *is a fact*.

The task of abandoning the Tractarian conception of nonsense is not so difficult when one considers just *what* is nonsensical. What are nonsensical are sentences about the necessary conditions for representation. Those conditions that must be satisfied for a linguistic token to have meaning or sense are themselves contingent. We said earlier that the advocate of Tractarian semantics is committed to accepting (P) (P ⇒ *W*) where P ranges over linguistic tokens and *W* ranges over the necessary conditions for the possibility of representation. Included under *W*, for example, would be one's own willing (i.e., one's own selection of a structure, etc.) when one utters a sentence. However, the members of *W*'s domain do not enjoy the sort of necessary existence enjoyed by the simple objects that (for Wittgenstein) make up the substance of the world. No necessity attaches to one's own existence, the existence of one's will, one's selection of a particular structure, and so forth! Even if (P) (P ⇒ *W*) is true of all linguistic tokens, it is only contingently true. This fact allows us to pinpoint what can be regarded as the fundamental inconsistency within the *Tractatus*; for the Tractarian conception of analysis--which entails "[t]o be general means no more than to be accidentally valid for all things" (1922b, 6.1231)--*commits* Wittgenstein to the contingency of (P) (P ⇒ *W*). One could, of course, instantiate the first variable with particular linguistic tokens and the second with specific necessary conditions, but the result will still be a set of contingent truths. The point is that once one acknowledges that *sentences* which ascribe a necessary relation to two things need not be necessarily true themselves, the problem of not being able to say what the *Tractatus* calls nonsensical disappears.

But once this move has been made, nothing stands in the way of a thoroughgoing *naturalistic* account of the nature of language and its so-called rules of projection. Finding the *right* naturalistic account

would be a task that would exercise Wittgenstein for the rest of his life. But we can already get an idea of how the dominoes begin to fall. The first to fall is one of the two "godheads," namely the metaphysical subject. Its existence is contingent, as indeed is *what* it wills (since it chooses to will one thing or another). This carries significant consequences for the analysis of the ascriptive clause within the propositional attitude ascription. Stripped of its necessity there is no reason to regard reference to the subject as nonsensical. The metaphysical subject is thereby assimilated to the psychological subject which Wittgenstein dismisses as unimportant to philosophy. This does not mean that the production of utterances needs to be viewed as issuing from a *unified* subject or self. Indeed it would become one of the tenets of the later Wittgenstein's philosophy that belief in such a self is mere superstition. As one writer puts it, any attempt to locate a causal source for meaning and sense

> ...are attempts to deny the true depth of philosophy, which is the true depth of life itself, namely, the pure contingency and independence of the conditions of all meaning. The deep *Pathos* of philosophy and life is just that acknowledgment: that there is no single, central source and ground for the sense we happen to make to ourselves and one another; that sense appears as a face does, constellated out of elements fortuitously dispersed in a field, with no-thing as its source and center and guarantor (Edwards, 1990, p. 238).

The "proof" of this would occupy the great body of his later writings on the philosophy of psychology where he attempts to exhibit the variation and play that characterizes our use of psychological predicates. A discussion of that and his remarks on the impossibility of a private language fall beyond our present concerns. Suffice it to say that for the later Wittgenstein the appropriate study of language consists in examining its use within a social context--an idea foreshadowed by the 9 September 1916 *Notebooks* passage that asserts "[t]he way in which lan-

guage signifies is mirrored in its use" (1914b, p. 82). Thus it is the language user as social agent that is of importance to the later Wittgenstein.

Since the ascriptive clause does not need to be regarded as nonsensical, neither do content clauses that contain what were formerly considered nonsensical. A sentence like "John believes that Martha thinks he is rich" will *say* something about John. *What* it says will depend upon the sort of analysis deemed appropriate for content clauses generally. Earlier it was said that the Tractatus construes the content clause disquotationally. There is little reason to forsake that claim in the face of the criticism leveled above. In fact, the later Wittgenstein's philosophy of psychology resists regarding the content clause as referring to any sort of inner mental content (as when he says "[i]f God had looked into our minds he would not have been able to see there whom we were speaking of" (1958, p. 117; see also p. 231). This is not the place to discuss this matter at any length, but it appears that to the extent Wittgenstein is willing to allow for there to be mental contents, images and so forth, they are reduced to the status of epiphenomena: it is never *necessary* that a particular content or image pass before the mind's eye (see, e.g., the discussion of reading in 1958, 151ff.). The implication is that the content clause shows us something of what is to be expected of a subject's behavior. A full consideration of the criterial behaviorism of the later philosophy is beyond the scope of the present dissertation however. There is certainly *much* room for consideration of its strengths and weaknesses.

The other so-called godhead, the world correlated with the metaphysical subject, must be viewed in a different manner as well. The later Wittgenstein would become quite critical of his earlier belief in a world possessing a crystalline logical form (1958, 97). Consider in what the *de re* necessity of the *Tractatus* consists. It consists in the

fact that simple objects are immutable and that they have certain possibilities for being related to one another as constituents of *Sachverhalten*. Even though the obtaining of a given state of affairs is contingent, the *possibility* of its obtaining (given what simple objects there are) is not. So, if P is an atomic proposition containing names of simple objects, then it is necessarily the case that possibly P is true. To say that language and world share the same form (or that the form of a proposition corresponds to its sense) just is to give expression to the fact that what is necessary *within* language is determined by what is necessarily the case in the world. The tautologies that serve as rules within language (and contradiction which might be thought of as proscribing certain inferences or transformations) are grounded in the *de re* necessity of the world. At the bottom of all this is the necessity that attaches to the existence of simple objects.

Although Wittgenstein would later attack the idea of there being simple objects on the grounds that *simplicity* is a relative notion, such an objection carries no weight against the sort of argument for logical atomism that we were able to excavate from the *Tractatus*. That argument requires simple objects to be "outside of" time and space in the Newtonian sense where, presumably, nothing relative (in the proper sense) is to be found. We would do well to ask, however, whether the existence of these immutable objects cannot be regarded in some manner or other as contingent. We can certainly imagine the possibility of an object that exists *endlessly in time* as possessing existence contingently. One need but imagine a particle passing through space fortuitously never colliding with any obstacle. Similarly, where is the contradiction in saying that immutable objects responsible for spatial and temporal phenomena may be contingent? This seems to me to be the fundamental problem with the metaphysics of the *Tractatus*: it attributes *de re* necessity to objects whose nature, by its author's own admission, must be

left to the empirical sciences. But, by definition, how could the *empirical* sciences ever disclose what is necessary.

Once we see that the problems of necessity extend all the way to the substance of the world, we must renounce the idea that the objects of the world *fix* once and for all what *can* be said. If their own existence is contingent, then what could be said might be quite different than what can be said. Here the isomorphism between structure and meaning, between form and sense--the basic structuralist assumption of the *Tractatus*--comes undone.[198] Thus we find the Wittgenstein of the *Philosophical Investigations* declaring:

> ...if anyone believes that certain concepts are absolutely the correct ones...then let him imagine certain very general facts of nature to be different from what we are used to, and the formation of concepts different from the usual ones will become intelligible to him (1958, p. 230).

The point is that once shorn of its supposed metaphysical underpinnings, the rules and practices that comprise the use of language can be seen as more flexible, more pliable, more subject to human control. His working out of the nature of rules and rule-following would occupy him for the rest of his life and would serve as the unifying theme in his *Remarks on the Foundations of Mathematics* and *Philosophical Investigations*. The reader is directed to Levvis (1989) for a fuller treatment of the rule-following considerations in the later philosophy and to Levvis (1992) for an examination of how the general points concerning rules pertain to our use of psychological predicates.

What remains of Tractarian semantics once the two godheads are dismantled? This is what remains: linguistic tokens are the locus of meaning, semantic Platonism is false, an appeal to mental contents to

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[198] It seems to me that if one wants to retain a structuralist or formalist semantics once its underlying metaphysics has been abandoned, that one must accept some version of Fregean minimalism. Such is how this writer would interpret Davidson's formal semantics with its commitment to a coherence theory of truth and Jerry Fodor's computational theory of mind with its commitment to methodological solipsism.

explain semantic properties and relations is unnecessary, and perhaps most importantly a distinction between what can be said and what can only be shown must be recognized. What can be said, what can be counted as possibly true or possibly false, stems from rules that are under the governance of human beings. The manner in which utterances of rules--grammatical propositions--show what can be said (how they serve as *reminders* of correct usage and are *antecedent to truth*) is, however, a topic for another time.

LIST OF REFERENCES

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Albert, David (1993) "Bohm's Alternative to Quantum Mechanics," *Scientific American* 270, no. 5: pp. 58-67.

Allaire, Edwin (1959) "*Tractatus* 6.3751," *Analysis* 19, no. 5: pp. 100-105. Reprinted in Copi and Beard (1973), pp. 189-193.

Ambrose, Alice and Lazerowitz, Morris, eds. (1970) *G.E. Moore: Essays in Retrospect*. Humanities Press, New York.

Ammerman, Robert, ed. (1965) *Classics of Analytic Philosophy*. McGraw-Hill, New York.

Anscombe, Elizabeth (1959) *An Introduction to Wittgenstein's Tractatus*. Hutchinson, London.

Aquila, Richard (1977) *Intentionality: A Study of Mental Acts*. Pennsylvania State University Press, University Park, PA.

Armstrong, David (1973) *Belief, Knowledge and Truth*. Cambridge University Press, London.

Austin, J. L. (1962) *How To Do Things With Words*. Harvard University Press, Cambridge, MA

Ayer, Alfred (1936) *Language, Truth and Logic*. Dover Publications, New York, 1952.

_____ (1959) *Logical Positivism*. The Free Press, New York.

Baker, G.P. and Hacker, P. M S. (1984) *Frege: Logical Excavations*. Oxford University Press, New York.

Baker, Lynne Rudder (1987) *Saving Belief: A Critique of Physicalism*. Princeton University Press, Princeton, NJ.

Baldwin, Thomas (1993) "Introduction to *G. E. Moore: Selected Writings*" in Moore (1993), pp. vi-x. Routledge, London.

Black, Max (1964) *A Companion to Wittgenstein's Tractatus*. Cornell University Press, Ithaca, NY.

Block, Irving, ed. (1981) *Perspectives on the Philosophy of Wittgenstein*. MIT Press, Cambridge, MA.

Bradley, F. H. (1883) *Principles of Logic*. Oxford University Press, London.

Brockhaus, Richard (1991) *Pulling Up the Ladder: The Metaphysical*

Roots of Wittgenstein's Tractatus Logico-Philosophicus. Open Court, Lasalle, IL.

Carnap, Rudolf (1930) "The Old and New Logic," in Ayer (1959), pp. 133-146.

_____(1937) *The Logical Syntax of Language*. Kegan Paul, London.

_____(1947) *Meaning and Necessity: A Study in Semantics and Modal Logic*. The University of Chicago Press, Chicago, IL.

Carroll, Lewis (1896) *Symbolic Logic*. Potter, New York, 1977.

Carruthers, Peter (1989) *Tractarian Semantics: Finding Sense in Wittgenstein's Tractatus*. Basil Blackwell, Oxford.

Chierchia, Gennaro and McConnell-Ginet, Sally (1990) *Meaning and Grammar: An Introduction to Semantics*. MIT Press, Cambridge, MA.

Chihara, Charles (1973) *Ontology and the Vicious Circle Principle*. Cornell University Press, Ithaca, NY.

Church, Alonzo (1956) *Introduction to Mathematical Logic: Volume One*. Princeton University Press, Princeton.

Coffa, J. Alberto (1993) *The Semantic Tradition from Kant to Carnap: To the Vienna Station*. Cambridge University Press, Cambridge.

Copi, Irving (1958) "*Tractatus* 5.542," *Analysis* 18, no. 5: pp. 102-104. Reprinted in Copi and Beard (1973), pp. 163-165.

Copi, Irving and Beard, Robert, eds. (1973) *Essays on Wittgenstein's Tractatus*. Macmillan, New York.

Danto, Arthur and Morgenbesser, Sidney, eds. (1960) *Philosophy of Science*. World Publishing Co., Cleveland, Ohio.

Davidson, Donald (1967) "Truth and Meaning," *Synthese* 17: pp. 304-323. Reprinted in Davidson (1983), pp. 17-36.

_____(1968) ""On Saying That," Synthese 17: pp. 130-146. Reprinted in Davidson (1983), pp. 93-108.

_____(1969) "True to the Facts," *Journal of Philosophy* 66: pp.748-764. Reprinted in Davidson (1983), pp.37-54.

_____(1983) *Inquiries into Truth and Interpretation*. Oxford University Press, Oxford.

_____(1990) "The Structure and Content of Truth," *Journal of Philosophy* 87: pp. 279-328.

Dennett, Daniel (1978) *Brainstorms: Philosophical Essays on Mind and Psychology*. MIT/Bradford Books, Cambridge, MA.

_____(1989) *The Intentional Stance*. MIT/Bradford Books, Cambridge, MA.

Donnellan, Keith (1966) "Reference and Definite Descriptions," *The Philosophical Review* 75: pp. 281-304.

Dretske, Fred (1981) *Knowledge and the Flow of Information*. MIT Press, Cambridge, MA.

Dummett, Michael (1973) *Frege: Philosophy of Language*. Harper and Row, New York.

_____(1978) *Truth and Other Enigmas*. Harvard University Press, Cambridge, MA.

_____(1955) "Frege on Functions," in Dummett (1978), pp. 74-86.

Dufrenne, Mikel (1963) *Language and Philosophy*. University of Indiana Press, Bloomington, IN.

Edwards, James (1985) *Ethics Without Philosophy: Wittgenstein and the Moral Life*. University Presses of Florida, Tampa.

_____(1990) *The Authority of Language: Heidegger, Wittgenstein, and the Threat of Philosophical Nihilism*. University of Florida Press, Tampa.

Fasold, Ralph and Shuy, Roger, eds. (1977) *Studies in Language Variation*. Georgetown University Press, Washington.

Fodor, Jerry (1980) "Methodological Solipsism Considered as a Research Strategy in Cognitive Psychology," *Behavioral and Brain Sciences* 1980: pp.63-110. Reprinted in Fodor (1981), pp. 225-253.

_____(1981) *Representations: Philosophical Essays on the Foundations of Cognitive Science*. MIT/Bradford Books, Cambridge, MA.

_____(1983) *The Modularity of Mind: An Essay on Faculty Psychology*. Bradford/MIT Books, Cambridge, MA.

____(1994) *The Elm and the Expert: Mentalese and Its Semantics*. MIT/Bradford Books, Cambridge, MA.

Fodor, Jerry and Lepore, Ernest (1992) *Holism: A Shopper's Guide*. Blackwell, Cambridge, MA.

Frege, Gottlob (1879a) *Begriffsschrift: A Formula Language, Modeled upon That of Arithmetic, for Pure Thought*. S. Bauer-Mengelberg translation. Reprinted in Heijenoort (1967), pp. 1-82.

_____(1879b) *Conceptual Notation: A Formula Language of Pure Thought*

Modeled Upon The Formula Language of Arithmetic. T. Bynum translation. In Frege (1972), pp. 101-202.

_____(1884) *The Foundations of Arithmetic.* Northwestern University Press, Evanston, IL, 1972.

_____(1890) "Logic," in Frege (1979), pp. 1-8.

_____(1891a) "Function and Concept," in Frege (1984), pp. 137-156.

_____(1891b) "5.24.91 Letter to Husserl," Appendix in Mohanty (1982), pp. 117-119.

_____(1892a) "On Sense and Meaning," *Zeitschrift fur Philosophie und philosophische Kritik* 100: pp. 25-50. Reprinted in Frege (1984), pp.157-177.

_____(1892b) "On Concept and Object," *Vierteljahrsschrift fur wissenschaftliche Philosophie* 16: pp. 192-205. Reprinted in Frege (1984), pp.182-194.

_____(1892c) "Comments on Sense and Meaning," in Frege (1979), pp. 118-125.

_____(1895) "A Critical Elucidation of some Points in E. Schröder's, *Vorlesungen über die Algebra der Logik*," *Archiv für systematische Philosophie*: 1, pp. 433-456. Reprinted in Frege (1984), pp. 210-228.

_____(1897) "Logic," in Frege (1979), pp. 126-151.

_____(1902) "6.22.92 Letter to Russell," in Frege (1980), pp. 131-133.

_____(1903) "On the Foundations of Geometry: First Series," *Jahresbericht der Deutschen Mathematiker-Vereinigung* 12: pp. 319-324. Reprinted in Frege (1984), pp. 273-284.

_____(1906a) "A Brief Survey of My Logical Doctrines," in Frege, (1979), pp. 197-202.

_____(1906b) "On the Foundations of Geometry: Second Series," *Jahresbericht der Deutschen Mathematiker-Vereinigung* 15: pp. 293-309. Reprinted in Frege (1984), pp. 293-340.

_____(1918) "Thoughts," Part One of *Logical Investigations*, in *Beitäge zur Philosophie des deutchen Idealismus* 1: pp. 58-77. Reprinted in Frege (1984), pp. 351-372.

_____(1923) "Compound Thoughts," Part Two of *Logical Investigations*, in *Beitäge zur Philosophie des deutchen Idealismus* 3: 36-51.

_____(1972) *Conceptual Notation and Related Articles*, Terrell Bynum ed.

Oxford University Press, Oxford.

_____(1979) *Posthumous Writings*, Hermes, Hans, et. al., eds. University of Chicago Press, Chicago.

_____(1980) *Philosophical and Mathematical Correspondence*, McGuiness, Brian, ed. University of Chicago Press, Chicago.

_____(1984) *Collected Papers on Mathematics, Logic, and Philosophy*, McGuinness, Brian, ed. Basil Blackwell, New York.

Friedman, Michael (1981) "Theoretical Explanation," in Healy (1981), pp. 2-31.

Gier, Nicholas (1981) *Wittgenstein and Phenomenology: A comparative Study of the Later Wittgenstein, Husserl, Heidegger, and Merleau-Ponty*. SUNY Press, Albany, NY.

Gödel, Kurt (1931) "Über formal unentscheidbare Sätze der *Principia Mathematica* und verwandter Systeme I," *Monatshfte für Mathematik und Physik* 38: pp. 173-198.

Goldman, Alvin (1967) "A Causal Theory of Knowing," *Journal of Philosophy* 64: pp. 357-372.

Grice, Paul (1975) "Logic and Conversation," in Cole and Morgan (1975), pp. 41-58.

Grossmann, Reinhardt (1969) *Reflections on Frege's Philosophy*. Northwestern University Press, Evanston, IL.

Haack, Susan (1978) *Philosophy of Logics*. Cambridge University Press, Cambridge.

Hacker, P. M. S. (1972) *Insight and Illusion: Wittgenstein on Philosophy and the Metaphysics of Experience*. Oxford University Press, London.

_____(1975) "Frege and Wittgenstein on Elucidations," *Mind* xx: pp. 601-609.

Hahn, Hans (1933) "Conventionalism," in Isenminger (1968), pp. 45-52.

Harman, Gilbert (1973) *Thought*. Princeton University Press, Princeton, NJ.

Healy, R. ed. (1981) *Reduction, Time and Reality*. Cambridge University Press, Cambridge.

Heidegger, Martin (1927) *Being and Time*. Harper and Row, New York, 1962.

Heijenoort, Jean van, ed. (1967) *From Frege to Godel: A Sourcebook in Mathematical Logic, 1879-1931.* Harvard University Press, Cambridge.

Hertz, Heinrich (1899) *Principles of Mechanics Presented in a New Form.* Macmillan, London. Excerpts from the Introduction are reprinted in Danto and Morgenbesser (1960), pp. 349-365.

Hintikka, Jaakko (1957) "Identity, Variables, and Impredicative Definitions," *The Journal of Symbolic Logic*: 21, pp. 225-245.

_____(1958) "On Wittgenstein's 'Solipsism'," *Mind* 67, no. 265: pp. 88-91. Reprinted in Copi and Beard (1973), pp. 157-161

Hudson, Richard (1980) *Sociolinguistics.* Cambridge University Press, London.

Husserl, Edmund (1913) *Ideas: General Introduction to Pure Phenomenology.* Macmillan, New York, 1975.

Ishiguro, Hide (1981) "Wittgenstein and the Theory of Types," in Block (1981), pp. 43-49.

Isenminger, Gary (1968) *Logic and Philosophy: Selected Readings,* Appleton-Century-Crofts, New York.

Janik, Allan and Toulmin, Stephen (1973) *Wittgenstein's Vienna.* Simon & Schuster, New York.

Kaminsky, Jack (1969) *Language and Ontology.* Southern Illinois University Press, Carbondale, IL.

Kant, Immanuel (1785) *Foundations of the Metaphysics of Morals.* *Bobbs*-Merrill, New York, 1959.

Kaplan, David (1969) "Quantfying In," in Linsky (1971), pp. 112-143.

Katz, Jerrold (1990) *The Metaphysics of Meaning.* MIT Press, Cambridge, MA.

Keenan (1977) "The Universality of Conversational Implicatures," in Fasold and Shuy (1977), pp. 255-268.

Lee, Desmond, ed., (1982) *Wittgenstein's Lectures: Cambridge 1930-1932.* University of Chicago Press, Chicago, IL.

Lemmon, E. J. (1978) *Beginning Logic.* Hackett Publishing Co., Indianapolis, IN.

Levvis, Gary (1980) "The Ontological Status of Negative States of Affairs in Sartre's *Being and Nothingness,*" unpublished manuscript.

_____(1987) "Formal Semantics and Conversational Implicature," unpublished manuscript.

_____(1989) "The Nature of Necessity in Wittgenstein's *Philosophical Investigations*: A Reply to Grayson," unpublished manuscript.

_____(1991) "Why We Would Not Understand a Talking Lion: Wittgenstein on the Limits of Interpretation," *Between the Species: A Journal Ethics*: 8, pp. 36-41.

_____(1992) "The Wittgensteinian Consistency of Scepticism: An Antiseptic for the Anti-Sceptic," *Philosophical Investigations*: 15, pp. 67-78.

_____(1993) "An Assessment of Platonism in Contemporary Semantics," unpublished manuscript.

_____(1994) "Sievert on Ethics in Wittgenstein's Early Philosophy," *Southwest Philosophy Review* 10, no 2: pp. 179-184.

Linsky, Leonard, ed. (1971) *Reference and Modality*. Oxford University Press, Oxford.

Lotze Hermann. (1843) *Logik*. Clerendon Press, Oxford.

Malcolm, Norman (1972) *Ludwig Wittgenstein: A Memoir*. Oxford University Press, London.

McDonough, Richard (1986) *The Argument of the Tractatus: Its Relevance To Contemporary Theories of Logic, Mind, and Philosophical Truth*. SUNY Press, Albany, NY.

McGuiness, Brian (1974) "The Grundgedanke of the Tractatus," in Vesey (1974), pp. 49-61.

_____(1981) "The So-called Realism of Wittgenstein's *Tractatus*," in Block (1981), pp. 60-73.

_____(1988) *Wittgenstein: A Life*. University of California Press, Berkeley, CA.

Meinong, Alexius (1899) "Uber Gegendstände höherer Ordnung und deren Verhaltnis zur inneren Warnehmung," *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 21: pp. 182-272.

Mellor, D. H., ed (1978) *Foundations*. Humanities Press, Atlantic Highlands, N. J.

Mohanty, Jitendranath (1982) *Husserl and Frege*. Indiana University Press, Bloomington, IN.

Monk, Ray (1990) *Wittgenstein: The Duty of Genius*. Macmillan, New

York.

Moore, George Edward (1899) "The Nature of Judgment." *Mind* 8: pp. 176-193.

_____(1903) *Principia Ethica*. Cambridge University Press, Cambridge.

_____(1911) "Beliefs and Propositions," in Moore (1953), pp. 252-269.

_____(1922) "External and Internal Relations," in Moore (1993), pp. 79-105.

_____(1953) *Some Main Problems of Philosophy*. George Allen & Unwin Ltd., London.

_____(1954) "Wittgenstein's Lectures in 1930-1933," *Mind* 63 and 64, pp. . Reprinted in Ammerman (1965), pp. 233-284.

_____(1993) *G. E. Moore: Selected Writings*. Routledge, London.

Moorehead, Caroline (1992) *Bertrand Russell: A Life*. Penguin Books, New York.

Passmore, John (1966) *A Hundred Years of Philosophy*. Penguin Books, New York.

Pears, David (1985) "Introduction to Russell's *The Philosophy of Logical Atomism*" in Russell (1918), pp. 1-34.

_____(1987) *The False Prison: A Study of the Development of Wittgenstein's Philosophy* (Volume One). Oxford University Press, Oxford.

Peirce, Charles Sanders (1931) *Collected Papers*. Harvard University Press, Cambridge, MA.

Price, H. H. *Thinking and Experience*. Harvard University Press, Cambridge, MA.

Putnam, Hilary (1975) "The Meaning of 'Meaning.'" In Putnam (1978), pp. 215-271.

_____(1978) *Mind, Language and Reality: Philosophical Papers* (Volume One). Cambridge University Press, Cambridge.

Quine, Willard Van Orman (1948) "On What There Is." In Quine (1953), pp. 1-19.

_____(1953) *From a Logical Point of View*. Harvard University Press, Cambridge, MA.

_____(1959) *Methods of Logic*. Holt, Rinehart and Winston, New York.

_____(1960) *Word and Object*. MIT Press, Cambridge, MA.

Ramsey, Frank (1925) "The Foundations of Mathematics." Reprinted in Mellor, (1978), pp. 152-212.

Reichenbach, Hans (1938) *Experience and Prediction*. University of Chicago Press, Chicago, IL.

Rosenberg, Jay and Travis, Charles, eds. (1971) *Readings in the Philosophy of Language*. Prentice-Hall, Englewood Cliffs, NJ.

Russell, Bertrand (1903) *The Principles of Mathematics*. Norton, New York.

_____(1904) "Meinong's Theory of Complexes and Assumptions," *Mind* 13: pp. 204-219, 336-354, 509-524. Reprinted in Russell (1973), pp. 21-75.

_____(1905) "On Denoting," *Mind* 14: pp. 479-493. Reprinted in Russell (1973), pp.103-119.

_____(1908) "Mathematical Logic as Based on a Theory of Types," *American Journal of Mathematics* 30: pp. 222-262. Reprinted in Russell (1956), pp. 59-102.

_____(1910) "The Theory of Logical Types," *Revue de Metaphysique et de Morale* 18: pp. 263-301. Reprinted in Russell (1973), pp. 215-252.

_____(1912) *The Problems of Philosophy*. Oxford University Press, London. 1959.

_____(1913) *Theory of Knowledge: The 1913 Manuscript*. George Allen & Unwin, London. 1984.

_____(1914a) "On the Nature of Acquaintance." In Russell (1956), pp. 125-165.

_____(1914b) *Our Knowledge of the External World*. George Allen and Unwin Ltd., London, 1960.

_____(1918) *The Philosophy of Logical Atomism*. Open Court, Lasalle, IL. 1985.

_____(1919) *Introduction to Mathematical Philosophy*. George Allen and Unwin Ltd., London. Chapter XVI, to which all references are made, is reprinted in Rosenberg and Travis (1971), pp. 166-175.

_____(1922) "Introduction to Wittgenstein's *Tractatus Logico-Philosophicus*" in Wittgenstein (1922b), pp.ix-xxii.

_____(1924) "Logical Atomism." Appended to Russell (1918), pp. 157-

181.

_____(1925) *The ABC of Relativity*. George Allen and Unwin Ltd., London.

_____(1951) "Obituary: Ludwig Wittgenstein," *Mind* 60: pp. 297-298.

_____(1956) *Logic and Knowledge*, Marsh, R. ed. George Allen and Unwin Ltd., London.

_____(1973) *Essays in Analysis*, Lackey, Douglas, ed. Braziller, New York.

Russell, Bertrand and Whitehead, Alfred (1910) *Principia Mathematica*. Cambridge University Press, Cambridge.

Russinoff, Susan (1992) "Frege and Dummett on the Problem with the Concept 'Horse'," *Nous* 26: pp. 63-78.

Ryle, Gilbert (1949) *The Concept of Mind*. University of Chicago Press, Chicago, IL.

_____(1970) "G.E. Moore's 'The Nature of Judgment'", in Ambrose and Lazerowitz (1970), pp. 89-101.

Sartre Jean-Paul (1936) *The Transcendence of the Ego: An Existentialist Theory of Consciousness*. Noonday Press, New York, 1977.

_____(1943) *Being and Nothingness: A Phenomenological Essay on Ontology*. Washington Square Press, New York, 1975.

Sainsbury, Richard (1989) *Paradoxes*. Cambridge University Press, Cambridge.

Searle, John (1969) *Speech Acts*. Cambridge University Press, Cambridge.

Schopenhauer, Arthur (1881) *On the Fourfold Root of the Principle of Sufficient Reason and on the Will in Nature*. Dover, New York, 1958.

Sievert, Don (1994) "'Ethics Does Not Treat of the World. Ethics Must Be a Condition of the World, Like Logic.' *Notebooks 1914-1916*," *Southwest Philosophy Review* 10, no 1: pp. 199-208.

Skyrms, Brian (1975) *Choice and Chance: An Introduction to Inductive Logic*. Wadsworth, Belmont, CA.

Sluga, Hans (1980) *Gottlöb Frege*. Routledge and Kegan Paul, London.

Stenius, Erik (1964) *Wittgenstein's Tractatus: A Critical Exposition*.

Cornell University Press, Ithaca, NY.

_____(1981) "The Picture Theory and Wittgenstein's Later Attitude to it," in Block (1981), pp. 110-139

Stich, Stephen (1983) *From Folk Psychology to Cognitive Science: The Case Against Belief.* Bradford/MIT, Cambridge, MA.

Strawson, Peter (1950) "On Referring," *Mind* 59: pp. 320-344. Reprinted in Strawson (1971), pp. 1-27.

_____(1971) *Logico-Linguistic Papers.* Metheun & Co. Ltd., London.

Tarski, Alfred (1937) "The Concept of Truth in Formalized Languages," in Tarski (1956), pp. 152-278.

_____(1956) *Logic, Semantics, Metamathematics.* Clarendon Press, New York.

_____(1969) "Truth and Proof," *Scientific American* 194: pp. 63-77.

Urmson, J. O. (1969) *Philosophical Analysis: Its Development Between The Two World Wars.* Oxford University Press, New York.

Vesey, Gottfried. ed., (1974) *Understanding Wittgenstein.* St. Martin's Press, New York.

Waismann, Friederich (1979) *Ludwig Wittgenstein and the Vienna Circle: Conversations Recorded by Friederich Waismann.* Blackwell, London.

Weinberg, Julius (1935) "Are There Ultimate Simples?," *Philosophy of Science* 2, pp. 387-399. Reprinted in Copi and Beard (1973), pp. 75-85.

White, Roger (1974) "Can Whether One Proposition Make Sense Depend On The Truth of Another? (*Tractatus* 2.0211-2)" in Vesey (1094), pp. 14-29.

Wittgenstein, Ludwig (1912) "Extracts from Wittgenstein's Letters to Russell, 1912-1920." Appendix III in Wittgenstein (1914b), pp. 120-132.

_____(1913a) "Review of P. Coffey *The Science of Logic.*" *The Cambridge Review* 853, p. 351. Reprinted in Wittgenstein (1993), pp. 2-3.

_____(1913b) "Notes on Logic." Appendix I in Wittgenstein (1914b), pp. 93-107.

_____(1914a) "Notes Dictated to G.E. Moore in Norway." Appendix II in Wittgenstein (1914b), pp. 108-119.

_____(1914b) *Notebooks 1914-1916*, Anscombe, G.E.M. and Wright, G.H. von, eds. University of Chicago Press, Chicago. 1961.

_____(1922a) *Tractatus Logico-Philosophicus*. C.K. Ogden translation. Routledge & Kegan Paul, London.

_____(1922b) *Tractatus Logico-Philosophicus*. D.F. Pears & B.F. McGuiness translation. Routledge & Kegan Paul, London. 1961.

_____(1929a) "Some Remarks on Logical Form," Aristotelian Society Supplementary Volume 9, *Knowledge, Experience and Realism*, Harrison and Sons, Ltd., London, pp. 162-171. Reprinted in Copi and Beard (1973), pp. 31-37.

_____(1929b) "A Lecture on Ethics," in Wittgenstein (1993), pp. 36-44.

_____(1930) *Philosophical Remarks*. University of Chicago Press, Chicago.

_____(1932) *Philosophical Grammar*. University of California Press, Berkeley, CA. 1978.

_____(1934) *The Blue and Brown Books: Preliminary Studies for the 'Philosophical Investigations'*. Harper Colophon Books, New York. 1965.

_____(1935b) "Notes for the 'Philosophical Lecture'". In Wittgenstein (1993) pp. 447-458.

_____(1937) *Remarks on the Foundations of Mathematics*. Wright, G. H. von, Rhees, R., Anscombe, G. E. M., eds. MIT Press, Cambridge, MA. 1983.

_____(1958) *Philosophical Investigations*. Macmillan, New York.

_____(1972) *On Certainty*. Wright, G. H. von, Anscombe, G. E. M., eds. Harper Torchbooks, New York.

_____(1974) *Letters to Russell, Keynes and Moore. Wright, G. H. von*, ed. Basil Blackwell, Oxford.

_____(1984) *Culture and Value*. Peter Winch, ed. University of Chicago Press, Chicago, IL

_____(1993) *Philosophical Occasions: 1912-1951*. Klagge, James, Nordman, Alfred, eds. Hackett Publishing Co., Indianapolis, IN.

Wright, G. H. von (1955) "Ludwig Wittgenstein: A Biographical Sketch," *Philosophical Review* 64: pp. 532-533. Reprinted in Malcolm (1972), pp. 1-22.

_____(1982a) *Wittgenstein*. University of Minnesota Press, Minneapolis,

MN.

_____(1982b) "Modal Logic and the *Tractatus*," in 1982a, pp. 183-200.

APPENDIX

Upon completing this dissertation I became convinced that its chapters contain an inaccurate account of Wittgenstein's conception of *Sinn*. This realization came to me through the indefatigable efforts of Professor John Nolt, to whom I am grateful. I would like to take this opportunity to append to my earlier discussion an account of the objection and its implications.

In Chapter One the *Sinn* of a propositional sign is defined as a set of possible states of affairs, such that if an elementary proposition is false, then some other elementary proposition composed of the same singular terms must be true. This claim was based upon the premise that the bipolarity of the proposition could only be secured through positing falsification conditions for elementary propositions. Consider, however, a world in which there are three objects: α, β, and a circle.[199] Within this world there are four possible states of affairs: α and β may both be inside the circle, α but not β may be in the circle, β but not α may be in the circle, or neither α nor β may be in the circle. These possibilities are represented by the first column of Figure I. Let us now imagine two languages in which α, β, and the circle are denoted respectively by "a", "b", and by a small circle. The first of our languages is thoroughly pictorial, so that the various spatial relations among the objects are depicted by similar relations among the propositional sign's elements. The second column of Figure I contains the permissible propositional signs for Language 1, and correlates each with its truth condition in the first column. Language 2 is a linear script in which the small circle followed by "a" indicates that α is in the circle, the small circle followed by "b" indicates that β is in the circle. The semantic rule governing the elementary propositions in Language 2 is: O_x is true, if and only if what x denotes is in the

[199] This example comes from John Nolt.

circle. The third column in Figure I presents the sentences of Language 2 that would serve as translations of those contained in Language 1.

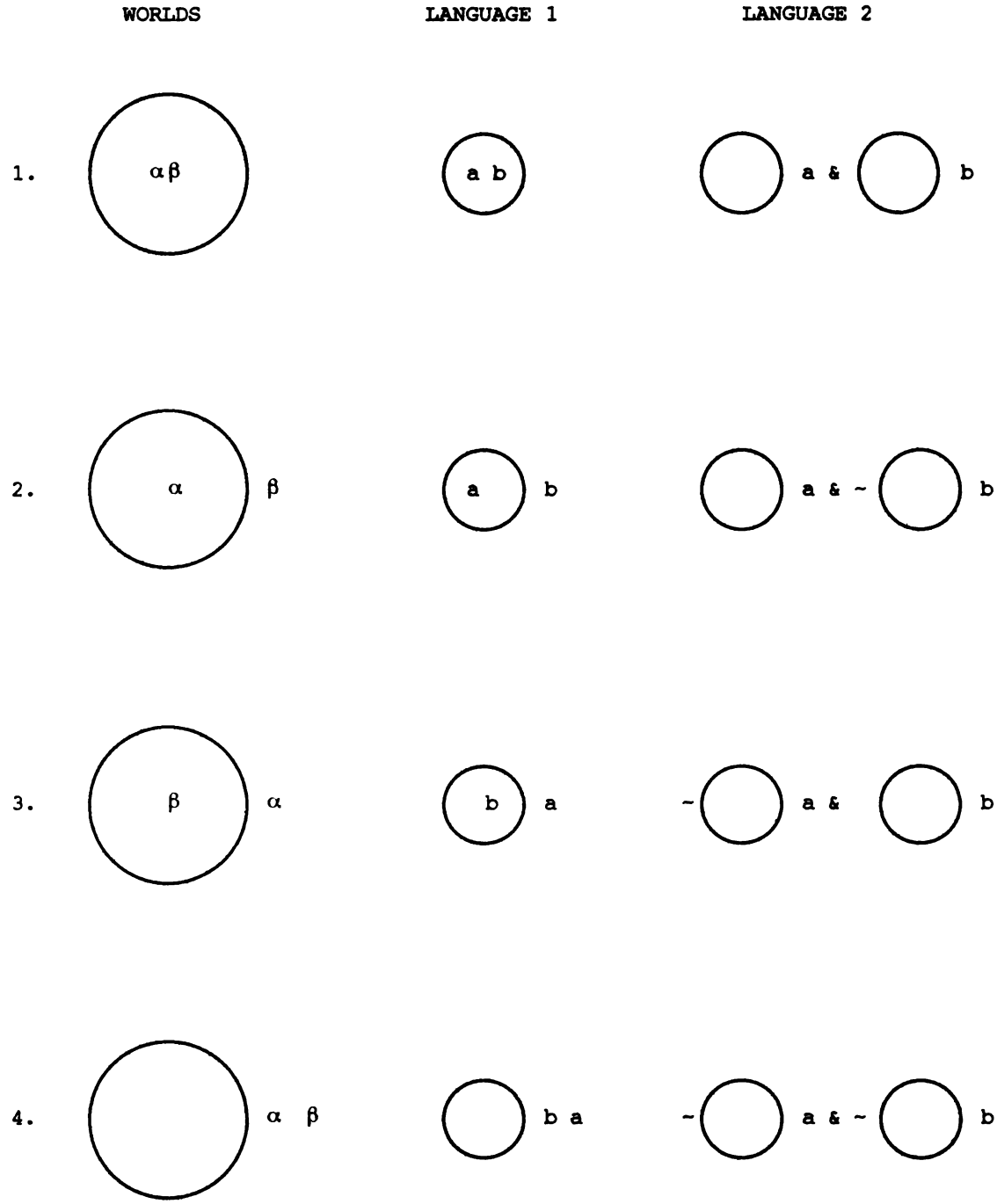


Figure I

Consider what, with respect to Language 2, must be the case if an elementary proposition of the form O_x is false. I had asserted that some other elementary proposition would have to be true. But if O_a or O_b is false, there is no other elementary proposition in Language 2 that is thereby true. In Language 2 the only way to characterized the falsehood of O_a and O_b is by means of line 4; the conjuncts of line 4 are, however, molecular rather than elementary. There are no alternative elementary propositions in terms of which we may state *what* makes O_a and O_b false. Here all we can do is speak of the nonobtaining of a's and b's being O or the negative fact(s) that a and b are not O. Indeed what line 4 of Language 2 demonstrates is that it is possible within certain languages for some possible states of affairs to *only* be represented by molecular propositions. Nevertheless Language 2 and Language 1 *are* expressively equivalent: whatever one can say in the one, one may say in the other. So, it is not necessary for a language to contain true elementary propositions in order to represent actual elementary states of affairs; and it is certainly not necessary for a language to possess elementary propositions (or a disjunction of elementary propositions) that express the very same thing as a false or negated elementary proposition.

It occurs to me that one *might* want to respond to this objection by pointing to the fact that Language 2 contains predicative expressions in addition to singular terms. Clearly the small circle functions as a

predicate, so O_a and O_b cannot be regarded as Tractarian elementary propositions. There are, obviously, expressions within a language that can function either singularly or predicatively. Such is the case with definite descriptions. But we know that Wittgenstein would not treat definite descriptions as elementary, but would subject them to further analysis. Thus one might want to respond to the objection by saying that a language need not use elementary propositions to state that some state of affairs obtains, and that it need not contain true elementary propositions that are equivalent to its false or negated propositions; nevertheless, it must be possible for such a language to be translatable into another language where such is the case. This is precisely how things stand with regard to Languages 1 and 2.

There is a good reason, however, why we should not respond to the objection in this manner. To require that all languages must be translatable in this way seems to be a fairly *ad hoc* determination. Whether a language stands in need of translation *at all*, depends, I suspect, upon whether it is capable of exhibiting determinancy of sense. ("A proposition must restrict reality to two alternatives: yes or no" (1922b, 4.023).) Language 2 would fail in this regard if, for example, O_a could be false in more than one way, i.e., by the non-existence of α, by the non-existence of the circle, or by the failure of α to be in the circle given that both exist. But Language 2 rules out the first two possibilities by requiring each of its terms to be referring terms. Determinancy of sense does not require anything more than what Language 2 already possesses.[200] A language really need only possess the re-

[200] This point is underscored at *Tractatus* 4.025 where it is asserted:

> When translating one language into another, we do not proceed by translating each *proposition* of the one into a *proposition* of the other, but merely by translating the constituents of propositions (1922b, 4.025).

sources by means of which to negate its elementary propositions. As Chapter Four argues, this possibility is secured by the fact that any proposition contains the potential of having any operation whatsoever performed upon it.

In an important way, my identification of the sense of a proposition with a *set* of possible states of affairs fails to do justice to the fact that sense *itself* effects the directed division within reality (that is to say, the sense of a proposition must *itself* exhibit bipolarity). A set of possible states of affairs, however, is *the reality* within which the directed division must occur. Wittgenstein says:

> What a picture represents is its sense (1922b, 2.221).
>
> The agreement or disagreement of its sense with reality constitutes its truth or falsity (1922b, 2.222).
>
> A proposition is a picture of reality: for if I understand a proposition, I know the situation that it represents. And I understand the proposition without having had its sense explained to me (1922b, 4.021).
>
> A proposition *shows* its sense.
> A proposition *shows* how things stand *if* it is true. And it *says that* they do so stand (1922b, 4.022).

We may characterized the sense of O_a in Language 2 by saying that when it is uttered (etc.) it asserts O_a is true and that $\sim O_a$ is not true. If O_a is true, then the *Bedeutung* of the proposition just is the fact that α is in the circle, in which case we have the *agreement* of the sense of the proposition with reality. If O_a is false, then the *Bedeutung* of the propositional sign is the fact that α is not in the circle, and in that case we have the disagreement of the sense of the proposition with reality. This is what Wittgenstein has in mind when he

asserts that propositional signs P and ~P can have the same *Bedeutungen* but opposite *Sinne* (1922b, 4.0621). That is to say, if P is true and ~P is false, then it is the fact that P that is their *Bedeutung*; if P is false and ~P is true, then it is the fact that ~P that is their *Bedeutung* (1914b, p. 112). If O_a is true and $\sim O_a$ is false, then it is the fact that α is in the circle that is their *Bedeutung*; if O_a is false and $\sim O_a$ is true, then it is the fact that α is not in the circle that is their *Bedeutung*.[201]

Of course when one asserts O_a, one does not *say* O_a is true and $\sim O_a$ is not true. *That* is shown by the fact that one employs a particular propositional sign with its own particular structure. One uses O_a to *say* that α is in the circle, and one's *employment* of that sign *shows* the rest. This fact is consonant with the central thesis in this dissertation, namely, that the *use* of signs makes possible the semantic properties of language. Before I would not have said that the use of signs makes *sense* possible, given the way that term had been defined.

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[201] The claim that P (when true) and ~P (when false) share a *Bedeutung* and that P (when false) and ~P (when true) share a *Bedeutung*, but that P and ~P do *not* share a *Bedeutung* regardless of their truth-value, is supported by conjoining *Tractatus* 4.0621, in which Wittgenstein asserts "[t]he propositions '*p*' and '*~p*' have opposite sense, but there corresponds to them one and the same reality" (1922b, 4.0621) with the passage from the "Notes Dictated to Moore" which asserts:

> "The *Bedeutung* of a proposition is the fact that corresponds to it, e.g., if our proposition be "aRb", *if it's true*, the corresponding fact would be the fact aRb, *if false*, the fact ~aRb" (1914a, p.112; emphasis added).

Clearly this second passage indicates that the *Bedeutung* of a propositional sign depends upon the sign's truth or falsity.

Now, however, nothing precludes our saying that such is the case.

One remaining issue concerns the nature of negative states of affairs. I have maintained that a negative state of affairs cannot merely consist in the existence of simple objects that are in no way related to one another. This assumption is crucial to my proposed solution to the Color Exclusion Problem. For if it is true, then it is of no consequence that being red precludes being blue: "This is red" and "This is blue," like P and ~P, could be said to have opposite *Sinne* but identical *Bedeutungen*. What makes it seem natural to impute to the author of the *Tractatus* those views held by the author of the *Philosophical Remarks* is the fact that at *Tractatus* 2.011-2.0131 Wittgenstein asserts (i) that objects are *defined* in terms of their potential for concatenation with one another (1922b, 2.011), and (ii) that objects cannot ever be regarded in isolation, i.e., as being unrelated or propertyless (1922b, 2.0131). In that series of passages he tells his readers that "[t]hings are independent insofar as they can occur in all *possible* situations, but this form of independence is a form of conexxion with states of affairs, a form of dependence" (1922b, 2.0122). Even though it is incorrect to identify the range of possible states of affairs with a proposition's sense, and even though the state of affairs that happens to obtain when an atomic proposition is false may not be expressible by another atomic proposition, it still seems that there must be some such state of affairs that renders (or a set of possible states of affairs capable of rendering) the elementary proposition false. What is crucial to my proposed solution to the Color Exclusion Problem is not that another elementary proposition "with the same sense" is made true by the falsehood of another elementary proposition, but rather that a language must have *some* means to convey what makes an elementary proposition false. In the *Tractatus* this requirement is satisfied through the fact that P and ~P have the same *meaning*. That is why ~P can express what

makes P false. Of course the relation of P to ~P is not a relation between *elementary* propositions, and it is in that regard that my way of posing the solution is misleading.

VITA

Gary Watts Levvis was born in Rockford, Illinois on October 12, 1956. He received his B.A. degree (with a major in philosophy) from Furman University, and his M.A. from the University of Tennessee. After serving as a Teaching Assistant within the Department of Philosophy at the University of Tennessee he was appointed an Instructor first at Clemson University and later at Louisiana State University. As of January 1995 he teaches at Central Connecticut State University.

Mr. Levvis has published on ethics, philosophy of language and philosophy of mind in such journals as *Philosophical Investigations*, *The Journal of Value Inquiry*, *Between the Species: A Journal of Ethics*, and the *Southwest Philosophy Review*.