

**UNIVERSITY OF NAIROBI**  
**FACULTY OF ARTS**  
**DEPARTMENT OF PHILOSOPHY AND**  
**RELIGIOUS STUDIES**

**WITTGENSTEIN'S THEORY OF SEMIOTIC SYSTEMS AND ITS  
APPLICATIONS TO THE PROBLEM OF REPRESENTATION AND  
COMMUNICATION**

**BY**  
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**A THESIS SUBMITTED IN FULFILMENT FOR THE DEGREE OF  
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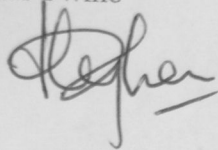
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## DECLARATION

I declare that this is my original work and has not been presented for the award of a degree in any other University.

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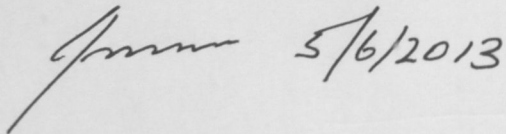
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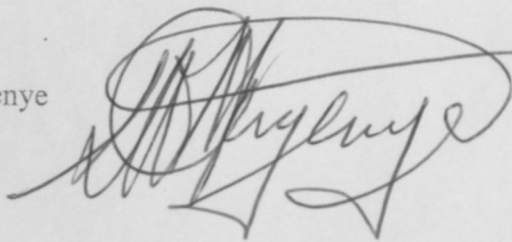


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## DEDICATION

To my wife Susan Waiyego Mwangi and son Tal Médard Mwangi-Owino

With Love

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## ABSTRACT

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This study is an attempt to establish the semiotic theory of Wittgenstein as it can be discerned in his two major works namely, the *Tractatus* and the *Philosophical Investigations*. The specific problem of the study is to investigate the theory of representation and communication in the philosophy of Wittgenstein. The core task of the study consists in determining the necessary and sufficient conditions for the adequacy of representation and efficacy of communication of a sign system in the philosophy of Wittgenstein.

The study is based on three basic assumptions which hold that Wittgenstein's philosophical insights include a semiotic theory; that all semiotic systems can be formalized recursively from a finite set of components and rules and finally that communication constitutes the pragmatic aspect of Wittgenstein's theory of language. Concomitant with these assumptions are three basic objectives that the study has attempted to achieve namely, determination of the semiotic theories in the *Tractatus* and the *Philosophical Investigations*, interpretation of the communicative theory of Wittgenstein and lastly, indication of the relevant areas where Wittgenstein's ideas can be applied relative to the chief philosophical goals of semiotic activity identified in the study which are representation and communication.

Consequent to the analysis of the semiotic theories in the two chief works of Wittgenstein, the study has attempted to synthesise the two works by employing the theoretical framework of model-theory as proposed by Tarski but extended by Henry Hiz in order to formulate a unified semiotic theory of Wittgenstein. The study concludes that the philosophy of Wittgenstein gleaned from the two major works implies a semiotic theory in which signs are given a much richer conception as a four term relation whose variables are the users, the sign, the object signified and the context of use. This semiotic theory is further applicable as a basis for reconciling the logical and the social semiotics, elaboration of philosophy of communication as well as a framework for developing a methodology for multidimensional textual analysis.

- **Theorem:** A formal statement of a general principle (not isolated fact), proved directly from the axioms.
- **Lemma:** Preliminary proposition used in a proof of a theorem
- **Corollary:** Propositions that follow as immediate consequences after establishing that a theorem or a lemma is true.

**Semantics:** It is a general theory of meanings attached to words and sentences. With reference to formal languages, it is the interpretation of the formal language.

## DEFINITION OF TERMS

**Communication:** The process and act of conveying one's meanings, messages and information to others by means of signs. This may be at a personal level or mass level.

**Definition:** A statement or a rule that is agreed on by all parties concerned

**Expression:** Any finite sequence of symbols of a language or a semiotic system

**Infosphere:** A system of services and documents encoded in any semiotic and physical media

**Isomorphism:** A correspondence of structure between two entities

**Language:** An infinite set of strings of signs over a vocabulary

**Proof:** A systematic method of demonstrating a truth with precision. It consists of the following elements:

- **Primitives:** Basic concepts that are accepted in a theory without a formal definition.
- **Axioms/postulates:** Basic propositions built out of primitives and are accepted in a theory as self-evident hence, without formal proof.
- **Theorem:** A formal statement of a general principle (not isolated fact), proved formally from the axioms.
- **Lemma:** Preliminary proposition used in a proof of a theorem
- **Corollary:** Propositions that follow as immediate consequences after establishing that a theorem or a lemma is true.

**Semantics:** It is a general theory of meanings attached to words and sentences. With reference to formal languages, it is the interpretation of the formal language.

**Semiotics/Semiology:** The study of signs and meanings conveyed by them.

**Semiosis:** This is the process of producing and interpreting signs i.e. relations of signs

- **Extrasemiotic property:** It refers to the properties of signs which are not semiotically significant e.g. the length of a sentence, the weight of a building etc.
- **Semiotic property:** This refers to the properties of signs which create meaning.
- **Semantic property:** These are the semiotic properties that are specific to speech.

**Semiosphere:** The abstract space of meaning necessary for the existence and operation of sign systems and signifying activities

**Sign:** It is a perceptible substance or stimulus which is associated in our minds with other stimuli for purposes of communication.

- **Icons:** These are signs that represent things by virtue of an analogical correspondence between them. For example, “no smoking” signals that depict the cigarette.
- **Symbols:** Signs that represent things arbitrarily for example symbolic sign in mathematics and logic

**Speech Acts:** These are the acts performed while speaking such as making statements, giving commands, asking questions, making promises, referring, predicating, etc. There are three categories of speech acts namely; locutionary act, illocutionary act and perlocutionary act.

- **Locutionary Act:** This is a speech act, which performs merely the act of saying

something. It just involves uttering of a sentence.

- **Illocutionary Act:** This is the speech act which performs acts within the class which includes stating, referring, questioning, warning, promising etc.
- **Perlocutionary Act:** This is a speech act, which performs acts within the class which includes informing, irritating, boring, frightening, embarrass etc.

**Structure:** A collection of things suitable for being correlated as meanings to various expressions of a language and any semiotic system.

- **Interpretation:** A function assigning certain objects of a structure to linguistic and semiotic expressions as their meanings
- **Model:** An interpretation which gives the value *true* to a sentence. It is thus an obtaining situation in a structure
- **Model-theory:** a formal inquiry into the relationship between a semiotic system and its structure.

**Syntax:** It is a system of rules governing the construction of sentences of a given natural language. However, with reference to a formal language, it is a specification of the vocabulary of the language together with the rules for the construction of acceptable combinations of the items in the vocabulary.

**Theory:** A language or a semiotic system together with a set of its expressions or formulas, which are concerned with a given structure.

# CHAPTER ONE

## GENERAL INTRODUCTION

### 1.1 BACKGROUND TO THE STUDY

The ongoing process of globalization reflected in increased interrelations between nations and peoples economically, socially, politically, diplomatically, forms the backdrop of this study. Philosophy, like any other discipline, is challenged to address and contribute new insights into the possibilities of creating a more humane and harmonious world. With its ever-living concern for unity of thought, Philosophy must actively seek ways of generating a creative synthesis of human civilizations out of the cumulative experience of diverse world cultures.

The need for Philosophy to address itself to the current world problems was well captured by the theme of the 21<sup>st</sup> World Congress of Philosophy held in Istanbul, Turkey from August, 10<sup>th</sup>-17<sup>th</sup>, 2003 which was: "*Philosophy Facing World Problems*". This congress was preceded by a peripheral International Conference in Istanbul from August 8<sup>th</sup>-9<sup>th</sup>, 2003 whose sub-theme was "*The Dialogue of Cultural Traditions: A Global Perspective*". In the present intercultural context therefore, dialogue that is both global and open is indispensable and philosophy must reflect and contribute to it. The dialogical process ought to be rendered humane, liberating and participatory. Instead, examples abound to demonstrate that the process has been bedeviled by coercion, exploitation and various forms of Neo-colonialism. This tendency has given rise to polarizing categories like "North-South", "Developed-Underdeveloped", "First world-Third

world”, “Christian-Moslem”, “Centre-Periphery”, together with their accompanying stereotypes. These can result in exclusion, bitterness and very many sophisticated forms of economic, political and cultural manipulations, which in turn can result in ineffective communication processes between peoples.

It is against this backdrop that this study is prompted and hopes to make a contribution. It will consist in a reflection on communication as a process of human interaction. Philosophy of language and one of its main proponents, Wittgenstein, will be the focus of the study. His exclusive concern with language makes him merit such a study.

I think that the contemporary brand of philosophy, commonly referred to as *Analytical Philosophy*, because of its concern with language, meaning and clarification of concepts, has some valuable insights to offer with regard to the practical questions of language, meaning and communication which are generated by today’s communication technology. Analytical Philosophy is a heterogeneous philosophical movement of the twentieth century. Within it, three main trends are identified, namely: Logical Atomism, Logical Positivism and Ordinary-Language Philosophy. But a common feature to all of them is the concern with the analysis of language and the conception of the generic task of philosophy as being the clarification of concepts.

The main proponents of Logical Atomism were Bertrand Russell and the “early” Wittgenstein. They held broadly that our languages have a basic uniform structure which represents the basic structure of the world. And so through a detailed analysis of

the structure of our languages, we can ultimately arrive at a clear understanding of the basic structure of the world. This is a form of metaphysics. The function of philosophy is, therefore, the analysis of language which eventually unveils its basic structure.

The proponents of Logical Positivism were Moritz Schlick, Rudolph Carnap, Herbert Feigl Otto Neurath, Friedrich Waismann and A. J. Ayer. They were mostly influenced by the development of mathematical logic and the advance of positive (or empirical) sciences. They dismissed any form of metaphysics, upto and including the metaphysics of Logical Atomism as being meaningless. They held that philosophy does not give any true knowledge but it merely clarifies the meaning of statements: by showing some to be scientific, some to be mathematical and some to be non-sensical. According to them, the only significant statement is either a statement of formal logic which includes mathematical statements or a statement of science. All the other statements are considered non-cognitive and are just motivational.

Finally we have the Ordinary-Language Philosophy whose main proponents were the "later" Wittgenstein, Gilbert Ryle and John Austin. They held that the function of philosophy is to simply indicate the meaning of terms, particularly the problematic philosophical terms, by describing how they were used by ordinary speakers. They, therefore, abandoned the enterprise of fashioning a formal language free from errors and ambiguities which the Logical Atomists and the Logical Positivists advocated. Of all these analytic philosophers, Wittgenstein is an appropriate choice for a case study because his thoughts had considerable bearings on the three analytic trends.

Frege and Russell enormously influenced and shaped the thinking of Wittgenstein. He endorsed their works but on several aspects, he attacked them too. It is their orientation in philosophy which created in Wittgenstein the concern with the nature of language which was later to be his main philosophical preoccupation throughout his life. His early contacts with Russell and Frege formed his early thinking and culminated in his philosophy of logical atomism expounded in his major work, the *Tractatus-Logico-Philosophicus*<sup>1</sup>. He wrote it during the First World War and finished it in 1918, even though it came to be published in 1922.

With the publication of the *Tractatus*, Wittgenstein thought that the problem of philosophy had finally been solved by him and, in a consistent move, he abandoned active philosophy. He, therefore, went to a Teachers' Training College in Vienna in 1919 and later worked as a teacher in remote Austrian villages from 1920-1929 when he again took up philosophy. This period, as a school teacher, marked the transition of Wittgenstein from his "early" philosophy to the "later" philosophy. He had occasional visits and discussions with some notable logical positivists, like Friedrich Waismann. Wittgenstein mainly taught arithmetic and language or grammar to his pupils. A blend of these two, namely, discussions with some philosophers and experience as a grammar teacher were instrumental in changing his earlier view of language and adopting a new version.

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<sup>1</sup> Ludwig Wittgenstein, *Tractatus-Logico-Philosophicus*, Translated by Pears and McGuinness (New Jersey, The Humanities Press Inc, 1961): In the subsequent pages, it will be referred to simply as the *Tractatus* or in case of references, it will be abbreviated as T.L.P.

Warren Bartley points out that this is a period in which the Austrian school-reform movement was in force and advocating change in teaching techniques. This movement attacked the old drill-school method of learning by rote which was being used to instruct pupils. Wittgenstein was sympathetic to the movement. The main principles of the school-reform programme were “self-activity” and integrated instruction and Wittgenstein’s way of implementing these principles in his school radically, reshaped his views on language<sup>2</sup>.

In 1926, he left teaching and went back to Cambridge University to take up philosophy again. His *Tractatus* had become a classic there and so he was awarded a doctorate degree at Cambridge by virtue of the *Tractatus*. In this second phase, Wittgenstein wrote the *Philosophical Investigations* which was published posthumously in 1953. It expounded a new doctrine of language and rejected his earlier view that ordinary language can be translated into the rigorous formal language of logic, which accurately pictures the relations of objects in the world. Instead he expounded the view that ordinary language is in order just the way it is. All that is required is a sensitivity to the various contexts in which words are ordinarily used, hence, the meaning of terms can be established only from their usage in ordinary language. These two major works have inspired diverse and elaborate schools of thought which are often opposed to one another.

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<sup>2</sup> William W. Bartley, *Wittgenstein* (London, Quartet Books, 1975) pp 104-104

The study therefore, undertakes to examine the communicative import of Wittgenstein's philosophy by broadening our analyses to include semiotic systems in general. It thus, explores the often ignored pragmatic aspect of communication, thus offering an expanded formulation of Wittgenstein's thought that is not limited only to the formal side of language. Communication has the double aspect of us employing signs and symbols to communicate with others and, at the same time, interpreting and learning from the signs employed by others. This double aspect of communication is studied in detail by semiotics. Language is, therefore, a part of semiotics. Semiotics is defined as a general theory of sign systems. A sign is any perceptible meaning-carrying entity or a system of such entities for purposes of communication. So the function of the sign is to communicate ideas by means of messages.

The central philosophical problem of semiotics is the problem of representation and communication. Representation is a problem that prompts us to inquire into the relation between what is known and the tools employed in knowing it while communication highlights the social character of the process. Representation becomes a debatable question particularly regarding the adequacy of representations of any material that falls outside of our perceptual range and concomitantly the problem of communication regards the reliability of the transmission of such material in a social context. The study therefore attempts to assess possible philosophical contributions of Wittgenstein to this important area of investigation.

There are diverse semiotic traditions and approaches which have been developed in various parts of the world. The primary aim of semiotics is to investigate the nature of signs, how the human mind employs them as means of representation for the purposes of knowing and

communication of the same knowledge to others. There are two main categories into which most semiotic inquiries fall, namely; the logical and the social.

Logical semiotics focuses predominantly on logic and meaning and has become closely linked to analytical philosophy of language and linguistics. In the USA it was initiated by C. S. Peirce and given the complete expression by Charles Morris. Peirce was devoted mostly to the classification of signs, thereby, introducing the distinction between icon, index and symbol. Morris introduced the standard divisions of syntax, semantics and pragmatics as the integral dimensions of all sign systems. Independently of the American context was also a European brand of logical semiotics developed by philosophers such as Frege, Twardowski and Husserl. The last two were disciples of F. Brentano. While Twardowski investigated the semantic and pragmatic functions of names, it is Husserl who developed these themes into a complete system of phenomenological analysis particularly in his second volume of *Logical Investigations*.

Social semiotics in which signs are treated mainly as social phenomena is mainly a European line of thought. It traces its origin back to the lectures on general linguistics by Ferdinand de Saussure. His single most insight was the observation that meaning does not reside in individual isolated words but rather that words acquire meaning only in the context of a system of other signs bounded by various relationships or structures. His application of the principle of structures paved the way for structuralism and semiotics which was especially developed by Louis Hjelmslev. Hjelmslev generalized de Saussure's signifier-signified distinction into two parallel structures of meaning with his expression-content distinction and attempted to algebraically formalize the system. Finally, he extended his analysis to include non-linguistic

signs systems such as traffic lights. The social semiotics reached its peak with the thought of Algirdas Julien Greimas and the Paris school where semiotics acquired a scientific status not just as general theory of signs but also as a methodological tool for textual analysis. It is in line with these parallel traditions that the present study seeks to investigate the semiotic import in the philosophy of Wittgenstein. It takes a wide-reaching approach in order to show both theoretical and practical semiotic relevance of Wittgenstein's thought.

There are, therefore, two trends that characterize what is referred to as the linguistic turn in philosophy namely; the analytic philosophy that is predominantly practiced in the Anglo-Saxon world and the semiotic trend that is dominant on the continent. In the Anglo-Saxon tradition, Wittgenstein and, indeed, all analytic philosophers have been predominantly confined to the logical analysis of language. Ferruccio Rossi-Landi in his essay *Wittgenstein: New and Old* aptly captures this observation when he makes the distinction between the "emergent" and the "submerged" Wittgenstein. By "emergent" he is referring to Wittgenstein's logico-formal labels while by the "submerged", he designates "the immense possibilities of historical and conceptual excavation" of Wittgenstein's philosophy<sup>3</sup>. The latter, is indicative of the possibilities which transcend the logico-formal labels yet given minimal attention in the analytic literature. The analytic trend is restricted to the formal investigation of language almost to the exclusion of the communicative/pragmatic aspect. Compounded by the positivistic outlook of its proponents, this approach excludes social and aesthetic dimensions of language. These dimensions are explored by the tradition of semiotics or semiology which constitutes the

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<sup>3</sup> Ferruccio Rossi-Landi, "Wittgenstein: Old and New", in *Semiotics Unfolding* Vol.1, Borbe Tasso (ed.) ( Berlin, Mouton Publishers, 1979) p 329

linguistic turn in philosophy on the continent. However, the representatives of this tradition make negligible references to the analytic tradition of the linguistic turn, including Wittgenstein. It is the contention of this study that restricting Wittgenstein's philosophy to the formal, analytic aspects of language is reductionist and fails to grasp the full stretch of his insights. Instead, his philosophy propounds insights of communicative relevance which transcend and complement his formal reflections and which can contribute substantially to semiotics and a general theory of communication.

The study attempts to bridge the gap between these two traditions of linguistic philosophy hinted to above by isolating Wittgenstein's philosophy as a case study. First it addresses the concerns alluded to by Rossi-Landi by pursuing the semiotic relevance of Wittgenstein's thought and, secondly, it contributes further insights to the continental semiotic research which is foundational to communication. The problem derives from the fact that the ultimate goal of language and by extension any sign system, is communication. Communication is constitutive of the definition of a sign. Therefore, Wittgenstein's overriding concern with language should ultimately address the communicative function. To neglect this as has been done by the logico-analytic tradition is likely to miss the practical consequences of his thought. Conversely, to ignore the thought of Wittgenstein in developing a communicative discourse is likely to dispense with a wealth of ideas.

## 1.2 STATEMENT OF THE PROBLEM

The specific semiotic problem of the study will therefore be to discern the theory of representation and communication in the philosophy of Wittgenstein. This core task of the study will consist in determining the necessary and sufficient conditions for the adequacy of representation and efficacy of communication of a sign system in the philosophy of Wittgenstein. According to Anthony Kenny and Kung Guido, the investigation of the relation of representation was arguably the core concern of Wittgenstein that spanned the whole of his philosophical career<sup>4</sup>. Representation is a complex philosophical problem because its nature as a relation is difficult to specify. First, it is a relation which seems to lack its *relata* since what is represented is presupposed to be absent from the immediate context of representation. Secondly, as a relation, representation lacks the formal properties of relations. Specifically, it is not reflexive, symmetric nor transitive. This means that it is not easily amenable to theory and moreover it cannot structure any collection of objects. In order to transform it into a formal and genuine relation we need to specify certain constraints or conditions. The study will therefore investigate the constraints that can transform representation into a genuine relation as can be gleaned from the works of Wittgenstein. In this attempt the study will incorporate an attempt to extend the model-theoretic approach to the emergent semiotic theory of Wittgenstein. In such an approach a sign system is studied in relation to its structure, that is, what the sign system is about. This will inform the research on the representation question of Wittgenstein's thought. The second complementary task of the study will be an attempt to highlight the possible areas

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<sup>4</sup> Anthony Kenny, *Wittgenstein*, Penguin Books, 1973, p 54; Kung Guido, *Ontology and the Logistic Analysis of Language*, Dordrecht: D. Reidel Publishing Company, 1967, p 51

in which the insights gleaned from the first task can be employed especially in the context of contemporary globalized world created by advances in communication technology.

### **1.3 OBJECTIVES OF THE STUDY**

The primary and general objective of this study is to interpret the thoughts of Wittgenstein so as to decipher its communicative relevance. It is centred on the two major works of Wittgenstein namely, the *Tractatus-Logico-Philosophicus* and the *Philosophical Investigations*. Other numerous works of Wittgenstein and commentaries thereof are studied with the aim of enhancing a full understanding of these two works. In order to adequately achieve this wide objective, the study attempts to achieve the following specific objectives:

- a) determine the semiotic theories in the *Tractatus* and the *Philosophical Investigations*
- b) interpret the communicative theory of Wittgenstein
- c) discuss the relevant areas where Wittgenstein's ideas can be applied

### **1.4 JUSTIFICATION OF THE STUDY**

Communication is a timely field of investigation, particularly in the increasing intercultural world context of today. Equally important, is the heterogeneity within analytic philosophy, which constantly poses the need for case studies. So, the isolation of Wittgenstein and an examination of what he uniquely has to offer, make a contribution to the on-going research in this area.

More specifically, however, the study is justified on the following grounds:

- a) Advances in communication technology constitute an integral element in contemporary infrastructural development everywhere. A study of the foundational communicative

concepts is necessary for an effective formulation of communication policies. This study is aimed at such an investigation of the foundations of communications theory.

- b) That the study has an interdisciplinary relevance, which would enhance philosophy's function as a service discipline to other disciplines as well as their enhancement.
- c) It will make a contribution towards the on-going research into Wittgenstein's philosophy and attempt to pursue the communicative dimension of his philosophy and not merely its linguistic formal dimension.

## 1.5 SCOPE

The study is focused on the two major works of Wittgenstein namely, the *Tractatus-Logico-Philosophicus* and the *Philosophical Investigations*. Other numerous works of Wittgenstein and commentaries thereof will be studied with the aim of enhancing full understanding of these two works. The reason for choosing these two works over the other writings of Wittgenstein is that they represent the complete expressions of Wittgenstein's two phases of philosophical thought. The other writings of his were either preludes or sequels to these works. Therefore, the semiotic views represented in these two works would be expressive of the general views that can be encountered on the same matters in the other writings of Wittgenstein. The specific focus of the study will be on the nature of the relation of representation and its corollary concept of communication. The study will investigate these concepts in the light of Wittgenstein's work in order to highlight their nature and their necessary conditions for adequacy and effectiveness

## 1.6 LITERATURE REVIEW

Despite the rapidly expanding body of literature on the philosophy of Wittgenstein, few if any, expressly address the relevance of his thought to communication issues particularly semiotics.

This is sadly so in spite of the close relation between the much discussed linguistic implications of his philosophy and human communication. Nevertheless, a number of writers have hinted to a closer connection between Wittgenstein's philosophy and the general semiotic theory. The following literature review is to highlight some of these writers' views and the lacunae which persist in this area of inquiry, notwithstanding their observations.

Hans-Johann Glock<sup>5</sup> makes a strong case for the existence of a German analytic tradition that is the precursor to the Anglo-American analytic tradition. He insists that the tradition is, in considerable part, the invention of German speakers e.g. Frege, Wittgenstein, and the Logical Positivists of the Vienna Circle who were driven out of central Europe by the Nazis. He observes that this tradition emerged in Germany as early as Kant when the German philosophers, unlike their English counterparts, refused to reduce philosophy to the status of natural sciences or, unlike the French philosophers, who reduced philosophy to the status of mere literary works. The Germans, instead, sought to show that philosophy was distinct from both the sciences and literary works. It has its own unique object and methodology. He notes for example, that for Kant, Philosophy was immune to confirmation or refutation by empirical evidence because it reflects on the non-empirical preconditions of empirical knowledge, i.e. logical or epistemological structures that antecede matters of empirical truth or falsity. As for the method of Philosophy, subsequent developments led to the emergence of different approaches of which the linguistic turn was one. We can, therefore, understand the background of Wittgenstein's insistence that philosophy is not a body of doctrines but rather a clarification of language to eliminate ambiguities. Such an activity might be interpreted as establishing the

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<sup>5</sup> Hans-Johann Glock, "Vorsprung durch Logik: The German Analytic Tradition", in Anthony O'Hear (ed.) *German Philosophy since Kant* (United Kingdom, Cambridge University Press, 1999) pp 137-166

core concern of philosophy as the stipulation of the conditions for representational adequacy and communicative efficacy of language as a system of signs.

David Bell echoes the same observation as Glock's that the founders of British analytic tradition namely, Moore and Russell turned to Germany after having been dissatisfied with education in Britain. It was there that they got the influences from the new German approaches to mathematics, psychology, physics and logic<sup>6</sup>.

Stephen Priest describes the entire western philosophy since Kant as essentially operating within a Kantian anti-metaphysical paradigm. "German-language philosophy and, *a fortiori*, Husserl's phenomenology is no exception to this". In allusion to his forthcoming work entitled, "*The critical Paradigm: Modern Philosophy's Kantian Assumptions*" Priest argues that the entire analytical philosophy, with all its ramifications, has a German or Austrian genesis. He writes, "in brief, analytical philosophy is a sub-species of continental philosophy"<sup>7</sup>.

These readings strongly put a case for continuity rather than a separation of the analytic tradition with the continental philosophy. Therefore, a look at further details of connections can be a basis for expanding the philosophical insights of Wittgenstein.

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<sup>6</sup> David Bell, "The Revolution of Moore and Russell: A Very British Coup?" in Anthony O'Hear (ed.), *German Philosophy since Kant* (United Kingdom, Cambridge University Press, 1999) p 194

<sup>7</sup> Stephen Priest, "Husserl's Concept of Being: From Phenomenology to Metaphysics", in Anthony O'Hear, *op. cit.* (1999) p 209

Andrew Bowie notes that the *linguistic turn* in German philosophy, unlike the English-speaking world, took a hermeneutic turn with the Kantian tradition of searching for the epistemological status of philosophy, seeing it as interpretation, whereas the analytic philosophers see the status of philosophy as mainly logical clarification of concepts<sup>8</sup>. Jurgen Habermas too, observes that what is called the linguistic turn in philosophy came about in a hermeneutic and an analytic version. He notes further that the hermeneutic turn has its roots in Heidegger who was informed by the linguistic tradition of the German Philosopher and Linguist, Humboldt, while the analytic turn was informed by the philosophical paradigm in Gottlob Frege's logical semantics. However, Habermas argues that the two traditions of hermeneutics and analytic philosophy are complementary rather than competing<sup>9</sup>.

Model-theory has a relatively short but steadily growing history. It has emerged to be an effective semantic theory for formal systems. It has made it possible to develop semantics of the formal languages into a rigorous science. Robert Vaught<sup>10</sup> traces its initial phases from around 1915 with the works of Leopold Löwenheim. But he asserts that the decisive influence in model-theory came from Alfred Tarski. Chen-Chung Chang echoed the same sentiment. However, it is noteworthy that model-theory in its early conception has been restricted by practice rather than by structure, to only deductive sciences expressible in formal languages. This tendency has persisted in the literature on model-theory despite the observation that Chang

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<sup>8</sup> Andrew Bowie, "German Philosophy Today: Between Idealism, Romanticism and Pragmatism" in Anthony O'Hear, *op. cit.*(1999) p 373

<sup>9</sup> Jurgen Habermas, "Hermeneutic and Analytic Philosophy: Two Complementary Versions of the Linguistic Turn?" in Anthony O'Hear, (ed.), *op. cit.* (1999) pp 413-441

<sup>10</sup> Robert L. Vaught, "Model Theory before 1945" in *Proceedings of the Tarski Symposium, vol. XXV*, Henkin, H. et al (eds.) (Rhode Island, American Mathematical Society, 1974) pp 153-172

makes that, as early as 1935, Tarski himself had suggested that further investigations in the field of model-theory are required in order to apply it in the totality of knowledge and not just to the deductive sciences but to other forms of representation too<sup>11</sup>. In a paper titled *Establishment of Scientific Semantics*, Tarski noted that:

With this the problem of establishing semantics on a scientific basis is completely solved. Only the future can definitely say whether further investigations in this field will prove to be fruitful for philosophy and the special sciences, and what place semantics will win for itself on the totality of knowledge. But it does seem that the results hitherto reached justify certain optimism in this respect.<sup>12</sup>

Marian Przelecki argued that the limitation of model-theory to formal languages was an unjustifiable limitation and demonstrated that even non-mathematical languages constitute a proper object of model-theoretic studies. She went on to propose that any semantic inquiry of all languages is, properly speaking, model-theoretic<sup>13</sup>. Holding the same line of thought, J. T. Wang demonstrated that any generative grammar in the Chomskian style is ultimately reducible or equivalent to a first-order theory, hence capable of full formalization<sup>14</sup>. With this then, it is possible to construct a rigorous model-theory for any language and this would be the basis for

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<sup>11</sup> Chen-Chung Chang, "Model Theory 1945-1971" in *Proceedings of the Tarski Symposium vol. XXV*, Henkin, H. et al (eds.) (Rhode Island, American Mathematical Society, 1974) pp 173-186

<sup>12</sup> Alfred Tarski, "Establishment of Scientific Semantics" in *Logic, Semantics, Metamathematics, Papers from 1923 to 1938*, Corcoran, (ed.) ( Indianapolis, Hackett publishing Company 1983) p 407

<sup>13</sup> Marian Przelecki, "A Model-Theoretic Approach to Some Problems in the Semantics of Empirical Languages" in *Logic, Language and Probability*, Bogdan, R.J. and Niiniluoto I. (eds.) (Dordrecht-Holland, D Reidel Publishing Company, 1973) pp 285-290

<sup>14</sup> J. T. Wang, "On the Representation of Generative Grammars as First-Order Theories" in *Logic, Language and Probability*, Bogdan, R.J. and Niiniluoto I. (eds.) (Dordrecht-Holland, D Reidel Publishing Company, 1973) pp 302-315

semantics and interpretation for any system of representation. I. I. Revzin also echoed the same thought that the theory of generative grammar constitutes a proper object of model-theory<sup>15</sup>.

Noam Chomsky describes a generative grammar as an explicit exposition of the finite set of rules and symbols by means of which we can generate only the well-formed sentences of a language, the number of which is infinite. It is analogous to a deductive calculus in logic in which, by a set of rules of formation, we can derive an infinite set of theorems. But a Generative Grammar does not stop at the level of grammar and well-formedness of sentences. It extends to include the question of meaning and interpretation of the well-formed sentences. To illustrate this we can take, for example, the popular sentence which was coined by Chomsky himself. "*The colourless green ideas are sleeping furiously*"<sup>16</sup>. We can understand this sentence because it is grammatically correct, but attempts to interpret it would lead to incoherence.

For that matter, Chomsky's theory is an inquiry into the interrelationship between the structural rules of a language and the interpretation of the sentences generated from these rules. Its issue is, in other words, the relation between syntax and semantics. In any given language, Chomsky upheld that there are three integral components namely: the phonetic component, the semantic component and the syntactic component. The syntactic component provides the deep structure of a language, the knowledge of which

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<sup>15</sup> I. I. Revzin, "Methodological Relevance of Language Models with Expanding Sets of Sentences" in *Logic, Language and Probability*, Bogdan, R.J. and Niiniluoto I. (eds.) (Dordrecht-Holland, D Reidel Publishing Company, 1973) pp 291-295

<sup>16</sup>Noam Chomsky, *Syntactic Structures* (The Hague, Mouton, 1957), p 15

determines the competence of a speaker. This deep structure generates the surface structure of the language at the phonetic and semantic levels. These two levels form the basis of linguistic performance.

In a more recent work, Chomsky elaborates on the above description and defines language in terms of three key elements namely; the properties of sound and meaning, called “features”, the items that are assembled from these properties, called “lexical items” and finally, the complex expressions constructed from these “atomic” units.<sup>17</sup>

In this definition, a generative grammar is seen to consist of two basic operations: one that generates lexical items from the features of sound and meaning, the second generates larger syntactic structures out of those already constructed, beginning with lexical items. However, this leaves open the question of how the interpretation of the generated structures takes place and this is precisely where model theory for a generative grammar proposed by the above-mentioned authors, becomes operational.

Michele Malatesta points out that any semiotic system is triple dimensional, specifically, the pragmatic dimension which describes how signs are related to their interpreter. By interpreter is meant both those who produce and codify the signs and those who receive and decodify them; the semantic dimension which describes the relation between signs and the objects to which they refer and finally the syntactic component which describes the relation of the signs with each other<sup>18</sup>. This places

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<sup>17</sup> Noam Chomsky, *New Horizons in the study of Language and Mind* (Cambridge University Press, 2000) p 10

<sup>18</sup> Michele Malatesta, *The Primary Logic: Instruments for a Dialogue between the two Cultures*,

semiotics on the threshold of model-theoretic study. However, Malatesta himself does not attempt such a study given that his intention in the book is simply to show that logic is merely a part of semiotics.

Nicolas Xanthos argues that the *Philosophical Investigations*, particularly the notion of “language games”, has important implication for semiotics. He observes that the semiotic theory of the text is constituted by three interdependent notions: the language game, the moves and the grammar. The language games describe “semiotic practices which, despite the term ‘language’, are not restricted to verbal languages”<sup>19</sup>. The moves refer to the concrete actions performed in a given language game e.g. an act of promising, reporting an event etc. These moves are subject to specific rules in the language game. Finally, we have the grammar of the language game which refers to the conceptual architecture that determines how the signs are used. They are the conditions for the possibility of the moves made in the language game. The language games can be understood, therefore, as the shared conceptual parameters that make it possible to identify and produce signs, and to establish relations of signification and representation.

Henry Hiz presented a general logical structure of semiotics. He highlighted the distinction between semantics and semiotics. The former studies meaning as carried in words, whereas the latter deals with meanings conveyed by any medium, including speech. Semiotics is, therefore, a generalization of semantics as it were. He then proceeded to use model-theory in studying

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(Roma, Millennium Romae, 1997) pp18-29

<sup>19</sup> Nicolas Xanthos, (2006), “Wittgenstein’s Language Games”, in Louis Hébert (dir.), *Signo* [on-line], Rimouski (Quebec), <http://www.signosemio.com>

meaning relations in a semiotic system. In order to overcome the customary practice of limiting model-theory to only formal languages, Hiz extended the logical semantics of model-theory to general semiotics. In a manner close to Rudi Keller, he takes any semiotic system as a logical system out of which some consequences are deducible from a set of premises<sup>20</sup>. Keller reconceptualises communication as less to do with the operation of packing, sending and unpacking of ideas and messages. Instead, he sees it as an inferential process whereby interlocutors construct arguments and attempt to draw certain conclusions. According to him, therefore, “linguistic signs have less the character of packing cartons than that of premises for drawing interpretive conclusions”<sup>21</sup>. At the same time, Keller adopts an approach that discusses the basic principles of the formation and dynamics of signs, thus automatically answering questions regarding the architecture of sign systems, for example, how are signs built? What are their parts? How many sides do they have? How can signs be classified? etc. Thus, Keller’s approach can be said to be *formal-pragmatic*, and can be employed to complement model-theory and to explore the semiotic and pragmatic aspects of Wittgenstein’s philosophy.

Kees Doets presented basic outlines of model-theory. Even though his work is restricted to the outlines of model-theory for first-order languages, in the introduction he indicates the various directions which model-theory has currently taken and can thus be pursued. Examples are model-theory for second-order languages, applied model-theory, which implies application of

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<sup>20</sup> Henry Hiz, “Logical Basis of Semiotics” in *A Perfusion of Signs*, Sebeok, A. Thomas (ed.) (Bloomington and London, Indiana University Press, 1977) p 41

<sup>21</sup> Rudi Keller, *A Theory of Linguistic Signs*, Translated by Duenwald Kimberley (Oxford, Oxford University Press, 1988) p 59

the theory beyond formalized languages, recursive model-theory, classification theory, finite model-theory<sup>22</sup>. These justify the attempt of this study to explore the linguistic and semiotic theories of Wittgenstein's philosophy *model-theoretically*.

Susan Langer criticizes the neo-positivists' dismissal of presentational form of, for example, metaphysics and aesthetics as mistaken and based on a narrow understanding of our ordinary communication. She contends that symbolism, which is at the heart of communication, goes beyond the limits of discursive language and asserts, "There is an unexplored possibility of genuine semantics beyond the limits of discursive language"<sup>23</sup>. Such a semantic would be the subject and interpretation of presentational form, which is the expression of our experience of the physical space-time world, which do not fit the grammatical scheme of our discursive form. This is a suggestion that in order for us to overcome the limitations of logico-analytical trend in philosophy, we must turn to semiotics. She notes that the logical analysts use two basic assumptions in constructing their theories namely,

- a) That language is the only means of articulating thought
- b) That everything, which is not *speaking* thought, is feeling.

But of interesting note is that to guide her study of symbols, was the logical theory set forth by Wittgenstein in the *Tractatus*. This strongly suggests to us that Wittgenstein's philosophy has a semiotic relevance which, thus far, has not been fully explored to give us the full grasp of his thought. Specifically in this regard, are Wittgenstein's assertions in the *Tractatus*: 6.522-7. In these theses Wittgenstein's point is to illustrate the limitations of discursive language and to

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<sup>22</sup> Kees Doets, *Basic Model Theory* (Stanford California, CSLI Publications, 1996) p vii

<sup>23</sup> Susanne K. Langer, "Discursive and Presentational Forms" in Innis Robert (ed.) *Semiotics: An Introductory Reader*, London, Hutchinson and Company Publishers Ltd, 1985) p 95

indicate a route to representational forms beyond the discursive form. It is interesting to note that at the completion of the *Tractatus* and in order to persuade the editor Ludwig von Ficker to publish this work, he had to insist on this very point thus:

I once meant to include in the preface a sentence which is not in fact there now but which I will write out for you here, because it will perhaps be key to the work for you. What I meant to write then, was this: My work consists of two parts: the one presented here plus all that I have not written. And it is precisely this second part that is the important one. My book draws limits to the sphere of ethical from the inside as it were, and I am convinced that this is the ONLY [sic] rigorous way of drawing these limits.  
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Francis Biryaho argues that the use of proverbs in a language transcend the restriction of the *Tractatus* to truth-valuation and includes other non-propositional functions. He explains proverbs as tools which are used to do things. They are the distillate of long and reflective processes. In this regard it is possible to see that a proverb can never be false either. In reference to the Bantu of Eastern Africa, he contends that proverbs really do not function to inform but rather largely to create cohesion and harmony within the community. They, thus, cover a great deal of social and cultural activities ranging from polite advice to sympathetic expressions of hope and providence. This, according to Biryaho, is in accord with Wittgenstein's contention that "words are deeds...where boundaries between world and language dissolves, where behaviour and language melt into one another, become indistinguishable."<sup>25</sup>

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<sup>24</sup> Paul Engelmann, *Letters from Ludwig Wittgenstein*, Edited by B.F. McGuiness, translated by, L. Furtmüller, (Oxford, Blackwell, 1967) p 23

<sup>25</sup> Francis Biryaho, *A Study of Proverbs in the Light of Ludwig Wittgenstein's Philosophy of Language with a Special Reference to the Bantu of Eastern Africa*, Excerpta ex Dissertatione ad Doctoratum in Philosophia, Pontificia Universita Gregoriana, Facolta di Filosofia, 2004: p 3

Erick Schwimmer traces a historical development and gradual convergence of semiotics and anthropology that has seen semiotics develop from mere reflection on sign systems to an anthropological tool of solving problems arising out of humanity's cultural diversity. He outlines therefore, a general purview of the different approaches which have been proposed, developed and adopted for utilizing semiotic methods for analyzing cultures, thereby indicating a "new kind of semiotics now beginning to become important in anthropology, namely that based on the *Philosophical Investigations* of Wittgenstein"<sup>26</sup>. However, he does not expound further on this, which is an indication of a semiotic attempt and approach that still is remaining consciously incomplete. It, therefore, warrants a study that explores the semiotic relevance of Wittgenstein's thought.

Rossi-Landi, also criticizes the tendency to limit Anglo-Saxon analytic philosophy, including Wittgenstein's, only to the logico-formal analyses of language. He distinguishes between the "emergent Wittgenstein" and the "submerged Wittgenstein". By the former he means the logico-formal-analytic interpretation of Wittgenstein, while the latter refers to the unfolding and yet mostly hidden works and interpretations of Wittgenstein which, he notes, "faces immense possibilities of historical and conceptual importance"<sup>27</sup>. He expressly suggests that one such possibility is in the area of semiotics. He points out that contemporary semiotic literature is evidently less concerned with Wittgenstein and he goes on to suggest that even though Wittgenstein may have not directly used semiotic terminology, his problems were of

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<sup>26</sup> Erick Schwimmer, "Semiotics and Culture" in Sebeok, T. (ed.), *A Perfusion of Signs* (Bloomington and London, Indiana University Press, 1977) pp168-169

<sup>27</sup> Ferruccio Rossi-Landi, "Wittgenstein: Old and New", in *Semiotics Unfolding* Vol.1, Borbé Tasso (ed.) (Berlin, Mouton Publishers, 1979) p 329

semiotic nature hence he makes contributions to a general theory of semiotics. *Tractatus*: 3.1-3.144 is specifically concerned with the elucidation of the concept of sign. This is certainly the key object of semiotics. It is objectionable that in this regard Wittgenstein was using the term sign in a purely restricted sense and that is, to stand for names in his picture theory. However, it is informative of the broader semiotic significance to recall the roots of the picture theory itself as noted by Von Wright. Norman Malcolm recounts von Wright's account of how Wittgenstein arrived at the picture theory of meaning:

Wittgenstein was reading in a magazine about a lawsuit in Paris concerning an automobile accident. At the trial, a miniature model of the accident was presented before the court. The model here served as a proposition, that is, as a description of states of affairs... It now occurred to Wittgenstein that one might reverse the analogy and say that a proposition serves as a model or picture, by virtue of a similar correspondence between its parts and the world.<sup>28</sup>

*Tractatus*: 3.21 echoes von Wright's observation: "The configuration of objects in a situation corresponds to the configuration of simple signs in the propositional sign." The very analogy of the representational capacity of language to a picture itself points to broader semiotic underpinnings of the *Tractatus*. The theme of signs continued in the later phase of his thought as did many other themes of the *Tractatus*. The emphasis on signs in the later phase was on the systemic character of signs. This means that Wittgenstein emphasized the primacy of context in understanding any sign system. Unlike in the Tractarian phase where a proposition was considered independent and therefore could be studied in isolation in the *Investigations*, it is impossible to do that. Signs, and indeed, propositions can only be understood in the context of other signs. In PI, 503-504, he asserts:

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<sup>28</sup> Norman Malcom, *Ludwig Wittgenstein: A Memoir*, 2<sup>nd</sup> ed. (Oxford, Oxford University Press, 1984) p7

If I give anyone an order I feel it to be quite enough to give him signs. And I should never say: this is only words, and I have got to get behind the words. Equally, when I have asked someone something and he gives me an answer (i.e. a sign) I am content... 'how am I to know what he means, when I see nothing but the signs he gives?' then I say 'How is he to know what he means, when he has nothing but the signs either?'<sup>29</sup>

Wittgenstein, in his work entitled, *Philosophical Grammar*, states his systemic view of signs thus: "it is only in a language that something is a sentence. To understand a sentence is to understand a language. A sentence is a sign in a system of signs. It is one combination of signs among a number of possibilities, and is opposed to other possibilities."<sup>30</sup> It emerges from these few remarks that Wittgenstein in the later phase, considered language as a subset of the broader set of signs employed for communication.

Umberto Eco is a noteworthy illustration of Rossi-Landi's observations referred to above. In his work entitled, *Semiotics and the Philosophy of Language*, Umberto attempts to show how general semiotic and various approaches to philosophy of language address similar fundamental problems such as:

What does it mean for human beings to say, to express meanings, to convey ideas, or to mention states of the world? By which means do people perform this task? Only by words? And, if not, what do verbal activity and other signifying or communicative activities have in common?<sup>31</sup>

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<sup>29</sup> Ludwig Wittgenstein, *Philosophical Investigations*, Translated by Anscombe G. E. M, (Oxford, Basil Blackwell, 1978), p 139: In the subsequent pages, it will be referred to simply as the *Investigations* or in case of references, it will be abbreviated as PI

<sup>30</sup> Ludwig Wittgenstein, *Philosophical Grammar*, Translated by Kenny, A. (University of California Press, 1974) p 94

<sup>31</sup> Umberto Eco, *Semiotics and the Philosophy of Language* (London, The Macmillan Press Ltd, 1984) p 7

Nevertheless, in the entire book, he hardly makes allusion to Wittgenstein's contribution and when he does, it is "only in passing and for purposes of illustration rather than scientific concern"<sup>32</sup> - an observation Rossi-Landi makes also of Eco's earlier work entitled, *A Theory of Semiotics*.

Karl Buhler contends that everyday language is a system of signs of which the sounds are posited by the speaker as signs and received by the hearer too as signs. Hence "the phenomenon of language arises as the mediator between individuals in the exchange of signs."<sup>33</sup> He argues that the origin of meaning and the conditions of sense are to be found not in the individual but in the society or social life as lived. Robert Innis in the introduction to Buhler's extract indicates an affinity of Wittgenstein's later work on these themes with Buhler's ideas. He suggests that Wittgenstein may have been influenced by Buhler with whom he associated for a time in the Austrian School Reform Movement. So Buhler's insistence on the primacy of social and hence publicly observable data for laying the foundations of language theory and not some introspective procedures influenced Wittgenstein's later philosophy<sup>34</sup>.

William Bartley<sup>35</sup> echoes the same observation that the period, 1920-1929, during which Wittgenstein worked as a teacher in remote Austrian villages, the Austrian School Reform Movement was in force and advocating change in teaching techniques. This movement attacked

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<sup>32</sup> Ferruccio Rossi-Landi, *op. cit.* p 332

<sup>33</sup> Karl Buhler, "The Key Principle: The Sign-character of Language" in Innis, R.E. (ed.) *Semiotics: An Introductory Reader* (London, Hutchinson and Co. publishers Ltd, 1985) p 70

<sup>34</sup> Robert E. Innis, (ed.) *Semiotics: An Introductory Reader* (London, Hutchinson and Company publishers Ltd, 1985) pp 66-69

<sup>35</sup> William W. Bartley, *Wittgenstein* (London, Quartet Books, 1975) pp 103-104

the old drill-school method of learning by rote, which was being used to instruct pupils. Wittgenstein was sympathetic to the movement. The main principles of the movement, Bartley observes, were “self-activity” and integrated instruction and Wittgenstein’s way of implementing these principles in his school radically reshaped his views on language. It, therefore, follows that Wittgenstein too held some semiotically significant views owing to seminal influences like Buhler upon him.

Pierre Guiraud categorizes signs into three categories namely, scientific-technical signs, social signs and aesthetic signs, each group possessing but manifesting differences in their logical and social functions<sup>36</sup>. The three categories are related to Habermas’ three basic functions of language i.e. cognitive, interactive and expressive. He critiques the logical positivists’ contention that non-declarative discourse is meaningless. This is in line with the new approach to the sign and linguistic theory held by Wittgenstein in the later phase in which meaning is identified with usage of linguistic expressions according to the operational rules of a given form of life. This is an echo of Wilhelm Humbolt’s view that language is the key to understanding the operations of the human mind and also the specific differences between cultures. He argues that language has its inner structure that shapes the subjective experiences of individuals, their worldviews and ultimately the institutions of a given community and its culture.

Keller upholds that Wittgenstein’s later philosophy represents a modern statement of a classical and prototypical notion of signs, which he refers to as the *instrumental notion*. Plato gave the

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<sup>36</sup> Pierre Guiraud, *Semiology*, Translated by Gross George, (London and Boston, Routledge and Kegan Paul, 1971) p 4

classical statement of this notion in his dialogue *Cratylus*. In this dialogue Plato uses, as in many of his other dialogues, the person of Socrates as the mouthpiece to his ideas. Thus Socrates constructs an argument to convince Hermogenes and in support of *Cratylus* that linguistic signs are motivated by their similarity to natural referents. The kind of similarity we detect in onomatopoeic names. In *Cratylus* (386-387) Socrates advances the argument that actions, just like things, have their proper and permanent essences which are not relative to individuals' perception. Speaking is an action which can be performed correctly or incorrectly. He employs the analogy that the correct performance of actions requires the appropriate instruments. Language is the instrument used for the performance of speaking by giving "information to one another, and distinguish things according to their natures" Keller observes that this notion addressed basic questions such as "what does a sign stand for? What are the extra-linguistic correspondents of signs?"<sup>37</sup> Going hand in hand with these questions is also a basic conception of communication as the transferal of ideas and concepts to the addressee by the provision of substitutes for those ideas and concepts. Keller maintains therefore that the later Wittgenstein represents this instrumental notion of signs in his famous *use-theory* of meaning.

David Stern in a study that focused exclusively on the initial articulations of Wittgenstein's thoughts documented in first drafts, conversations, lectures and revisions that led to the published works, asserts that Wittgenstein's philosophy is about the conception of the nature of representation. The radical change in Wittgenstein's view was due to a long process in which

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<sup>37</sup> Rudi Keller, *A Theory of Linguistic Signs*, Translated by Duenwald Kimberley (Oxford, Oxford University Press, 1988) p 43

he came to realize the inadequacies of his earlier views on representation<sup>38</sup>. Nevertheless, Stern ultimately attempted to interpret Wittgenstein's conception of mind and language and abandoned the semiotic inquiry. In this study, we will pursue the theory of representation or semiotics in Wittgenstein's thought.

Ray Jackendoff regards Wittgenstein's transition to the *Philosophical Investigations* merely as recognition that the *Tractatus* addressed issues which are capable of being represented as sets in the classical sense in which a set ought to be well defined. Hence the *Tractatus*' demand for determinateness of meaning is in function of this assumption. Instead the *Investigations* represents the phase in which Wittgenstein had come to the realization that the classical presumption can only be satisfied by a considerably small class of objects. But the vast majority of classes are of a fuzzy type of sets which requires the incorporation of non-classical forms of representation into our general theory of concepts and meaning. He views Wittgenstein's analogy of games as not just describing the nature of language but, instead, the broader category of various semiotic systems<sup>39</sup>.

The foregoing review clearly demonstrates that many authors recognize the semiotic relevance of Wittgenstein's thought and that semiotics is a field that warrants a model-theoretic study. However, despite the indications, no text to my knowledge, has explicitly undertaken a semiotic interpretation of Wittgenstein's philosophy. This study seeks to do just that, thus contributing towards the development of philosophy of communications.

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<sup>38</sup> David Stern, *Wittgenstein on Mind and Language* (New York and London, Oxford University Press, 1995) p 53

<sup>39</sup> Ray Jackendoff, "What is a Concept, That a Person May Grasp It?" in Davis S. and Gillon B.S (eds.), *Semantics: A Reader* (Oxford, Oxford University Press, 2004) p 341

## 1.7 THEORETICAL FRAMEWORK

The study is guided by model-theory as proposed by Alfred Tarski and expounded by Henry Hiz.<sup>40</sup> Hiz presented a general logical structure of semiotics. He highlighted the distinction between semantics and semiotics. The former studies meaning as carried in words, whereas the latter deals with meanings conveyed by any medium, including speech. Semiotics is, therefore, a generalization of semantics as it were. He then proceeded to use model-theory in studying meaning relations in a semiotic system. In order to overcome the customary practice of limiting model-theory to only formal languages, Hiz thus extended the logical semantics of model-theory to general semiotics. In a manner, he takes any semiotic system as a logical system out of which some consequences are deducible from a set of premises. Tarski developed his themes and ideas over a very long period of time and expounded them in various journals, conferences and books. Key among these is the collection of Tarski's papers from 1923-1938<sup>41</sup>.

Model-theory is specifically considered ideal because it is broader in scope and can serve as a framework for uniting the analytic aspect of Wittgenstein with his pragmatic aspects. In his paper on *the Concept of Logical Consequence*, Tarski provides us with a technical definition of the concept of a model. He defines it as an arbitrary sequence of objects in a domain which realizes or satisfies a sentence or a sentential function of a given language. Thus, if a sentence is said to be true then the circumstance which warrants its being true is its model<sup>42</sup>. There are

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<sup>40</sup> Henry Hiz, "Logical Basis of Semiotics" in *A Perfusion of Signs*, Sebeok, A. (ed.) (Bloomington and London, Indiana University Press, 1977) p 41

<sup>41</sup> Alfred Tarski, *Logic, Semantics, Metamathematics, Papers from 1923 to 1938*, Woodger, (Tr.), Corcoran, (ed.) (Indianapolis, Hackett publishing Company 1983)

<sup>42</sup> Alfred Tarski, "The Concept of Logical Consequence" in *Logic, Semantics, Metamathematics, Papers from 1923 to 1938*, Woodger, (Tr.), Corcoran, (ed.) (Indianapolis, Hackett publishing Company 1983) pp 416-417

indications, however, that Tarski did not mean to restrict the concept of models only to linguistic modes of representation but provided for the possibility of extending the concept to include other forms of representation too. In a paper titled *Establishment of Scientific Semantics*, Tarski noted that:

With this the problem of establishing semantics on a scientific basis is completely solved. Only the future can definitely say whether further investigations in this field will prove to be fruitful for philosophy and the special sciences, and what place semantics will win for itself on the totality of knowledge. But it does seem that the results hitherto reached justify certain optimism in this respect.<sup>43</sup>

It is, however, important at this point to highlight the connotation of models in everyday usage so as to clearly distinguish it from models in the technical sense adopted here. Ordinarily we tend to use and limit models to tridimensional spatial shapes such that two-dimensional diagrams are usually not considered as models. It is for this reason that a music score or a piano arrangement are never considered as models of the symphonies they are written for everyday usage of the term model.

The second everyday connotation of a model is the idea of a norm to which actual things conform more or less imperfectly. This gives rise to the possibility that the clay figure is a model of the human body in the sense discussed above while the human body, which informed the artist, is also a model in the second sense of a guiding norm. The third sense in ordinary parlance, is when a model begins to acquire the status of a specification of a set of qualities to which actual cases conform rather than approximating some concrete thing. So when we talk of

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<sup>43</sup> Alfred Tarski, "Establishment of Scientific Semantics" in *Logic, Semantics, Metamathematics, Papers from 1923 to 1938*, Corcoran, (ed.) (Indianapolis, Hackett publishing Company 1983) p 407

a model teacher, model husband etc, this is the underlying connotation. This is a sense, which is beginning to point into the direction in which a model is understood in model-theory.<sup>44</sup>

All the above aspects of models in everyday language presuppose a degree of isomorphism in the definition of models. The technical definition that model-theory adopts, however, does not presuppose such an isomorphism. A model is definable technically as a representation or abstraction of an actual object or situation. It is frequently used to demonstrate the relationships between action and reaction in terms of cause and effect. Three basic types of models categorized by their degree of abstraction are identifiable, namely: iconic (physical), analog (diagrammatic) and symbolic (logico-mathematical).

An iconic (physical) model is a representation of some item either in an idealized form or on a different scale. Thus, a representation is an iconic model to the extent that its properties are the same as those possessed by what it represents. Examples of such models are photograph, blueprint, map or a prototype of an item. Analog models can represent dynamic situations and are used more than iconic models which are basically static. They effectively depict relationships between cause and effects. Examples are demand curves, flow charts, frequency distribution curves, speed time graphs etc.,. Lastly, symbolic models are the most abstract of the models. They take the forms of figures, formulae or equations. The most common example of this is a mathematical equation like Einstein's formula  $E= mc^2$  . Model-theory takes the technical understanding of models.

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<sup>44</sup> Yuen Ren Chao, "Models in Linguistics and Models in General", in Nagel Ernest, et al, *Logic, Methodology and Philosophy of Science* (California, Stanford University Press, 1962) p 558

Briefly, model-theory is a formal inquiry into the relationship between a theory and its structure. It provides a way of attributing meaning to expressions of a given sign system. Vaught described it as any discussion of the relationship: “(structure  $V$ ) is a model of (sentence,  $s$ )”.<sup>45</sup> In its early phase model-theory was almost exclusively concerned with only deductive sciences, which could be written as formalized languages. But model-theory holds that any formal language or system is certainly about a given structure. It is on the basis of this relationship that models of a formal system can be discerned. In order for this to take place it is vital that there be an interpretation function which assigns elements of the structure to the elements of the formal system. Effectively, any formal language together with the interpretation function on it constitutes a *theory*. A theory is, therefore, a formal system defined as:

- i.) A formal language
- ii.) Sentences of the language
- iii.) An interpretation function of the system

Model-theory presumes this technical concept of a theory and to it includes the structure, which the theory is about. It is, thus, a way of attributing meaning to any sentence of a formal language. Its basic idea is to assign a truth-value to sentences about a given domain of discourse, where the domain simply defines any set of particular interest to us. A model in this technical sense allows for models to be concrete or abstract, isomorphic or non-isomorphic. Consequently, model-theory seeks to establish the relationship between a theory and its models. This will be the theory to inform the study. However, it will be complemented by the theory of

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<sup>45</sup> Robert L. Vaught, “Model Theory before 1945” in *Proceedings of the Tarski Symposium vol. XXV*, Henkin, H. et al (eds.) (Rhode Island, American Mathematical Society, 1974 ) p 153

linguistic signs expounded by Rudi Keller. This will provide us with a framework for reconstructing Wittgenstein's semiotic theory.

Keller's theory is preferable because it focuses on linguistic semiology by putting emphasis not on formal languages but on the semiotic processes in natural languages. This is of special interest to this study since it can play a paradigmatic role for the formulation of a general semiology which includes both formal and natural languages. Equally important, is the fact that it brings into unity the thoughts and ideas gleaned from a variety of traditions. His theory, therefore, recombines the two main traditions of semiotics and semiology as expounded respectively by C.S Pierce and Ferdinand de Saussure. In his system, Pierce conceived of signs in a logical sense. He wrote:

I hope to have shown that logic in its general acceptance is merely another word for semiotics, a quasi-necessary or formal doctrine of signs...I have in mind the fact that we observe the nature of such signs as best we can, and, on the basis of fine observations, by a process which I do not hesitate to call abstraction...<sup>46</sup>.

Saussure, on the other hand, emphasized the social function of the sign in his semiology. He thus studied the life of signs in society and stated that:

Language is a system of signs that expresses ideas, and is therefore comparable to writing, deaf-mute alphabet, to symbolic rites, to codes of good manners, to military signals, etc. It is simply the most important of these systems. A science that studies the life of signs in society is therefore conceivable<sup>47</sup>.

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<sup>46</sup>Charles Sanders Pierce, *Philosophical Writings of Pierce* (New York, 1940) p 98

<sup>47</sup>Ferdinand de Saussure, *Course in General Linguistics*, Translated by Wade Baskin, (New York, Philosophical Library, 1966) p 16

Keller provides a framework for reconciling the two aspects. He is concerned with the dynamics and the evolution of linguistic signs in natural languages. He reconceptualises communication as less to do with the operation of packing, sending and unpacking of ideas and messages. Instead, he sees it as an inferential process whereby interlocutors construct arguments and attempt to draw certain conclusions. According to him therefore, "linguistic signs have less the character of packing cartons than that of premises for drawing interpretive conclusions"<sup>48</sup>. This is a position that reflects Pierce's logical approach to semiology.

Secondly, Keller adopts an approach that discusses the basic principles of the formation and dynamics of signs, thus automatically answering questions regarding the architecture of sign systems e.g. how are signs built? What are their parts? How many sides do they have? How can signs be classified? This too responds to Saussurean social approach to semiology. Thus Keller's approach can be said to be *formal-pragmatic*, and can be employed to complement model-theory and to explore the semiotic and pragmatic aspects of Wittgenstein's philosophy.

But in philosophical literature, model-theory is opposed to proof-theory. The core idea of proof-theory is that a formal system should be considered only in terms of its syntactical relations of its symbols without reference to the intended meanings of the system. The contention of proof-theorists is that the question of meaning is highly subjective and can therefore not be brought to a rigorous systematization. We ought therefore only focus on the syntax of a sign system because that is the only field we can rigorously formalize. The property

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<sup>48</sup> Rudi Keller, *op. cit.*, p 43

of consistency of the system and the relation of derivability are the ones investigated by proof-theory. The study opts for model-theory over proof-theory not because the latter is wrong but simply that it is insufficient for a semiotic investigation in which meaning of a sign system is integral if communication is ever to take place. So, in model-theory, syntactical relations of the symbols alone are not enough. It has to incorporate semantic and pragmatic relations too. The blend of these two theories will constitute theoretical framework that will aid us in focusing on a) the relation of representation between sign systems and what they purport to represent in the thought of Wittgenstein and b) the transmission of this relation between emitters and receivers of signs in a communication process

## **1.8 ASSUMPTIONS OF THE STUDY**

In carrying out the study, the following assumptions will be made:

- a) That Wittgenstein's philosophical insights include a semiotic theory
- b) That all semiotic systems can be formalized recursively from a finite set of components and rules
- c) That communication constitutes the pragmatic aspect of Wittgenstein's theory of language

## 1.9 METHODOLOGY

The study is carried out through the consultation of written sources, especially library sources. This has involved a critical survey of both the primary works written by Wittgenstein and the secondary works or commentaries on Wittgenstein. It has therefore followed a hermeneutical approach which is essentially expository-evaluative. As such, it has used a three-fold method: descriptive, analytic and synthetic.

- a) **Descriptive:** This method has been applied to distinctly present the respective semiotic theories of the *Tractatus* and the *Investigations*. It has been used to expose the above-said theories, as they can be detected from the two works. It is, therefore, expository in nature.
- b) **Analytic:** This method aids in the examination of philosophical material. It involves two intellectual activities, which are practically inseparable but theoretically distinguishable.
  - i) A rational reconstruction of the ideas and thoughts of a thinker by identifying the arguments he/she adduces in his/her works. This requires a piecemeal consideration of the actual argumentative procedures used by the thinker to construct his/her theories in the field under consideration. The result of a rational reconstruction of ideas is, to a certain extent conjectural since some of the components used in his argumentation are ambiguous and we can never at times figure out their exact meanings and applications, and secondly the historical dimension might play a big role in shifting the senses of the

words, in conditioning his intentions and omissions. But we, in doing the reconstruction, may overlook some of these factors as superseded and irrelevant yet they had an enormous influence on the thinker. This might also warrant a textual criticism to determine such historical factors. In the study, it will be used to identify and reconstruct the semiotic and linguistic arguments adduced by Wittgenstein in his works.

ii) It also involves philosophical criticism. This is a task of logically demonstrating the strengths and limitations of the thinker's own reasoning. This is done on the basis of the reconstructed conjecture and/or discovered lacunae. The criticism is purely qualitative and not quantitative. In the study, it will enable us to determine the strengths and limitations or consistencies and inconsistencies in the arguments of Wittgenstein with regard to the concepts under investigation.

c) **Synthetic:** This method aids to decipher and isolate, in a systematic way, a position of a given thinker regarding a specific issue which the thinker did not address in isolation from other topics. In the study, it will be applied to appraise and synthesize Wittgenstein's thought in the light of the theoretical framework of model-theory complemented by Rudi Keller's theory of semiology. It is deconstructivist in Jacques Derrida's sense because it involves the constant and unavoidable creativity of the researcher or reader of a text. The researcher is not merely interpreting the text but is concurrently writing a text in his or her own right.

In the study the descriptive and analytical methods will be employed in the next three chapters, while the synthetic method will be predominantly used in chapters five and six in order to synthesize and apply the respective theories reconstructed from the two works.

## CHAPTER TWO

### LOGIC AND LANGUAGE: A CRITICAL EVALUATION OF FORMAL-LOGICAL THEORY OF LANGUAGE

#### 2.1 INTRODUCTION

The main objective of this chapter is to provide a critical evaluation of the formal-logical theory of language as it has been developed from the perspective of study in philosophy, logic and linguistics. This will be done by first examining the main concepts and principles of philosophy and the contributions of logic to the development of the concept of language. The chapter will then proceed to a critical evaluation of the formal-logical theory of language, which is based on the idea of language as a system of signs. The chapter will conclude by discussing the implications of the formal-logical theory of language for the study of language in philosophy, logic and linguistics.

#### 2.2 LOGIC AND LANGUAGE

Logic and language are two concepts that are closely related. Logic is the study of the principles of reasoning, while language is the system of signs that we use to communicate. The formal-logical theory of language is based on the idea that language is a system of signs that can be analyzed in terms of logic. This theory has been developed by philosophers and linguists, and it has had a significant impact on the study of language in philosophy, logic and linguistics. In this chapter, we will examine the main concepts and principles of the formal-logical theory of language, and we will provide a critical evaluation of this theory.

## **CHAPTER TWO**

# **LOGIC AND LANGUAGE: A CRITICAL EVALUATION OF FORMAL-LOGICAL THEORY OF LANGUAGE**

### **2.1 INTRODUCTION**

The main objective in this chapter is to give broad outlines of the formal-logical analysis of language as has been construed from the perspective of analytic philosophy which includes Wittgenstein's writings. This will involve a historical survey of the logic-language nexus in philosophy and the contributions of Wittgenstein in the elaboration of this connection. But the chapter's main is to demonstrate that strictly formal-logical interpretation of Wittgenstein's writings is limited and can, therefore, blind us from perceiving the full potential and richness of his thought.

### **2.2 LOGIC AND LANGUAGE**

Many logicians and philosophers including Frege, Russell and Wittgenstein, have held strong convictions that there is an intricate link between logic and language. Indeed, this has been the basic assumption of the major 'linguistic' schools of philosophy in the twentieth century. The schools are namely, logical atomism, logical empiricism, ordinary-language philosophy and philosophic linguistics.

Logic consists of rules and principles of correct reasoning. Reasoning as understood by logicians implies a process in which the mind proceeds from a given set of propositions in order to arrive at new ones. The derived propositions are presumed to be consequences of the given set of propositions which in logical parlance is referred to as premises. Logic is therefore describable as the theory of consequence relations between propositions. It seeks to systematize the rules that will enable us to draw all and only the proper consequences of a given set of propositions. A proposition in its turn is understood as the content of a sentence that has a truth-value. Tarski notes that "the set of all consequences of the set A is the intersection of all sets which contain the set A and are closed under the given rules of inference". A set is said to be closed under a given operation whenever the operation, if applied to the members of the set always yields a result which is still a member of the set. From the above definition it follows that every sentence being an element of a given set can be regarded as consequence of that set: "the set of consequences of a set of sentences consists solely of sentences, and that the consequences of consequences are themselves consequences"<sup>49</sup>. This implies that logic deals with consequential relationships between propositions alone with the help of specific rules of inference.

We can assume from the above description that the concept of a sentence and the relation of consequence are the primitives in a logical system. A sentence can then be precisely defined by rules of formation and a consequence defined by rules of inference.

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<sup>49</sup> Alfred Tarski, "Methodology of Deductive Sciences" in *Logic, Semantics, Metamathematics, Papers from 1923 to 1938*, Corcoran, (ed.) (Indianapolis, Hackett publishing Company 1983), p 63

The rules of formation would generate an infinite set of well-formed expressions. But such a set is amorphous until it is structured by the relation of consequence. The rules of inference provide the structuring relations. The union of the set of rules of formation and the rules of inference produce what is commonly referred to as logical syntax. Thus a logical system constitutes a language in its own right with a special syntax to which we can impose a semantic system in order to interpret the expressions of the language.

Language in its turn is a system of signs by means of which an infinite number of sentences, not necessarily truth-valued, are generated from a finite set of rules operating over a vocabulary. The minimum conditions for a language are therefore a vocabulary and a set of generative rules that will ensure that the speakers generate all and only well-formed sentences. The infinity of the sentences generated in a language is due to the recursive nature of the generative rules which allows the speakers of a language to reapply the same rules endlessly to their own output to yield a limitless number of sentences. This is what accounts for the unbounded creativity of languages evidenced by the ability of speakers and hearers to produce and understand infinitely many novel sentences of their languages.

From the above descriptions of language and logic it is easy to notice the relationship that exists between the two fields that makes them curiosities of philosophers. Philosophy in general and logic in particular take on occasions the conceptual systems elaborated by various disciplines and seek to explain and clarify their contents in order to make them fully comprehensible. They pursue this task by describing the structure of

these conceptual systems, analyzing the methods by which such systems are arrived at and evaluating the validity of the claims made for them. The concern is to learn about conceptual knowledge from the manner in which such knowledge is expressed and communicated in language. The assumption underlying this pursuit is that the form and content of conceptualization is strongly linked to the form and content of language. It is precisely this link between logical, conceptual structures and linguistic structures that some philosophers such as Wittgenstein undertook to investigate.

It is possible to trace the tracks of the logic-language nexus throughout the history of philosophy. If we hypothesize that the connection between logic and language began with the sophists in their overriding concern with rhetoric, the Socratic reaction to sophism can arguably be the point at which the logic-language connection became clearly identified. In his opposition to the sophists, Socrates brought into philosophy the practice of precise definition of key concepts in order to overcome the former's skepticism and relativism. Plato in his dialogues which employed the figure of Socrates as the principal character continued with the Socratic practice of searching for universal and objective definitions of concepts.

Aristotle in his *Organon* sought to systematize the logical principles that ought to guide the art of definition and inferences. He developed the theory of terms in the form of subject-predicate distinctions and applying this to his metaphysics he thought that the logico-linguistic categories of subject and predicate correspond to the ontological categories of substance and qualities. He also elaborated the theory of quantifying

expressions and the inferences whose validity depends on the meanings of such quantifiers.

During Hellenistic philosophy, the Stoics advanced theses on inferences based on sentential conjunctions or connectives. They particularly debated the nature of the conditional statement and its truth-conditions. In their investigations regarding the nature of truth, they discovered the famous liar's paradox which was formulated by Eubulides.<sup>50</sup> This paradox revolves around self-referring sentences such as the following, "this illustrating sentence is false":

- a. If it is false then it is true because it is false that the illustrating sentence is false, therefore the illustrating sentence is true
- b. If it is true then the illustrating sentence is false because it is true that the illustrating sentence is false, therefore the illustrating sentence is false

This paradox persisted for centuries until it was satisfactorily resolved by the logician Alfred Tarski by his methodological distinction between an object language and a metalanguage in pointing out that the paradox is a result of the confusion between these two levels of language. Thus, from these early stages in the history of philosophy we can already detect concerns arising out of the relation between language and logic specifically in relation to problems of quantifying expressions, grammatical conjunctions and their respective inferences and the semantic problem of truth.

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<sup>50</sup> Anil Gupta, "Truth" in Lou Goble (ed.) *The Blackwell Guide to Philosophical Logic*, Oxford: Blackwell Publishers, 2001 p 90

In the medieval period, the scholastics developed the theory of supposition according to which the meaning of words is to be determined by their form and relationships within the context of other words. Therefore, they attempted a systematic analysis of terms and their combinations in sentences. For instance, they developed the theory of distribution of terms in order to determine if a given sentence says something about the entire extension of a term or just about a part of the extension. The extension of a term refers to the collection of objects it refers to. If a sentence says something about the entire extension then the term is said to be distributed in the sentence otherwise it is undistributed.

Besides the concerns with the relations between words, the Middle Age also had concerns with the semantic relation of reference from which we have inherited the distinction between use and mention of words to which they respectively referred to as the *suppositio formalis* and *suppositio materialis*. A word is used when it is employed to refer to something and it is mentioned when it is referred to in an expression. They also drew a distinction between categorematic terms and syncategorematics. The former are words which refer to something in the world while the latter do not have references yet they are essential to the meaning of sentences and the logical relations between them. In the supposition theory the scholastics also analyzed sentences and arguments involving multiple quantifications.<sup>51</sup>

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<sup>51</sup> L.T.F Gamut, *Introduction to Logic*, Vol.1, Chicago: The University of Chicago Press, 1991, pp 11-12

In the modern period Leibniz proposed a programme for logic which would later be the inspiration towards the mathematization of logic. He proposed the creation of a universal language (characteristic universalis) which ought to have been a language which is maximally clear without any ambiguities and precise without any vagueness and figures of speech which are the common stock of natural languages. Vagueness, ambiguity and figurative speech render natural language inadequate for effective expression and communication of knowledge, hence the need for such an ideal language capable of clear and precise expression of knowledge.<sup>52</sup> The language would have basic rules of formation (ars combinatoria) which allow for the manipulation of the symbols of the universal language. Such manipulations or rules would be taken to correspond to the mental operations we perform in our thoughts. Finally, the language would be equipped also with rules of inference (calculus ratiocinator) which would serve as a means of calculation in order to check the validity of chains of reasoning in this language.

Even though Leibniz himself never executed his programme, it provided an ideal towards which many philosophers aspired. In the nineteenth century a number of mathematical philosophers, particularly, Bernard Bolzano, George Boole, Charles Sanders Peirce and Guiseppe Peano began to make progress towards the realization of Leibniz's programme. But it was the German mathematical philosopher, Gottlob Frege who brought this effort to full fruition. The system of logic outlined in his magna opus, *Begriffsschrift* (concept notation) created a symbolic system of logic with a

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<sup>52</sup> Pierre Wagner, *La Logique*, Paris: Presses Universitaires de France, 2007 pp 6-7

mathematization of the concept of validity of chains of arguments which are the hallmark of modern logic. It was based on the logical constants of negation, conditional, universal quantifier and the identity relation as primitives out of which all the rest of logical operations were derived. Frege's system was powerful enough to be able to combine the following:

- a. Syllogistic theory of Aristotle
- b. The theory of connectives of the Stoics
- c. The problem of multiple quantification that troubled the medieval philosophers
- d. The theory of polyadic relations
- e. Inferences involving identity

The greatest insight of Frege was that every complex expression of the system could be constructed in a stepwise process by the application of specific rules. But most importantly, was that these rules do not only generate complex expressions but they also transfer meaning from the lower level expressions to the derived expressions. This is the principle attributed to Frege known as the principle of compositionality or simply as Frege's law according to which the meaning of a complex expression is a function of the meaning of its components. The *Begriffsschrift* in which Frege's logical system was elaborated was initially intended to describe how language is used in mathematics and to advance the logicist thesis which argues that mathematics is founded on and therefore ultimately derivable from logical concepts and principles.

But in his later writings Frege began to show particular interest in natural language by trying to see the relationship between his formal language and the natural language. In this regard he echoes Leibniz concern that natural language is unreliable for communication of knowledge when he draws an analogy that his formal language is to natural language what a microscope is to the naked eye.<sup>53</sup> Other philosophers such as Bertrand Russell, Ludwig Wittgenstein, Rudolf Carnap, Hans Reichenbach followed closely along these lines of developing and relating formal languages to natural language. This is why Frege is commonly referred to as the father of philosophy of language. However, Frege's work remained largely unknown until the contact with Bertrand Russell who took it up and gave logicism proposed in it its full and complete expression in a work co-authored by Alfred North Whitehead, namely; the *Principia Mathematica*.

The *Principia Mathematica* was a monumental work and its logicist programme aroused great interests in the logical foundations of mathematics. Studies focusing on the system of *Principia Mathematica* revealed inherent weaknesses of the logicist programme. Notable among these were Gödel's two incompleteness theorems. The first theorem holds that if an axiomatic system is consistent, then there is at least one theorem which can neither be proved nor disproved within the system. Mario Bunge describes such a theorem as one that is undecidable and gives the definition that "formula A is said to be undecidable in theory T if neither A nor  $\neg A$  is a theorem of

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<sup>53</sup> Pierre Wagner, *Op. Cit.* p 63

T”.<sup>54</sup> The second theorem holds that no theory can prove itself to be consistent. This implies that it is not possible to prove a system of predicate logic to be consistent.<sup>55</sup> By showing that predicate logic is undecidable Gödel concomitantly demonstrated that there is no mechanical method for testing validity of arbitrary arguments in the universal language. So the implementation of Leibniz programme showed at the same time that it is not fully realizable. As a consequence to the revealed shortcomings of the system of *Principia Mathematica* logicism declined and logical research was directed more to the metatheoretical studies of logic in which the systems of logic themselves become the object of investigation by means of mathematical techniques.

But while revealing the shortcomings of logicism which it was intended to defend, the *Principia Mathematica* excited enthusiasm in the direction already set by Frege of relating formal logic to natural language. Russell himself was on the forefront of this pursuit and published a popular article entitled “On Denoting”. He exploited the theory of relational propositions and multiple quantification of Frege as expounded in the *Principia Mathematica* to carry out analyses of certain sentences known as the definite descriptions. His analysis reinforced the assumption that ordinary language is not only ill-equipped to deal with scientific and philosophical discourse but it also exposed the fact that there can be tension between the logical form of expressions and their grammatical form. Failure to notice this can make language to be misleading thus lending itself to faulty logical inferences. This thesis of Russell inspired and focused

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<sup>54</sup> Mario Bunge, *Treatise on Basic Philosophy*, Vol.7, part I, Dordrecht/Boston/Lancaster: D. Reidel Publishing Company, 1985, p 49

<sup>55</sup> Simon Singh, *Fermat's Last Theorem*, London: Fourth Estate, 1997, p 159

philosophical attention to the close relation between logic and language thereby sparking in its wake, divergent philosophical positions with regards to the nature of the relation between the two namely, logic and language.

To some philosophers ordinary natural languages are seen as a hindrance to clear logical thinking while for others it is unproblematic to logic. The philosophers who thought that natural language is a problem for logical reasoning proposed and embarked on the construction of artificial or ideal languages.<sup>56</sup> Such languages are supposed to avoid or reduce the problems of ambiguity, vagueness, irregularity of meaning that is common in ordinary natural languages. Thus every description which is intended to become part of our well-established body of knowledge should be expressed in terms of an ideal language. It is the language with capacity to articulate clearly and consistently a scientific body of knowledge. This is due to its structured nature in virtue of a precisely regulated formal system. The proposition for an ideal logical language raises yet another basic debate among philosophers concerned with language on the relationship between the two types of languages namely; artificial and natural. Küng has argued that while differences remain between the two types of languages, modern linguistic study carried out by linguists and logicians such as Chomsky, De Saussure, the Prague and Copenhagen schools of structuralism, among others:

have brought to the fore the affinity between the natural languages and languages of symbolic logic, without blurring their real differences in the process...This permits the structure of natural and logistic languages to be compared more accurately than has been possible so far, so that points of agreement and difference can be precisely stated. It is, for example, interesting to compare the way in which all the sentences of the English language can be

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<sup>56</sup> Rudolf Carnap was on the forefront in the attempts to construct ideal languages. Cf. Carnap, R. *The Logical Syntax of Language*, New York: Harcourt, Brace and Co., 1937

derived from a number of so-called kernel sentences by means of so-called transformations, with the way in which the sentences of logistic systems are formed from atomic sentences in accordance with rules of formation. Deduction rules, too, appear to be comparable to a special kind of transformations.<sup>57</sup>

But beyond the interests on the relation between the symbolic languages and the natural languages there is the much more basic philosophical concern on the relation between the structures of linguistic systems in general and the ontological structure of the world. This is what is called the problem of representation. The speculative grammarians<sup>58</sup> attempted to construct grammars purely on philosophical grounds on the assumption that there was a correspondence between grammatical categories and the ontological categories. Grammar is therefore considered as a mirror of reality and essentially the same in all languages whose differences are merely accidental. The contention of the speculative grammarians was that through philosophical consideration of the true nature of things we would discover the true form of universal grammar.

As far as the artificial languages are concerned the question of its relation to reality is much more acute given that they are artificially constructed to conform to a logical ideal guided by precise rules. Küng observes that despite the variety of these systems of logical languages they all share the commonality that they are explicitly defined by:

definite logical and ontological views of their inventors. The translation from a natural language into a logistic language, i.e. the logistic analysis of language, involves an ontological commitment for every sentence translated. The

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<sup>57</sup> Guido Küng, *Ontology and the Logistic Analysis of Language*, Dordrecht-Holland: D. Reidel Publishing Company, 1967, pp 5-6

<sup>58</sup> The term speculative in this context does not have the current pejorative connotation of being imaginary but a specific connotation deriving from Latin "speculum" which means a mirror. Cf. D. P. Simpson, *Cassell's New Latin Dictionary*, London: Cassell and Company Ltd., 1959

categories of logistic signs are intended to stand in a systematical correlation to the categories in which we see the world, so that it is meaningful to investigate this correlation between the precise syntactic structures of a logistic system and the ontological structure of the world that serves it as a model.<sup>59</sup>

In this view it is through the study of the structure of the artificial languages that we can come to discover the true structure of reality.

The three most influential twentieth-century movements to investigate the logical connection between language and logic were logical atomism, logical positivism and ordinary language-philosophy. The purpose of this chapter is merely to indicate how Wittgenstein's formal-linguistic construction took place in this context. For this matter, I will reduce the movements into two namely, logical empiricism and ordinary-language philosophy. Logical empiricism will embrace the first two movements (logical atomism and logical positivism) because their general spirit was the same despite the differences in their specific details. Wittgenstein's two major works namely; the *Tractatus-Logico-Philosophicus* and the *Philosophical Investigations* respectively fall into the two movements.

Despite the heterogeneity that might exist in these movements of philosophy, some two common elements run across them. The first is the basic assumption that natural languages are inherently unstructured and unsystematic aggregates of verbal constructions. Secondly, there is the general hostility to metaphysical speculation which they all contend springs from the unrestrained linguistic freedom. The difference between them would originate only in their orientations aimed at addressing these two

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<sup>59</sup> Guido Küng *Op. Cit.* p 9

issues.

The 'early' Wittgenstein carried out an analysis aimed at unveiling the underlying logical structure of language which makes it possible for us to use it to depict the true structure of reality. The exposition of this logical syntax would therefore put a constraint on linguistic freedom thereby preventing metaphysical expression. Jack Odell observes that "as far as Wittgenstein of the *Tractatus* was concerned, there is only one language, since all languages are subject to the same basic logical considerations."<sup>60</sup> In TLP 5.5563 Wittgenstein asserts that "All propositions of our colloquial language are actually, just as they are, logically completely in order". This should not however lead us into thinking that Wittgenstein thought that natural ordinary language is perfectly in order. He actually contended that on the surface, our languages are highly ambiguous, unclear and therefore prone to misleading us when we employ them. It is thus the task of the philosopher to carry out a logical analysis in order to lay bare the universal, hidden logical structure beneath the surface. Such an underlying structure he referred to as the logical syntax of language. "The only way to avoid confusions is to use unambiguous symbolism, which obeys the rules of logical grammar-of logical syntax"- TLP 3.324. Wittgenstein recognized the logical symbolism of Frege and Russell as the best for the purpose of developing an unambiguous symbolism. Wittgenstein was led by his analysis to uphold a picture-theory of meaning according to which sentences are meaningful only in the measure that they are either about the abstract realm of logic and mathematics or the concrete world of experience; otherwise they are about nothing at

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<sup>60</sup> Jack S. Odell, *On the Philosophy of Language*, Australia: Thomson Wadsworth, 2006, p 50

all. His ideal of unveiling the underlying logical structure of language was aimed at excluding metaphysics from the class of meaningful discourse. This position commits Wittgenstein to two conclusions. Firstly, he is led to an essentialist conception of language according to which all language has an essence and logic effectively is the very essence of language. Secondly, as a consequence of his analysis of meaning and equally consistent with the description of logic earlier offered, he comes to the position that meaning is linked to truth so that only declarative sentences of mathematico-logical and scientific discourse can be meaningful. This serves his purpose of eliminating metaphysics but also many others such as ethics, religion, and aesthetics among others.

In the *Philosophical Investigations* however, Wittgenstein became dissatisfied with his position expressed in the *Tractatus*. He now thought that ordinary language was in perfect order as it is and denied that there is any hidden logical structure which defines language. What is really needed is the restoration of normal, ordinary usage of language. Indeed, metaphysics arises from misuse of language and it would naturally disappear and never reappear when philosophers concentrate on the description of linguistic facts. Jerrold Katz proposes that Wittgenstein changed his view because he realized that his earlier position was too scientifically oriented<sup>61</sup>. Philosophy for 'later' Wittgenstein could not be modeled on a scientific paradigm for the reason that, scientific terms are univocal so as to ensure precise and technical representation of facts. On the other hand, terms of philosophical importance ordinarily are predominantly equivocal. They thus, have a wide variety of uses, some of which depend

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<sup>61</sup> Jerrold Katz, *The Philosophy of Language*, New York and London: Harper and Row Publishers, 1966, p 83

upon features, such as vagueness and ambiguity. What then is needed is not a logically rigorous regimentation of ordinary language to get rid of the ambiguity and vagueness but rather a detailed description of the ways in which speakers actually use words and expressions in their ordinary employment of a natural language. This means that in philosophy we must accept and put up with multifarious character of language rather than attempt to eliminate it. In PI 66 Wittgenstein provides us with the example of the term 'game' to illustrate this point. He observes that there is nothing in common to all the activities which we refer to by the generic term 'game'. Some are ball-games while others are board-games or even card-games. Some are played for amusements while others are played for winning. Some take skill while others take only luck. If we go through many more games we will notice nothing common in them all but only "a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail".

This position led Wittgenstein to develop a new theory of meaning according to which *meaning is use*. This has come to be commonly referred to as the use-theory of meaning. He recognized that the fundamental mistake in the *Tractatus* was to take one function of language and making it the absolute and essential function of language. In the very opening pages, PI 23, of the *Investigations* he remarks:

But how many kinds of sentences are there? Say assertion, question, and command?-There are countless kinds: countless different kinds of use of what we call 'symbols', 'words', 'sentences'. And this multiplicity is not something fixed, given once and for all; but new types of language, new language-games, as we may say, come into existence, and others become obsolete and get forgotten.

The *Tractatus* had assumed that only one language-game namely assertion, is the essence of language. This is the mistake the new theory of meaning sought to correct. The gist of this theory is that the different functions or uses that a language can be put to and the specific contexts that an individual finds himself or herself in determines the meaning intended by the speaker of a language. This viewpoint commits Wittgenstein to conceive of language as open-textured, multidimensional, and flexible. This leads to a non-essentialist view of language. So, unlike the earlier position of the *Tractatus*, language lacks an essential defining characteristic. Logic is therefore not the essence of language, instead it is just but one of the infinitely many functions that a language can be put to.

While the ideal-language philosophers and ordinary-language philosophers differed on their attitudes towards natural language, they all shared the same set of assumptions according to which natural language is unsystematic, vague, ambiguous, unstructured and misleading. However, there was at the other extreme of the spectrum, linguists who were equally well versed in logic and mathematics but proceeding from a different set of assumptions. They presupposed that language is systematic, structured, creative and therefore capable of precise formulation. Among these are Noam Chomsky, Jerrold Katz, Jerry Fodor, Postal, Harris, Yehoshua Bar-Hillel and Montague. Initially, these opposed sets of assumptions created a gulf between the philosophers of language and the linguists but overtime there is a convergence between the two groups. This is due to the fact that linguists are establishing theories which are of interest to philosophers for

example, the revival of the old debate between rationalists and empiricists; the nature and structure of the mind; the problems of analyticity and syntheticity; the problem of synonymy and translatability. Linguists also in their turn are finding great insights from philosophers and logicians especially as they increasingly accept logical tools to analyze linguistic problems. They also receive great insights from formal philosophical semantics which they attempt to extend to the construction of natural language semantics. Consequently, the convergence of these schools of philosophy of language has created the consensus that logic and language are closely related and that logic is relevant to language only in so far as it serves to represent and formalize the part of language related to inferential thinking.

### 2.3 CRITICAL REMARKS

In the foregoing section we have come to have a general grasp of Wittgenstein's conception of the connection between logic and language in his respective major works, the *Tractatus* and the *Philosophical Investigations*. It is this logic-language relation that I have referred to as the *Formal-Logical Theory of Language* and we now attempt to show the limitation of this construction of a theory of language in Wittgenstein's works.

The 'early' Wittgenstein and indeed the entire movement within which it falls, made the error of confining efforts to the construction of an ideal logical language free of ambiguities and vagueness in order to clearly represent scientific, meaningful discourse while avoiding metaphysical speculations. In this effort Wittgenstein attempted to

construct and recommended the construction of “a highly arbitrary and conceptually impoverished theories about a class of artificial languages whose structure bears little similarity to the structure of natural languages.”<sup>62</sup>

The ‘later’ Wittgenstein and the entire ordinary-language movement, by pursuing an anti-essentialist path, ended up repudiating any attempt to know anything systematic about the nature of language. Their efforts resulted in a highly informal, unorganized assortment of heterogeneous data with no determined philosophical relevance.

Nevertheless, the insights from both phases of Wittgenstein’s thought can inform and inspire us into new directions of reflection about the nature not only of human language but rather the nature of human communication in general which is the core function of language. The formalized theory of linguistic structure in general of the ‘early’ Wittgenstein combined with the ‘later’ Wittgenstein’s demand that linguistic description be concerned with and governed by the facts of natural language would yield a richer and fruitful description of language in general. Besides, the insights derived from linguistic reflections in Wittgenstein’s works can provide us with a basis for elaborating a generalized semiotic theory which will thereby transcend the highly restricted formal-logical theory of language. It is this that we will attempt in the subsequent chapters of this study. Francesco Barone aptly captures this by stating that

An important aspect of Wittgenstein’s doctrine should be clear: linguistic symbolism is studied in the form of a projective representation of reality; any evocative overtone of language, its normative function, its capacity to create worlds different from the world of cognition, is ignored or neglected. Language

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<sup>62</sup> Jack S. Odell, *Op. Cit.* p 51

is considered as an instrument of cognition; so long as this is kept in mind, it becomes perfectly understandable that neo-positivist thinkers should find in Wittgenstein a model and an approach for the analysis of scientific language.<sup>63</sup>

The picture-theory of language which identifies language with logic is characterized as naïve by André Martinez who describes such theories thus:

According to a very naïve, but widespread idea, a language is a repertory of words, that is, of vocal or written signs, each one of which corresponds to one thing... This idea of the language-repertory is based upon the simplistic notion that the whole world is ordered, previous to man's vision of it, into categories of objects, all of which are perfectly distinct from each other, and each of which is necessarily identified by a name in each language... Learning a second language would on that view simply consist in memorizing a new nomenclature similar to the old at every point. The few cases where you are forced to note exceptions to this parallelism are then called 'idioms'.<sup>64</sup>

This view has been challenged by a number of philosophers ranging from as early as Bacon, Locke, and Leibniz. The contention is that every language has its own "genius". All languages are different from each other not simply on the phonic basis but more on lexical and syntactical dimensions which are never coincident. Francis Bacon, as Tullio de Mauro notes, observed that every language has its own way of organizing meanings and according to him these semantic differences spring from the differing characters of the peoples who use them.<sup>65</sup> In other words semantic differences in languages reflect the cultural characteristics of their speakers. Each language has the capacity to mould the thought of the communities that speak it. We cannot bring language as the 'early' Wittgenstein does under the common denominator of one single universal type of logic.

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<sup>63</sup> Francesco Barone, *The Logical Neo-Positivism*, Torino, 1953: p 103

<sup>64</sup> André Martinez, *Elements of General Linguistics*, 2<sup>nd</sup> ed. Paris, 1960: pp 14-15

<sup>65</sup> Tullio De Mauro, *Ludwig Wittgenstein: His place in the Development of Semantics*, Dordrecht-Holland: D. Reidel Publishing Company, 1967 p10

Instead, each language forms its own patterns during the organization of human experience into meanings. These organizational patterns persist even when languages begin to express common school-established rationality. These criticisms of the naïve connection between language and thought make it absolutely clear that languages are not to be perceived as passive instruments for expressing thoughts but are rather active structures that determine thought. Besides, languages are not mere transcriptions of universally equal and predefined concepts but are instead historically diversified foundations upon which notions and concepts are built. This is the same line of thought that the 'later' Wittgenstein would also pursue. Ironically, Tullio De Mauro, points out that:

The 'early' Wittgenstein worked from a total acceptance of traditional ideas. But, accepting them, he gave them a formal rigour in which they had never been cast, not even by Aristotle. In this way he laid bare their most secret links and exposed all the consequences logically deriving from them to the limits of absurdity, indeed – and here lies his merit – beyond absurdity.<sup>66</sup>

Susan Langer also raises an instructive criticism of the logical empiricists' dismissal of presentational form of, for example, metaphysics and aesthetics as mistaken and based on a narrow understanding of our ordinary communication. She contends that symbolism, which is at the heart of communication, goes beyond the limits of discursive language and asserts: "There is an unexplored possibility of genuine semantics beyond the limits of discursive language".<sup>67</sup> Such a semantic would be the subject and interpretation of presentational form, which is the expression of our experience of the physical space-time world, which do not fit the grammatical scheme

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<sup>66</sup> *Ibid.*, p 23

<sup>67</sup> Susanne K. Langer, "Discursive and Presentational Forms" in Innis, R.E. (ed.) *Semiotics: An Introductory Reader*, London, Hutchinson and Company Publishers Ltd., 1985, p 95

of our discursive form. This is a suggestion that in order for us to overcome the limitations of logico-analytical trend in philosophy, we must turn to semiotics. She notes that the logical analysts use two basic assumptions in constructing their theories namely,

- a) That language is the only means of articulating thought
- b) That everything, which is not *speaking* thought, is feeling.

All these criticisms point to the inherent weaknesses of identifying logic with language and the resulting tendency to absolutize the descriptive role of language which reduces representation only to descriptive discourse.

## 2.4 CONCLUSION

This chapter sought to give a brief outline of the logico-formal conceptions of language predominantly practiced by analytic philosophers. These conceptions have tended to condition interpreters of analytical philosophers to exclusively concentrate on the formal logical side of language. Wittgenstein's philosophy which has largely been associated with this trend is, therefore, no exception to this tendency. Specifically, the *Tractatus* which leaned heavily towards the purely logico-formal analysis of language ran into grave difficulties that such a reduction portends. In reaction to this the *Investigations* denies the logico-formal analysis as misguided and pursues an equally extreme course which is against all forms of formalism and systematic analysis. The *Investigations* puts emphasis on the social constraints on language and less on logical constraints. The following chapters seek to demonstrate that the formal-analytic labels

are limiting and that Wittgenstein's philosophy has broad and rich semiotic insights that transcend the logico-formal labels.

## SEMIOTICS IN THE TRACTATUS

### 1.1 INTRODUCTION

The objective of this chapter is to assign the semiotic identity in the *Tractatus*. The first part will be a brief description of semiotics in general and a specification of the philosophical nature of representation. This will be followed by a detailed exposition of the semiotic problem of representation at the core of the various investigations of the *Tractatus*. It will focus on the specific issue of propositional representation and thereby establish if the *Tractatus* had any semiotic relevance. Finally, it will provide with a critical appraisal of the semiotic theory of the *Tractatus* as reported.

### 1.2 GENERAL SEMIOTICS

Semiotics is a general theory of signs and its formal composition. Signs may be defined as material or physical entities that whenever they function they represent an object or a state of affairs. Signs are distinguished by their referential and denotative functions. The denotative function is the one that refers to the object or state of affairs that the sign represents. The referential function is the one that refers to the sign itself. The denotative function is the one that refers to the object or state of affairs that the sign represents. The referential function is the one that refers to the sign itself. The denotative function is the one that refers to the object or state of affairs that the sign represents. The referential function is the one that refers to the sign itself.

## CHAPTER THREE

### SEMIOTICS IN THE *TRACTATUS*

#### 3.1 INTRODUCTION

The objective of this chapter is to discern the semiotic theory in the *Tractatus*. The first part will be a brief description of semiotics in general and a specification of the philosophical problem of representation. This will be followed by a detailed exposition of the semiotic problem of representation at the core of our semiotic investigation of the *Tractatus*. It will focus on the specific issue of propositional representation thereby establishing if the *Tractatus* has any semiotic relevance. Finally, it will involve also a critical analysis of the semiotic theory of the *Tractatus* so exposed.

#### 3.2 GENERAL SEMIOTICS

Semiotics is a general theory of signs used for human communication. Such signs may be either natural or cultural but the base line is that whatever their nature, they are used for communication and signification by the human beings. The word semiotics originates from the Greek word *semeion* which means a sign. But, John Deely<sup>68</sup> points out that even though the word might have a Greek origin, the concept of semiotics as a science of signs in general, is not Greek at all. For the Greeks *semeion* meant a sign exclusively in natural terms. It was not at all what we would today call 'sign in general' but rather 'natural sign in particular'. He points out that the conception of sign in

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<sup>68</sup> John Deely, *The Impact on Philosophy of Semiotics*, Indiana: St. Augustine's Press, 2003, p 52

general was proposed by St. Augustine of Hippo in order to express the idea that the universe of human experience is saturated with signs and the realization that the sign is the pervasive instrument of understanding and knowing.

However, even St. Augustine, Deely observes, had only a naïve notion of a sign simply as a sensible object, which stands for another object. In this view a sign is understood as a “connection between objects experienced whereby some one object, on being perceived, manifests also another besides itself, perhaps even one absent from the immediate perceptual surroundings, an object only remembered, longed for, or imagined”.<sup>69</sup> Saussure also defines a sign as essentially a two-term relation. It is a perceptible stimulus the perception of which refers one to another object not immediately present.<sup>70</sup>

Instead in its strict and technical sense, due to Charles Sanders Peirce, a sign is actually a triadic relation between the signifier, the signified and the *interpretant*. He defined a sign as “something which stands to somebody for something in some respect or capacity”.<sup>71</sup> Eco at the very beginning of his text highlights the relational nature of signs by pointing out the distinction between the compatible notion of a sign and semiosis:

The sign is usually considered as a correlation between a signifier and a signified (or between expression and content) and therefore as an action between pairs. Semiosis is according to Peirce, ‘an action, or influence, which is, or

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<sup>69</sup>John Deely, *Op. Cit.*, p54

<sup>70</sup> Ferdinand De Saussure, *Course in General Linguistics*, translated by Wade, Baskin, , Edited by Bally Charles and Sechehayé Albert in collaboration with Reidlinger Albert, London: Peter Owen Ltd. 1960

<sup>71</sup> Charles S. Peirce, *Elements of Logic : Collected Papers of Charles Sanders Peirce*, Vol. 2, edited by Hartstone and Weiss Paul, Cambridge, Massachusetts: Belknap Press of Harvard University Press, 1965, p 27

involves, an operation of three subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into an action between pairs'.<sup>72</sup>

Semiotics can conveniently be divided into two categories as suggested by Eco namely; specific semiotics and general semiotics. Specific semiotics aims at being the 'grammar', as it were of a particular sign system and describes a specific field of communicative phenomena as ruled by a system of signification. "Thus there are 'grammars' of the American Sign Language, of traffic signals, of a playing-card 'matrix' for different games or of a particular game".<sup>73</sup> These systems can be studied from a syntactic, semantic or a pragmatic point of view. Syntax investigates a sign system in terms of the relations between its elements, semantics studies the relation of a sign system in relation to what it refers to and pragmatics studies a sign system in relation to its users.

General semiotics is a philosophy of language, which stresses the comparative and systematic approach to languages – not necessarily verbal language- by exploiting the experiences and problems encountered in specific semiotics. Its core object is therefore the sign in general. It reconsiders in a generalized way the classical issues in analytic philosophy such as meaning, reference, truth, context, communicational acts as well as many logical problems as analytic and synthetic, necessity, implication, entailment, inference, hypothesis and so on. Only in general semiotics these questions are extended to include non-verbal communicative phenomena also. The most pertinent philosophical

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<sup>72</sup> Umberto Eco, *Semiotics and the Philosophy of Language*, London, The Macmillan Press, 1984 p 1

<sup>73</sup> Ibid. p 5

problem in this regard of general semiotics has been the problem of representation and one would affirm with certainty that it constitutes the philosophical interest in the study of signs. It is therefore imperative to clearly describe the nature of the problem of representation.

### 3.2.1 The Problem of Representation

Gennaro Auletta summarizes the problem of representation in philosophy as consisting of two principal questions<sup>74</sup>:

- a) Under which conditions may we say that an entity is a representation of something else?
- b) What is the guarantee that our (mental) representations correspond to or are in accord with external objects?

A large part of the history of modern and contemporary philosophy can be understood as a collection of answers to these questions, but in this section we highlight the problem of representation in general.

General semantics assigns to simple expressions of language truth-values that are taken to be their meanings. At the same time the semantics elaborate rules of composition, which allow us to derive the values of complex expressions, once we are provided with the truth-values of their simple constituents. This is all founded on the principle of compositionality, which holds that the truth-value of a complex expression is ultimately

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<sup>74</sup> Gennaro Auletta, "Is Representation characterized by intricacy and causality?" in *Intellectica*, Revue de l'Association pour la Recherche Cognitive, 2002/2 No. 35, p 84

derived from the truth-values of its component expressions. At this point then two fundamental questions emerge:

1. On what basis does an expression represent what it represents?
2. What does it mean to represent?

According to the principle of composition, there is no question as to the source of meaning for complex expressions. Instead the questions above lead us to ask what the source of simple expressions consists of. All representations have a common element and that is the fact that they all lead to something other than themselves. The problem of representation consists precisely in clarifying the nature of the relation between a representation and what they lead us to. This is exactly where we encounter the real philosophical problem of representation. The problem is that of how we determine the relation between the *representation* and what is *represented*. The question is: "does representation really involve a relation?" If it is a relation, it should involve specific terms of the relation and this presupposes that the related terms exist. For example, to say that *John loves Mary* is to presuppose that John and Mary exist. Yet, there are occasions when we speak of non-existent entities such as unicorns, square circles, etc. Such possibilities of non-existent objects of representation raise the question of whether *representation* is truly a relation. If it really is a relation, then we wonder if there are relations with no terms.

One of the attempts to address the problem comes from Frege who propounds that when we speak or think meaningfully of non-existent objects such as the square circle, the

representation that we have lacks reference, that is, the object signified, but nevertheless it has a sense, which is the *mode of representation* of the supposed object. This approach however, does not solve our problem. It merely relocates it to a new plane thereby leading us to the conclusion that sense is not a relational concept since we can have sense of non-existent objects.

To abandon the relational perspective of representation would nevertheless appear to be impossible. The philosophical tradition holds that a sign is anything that represents something else. So, a sign without what it stands for is really not a sign but merely a thing. This means that a sign is necessarily relational. We can affirm that what makes a sign is and only is the relation it has with what is represented. Its relational character is hence the necessary and sufficient condition for its being a sign. The idea of the relation of representation between the sign and the signified is therefore, the mandatory starting point for any investigation on meaning. The difficulty that one immediately runs into is on how to maintain the relational character of representation between expressions and fictional realities.

Such fictional entities would lead us to only two possibilities. Either we abandon the thesis that representation is relational or we accept that the sign can confer existence to the thing represented. The pursuit of the second option eventually leads to a form of Cartesian dualism in which ultimately the mind is endowed with an intrinsic representational capacity. The relation of representation in this perspective is one between what represents and what is represented but which may not necessarily exist

outside the former. The signified forms an integral part of the sign. This is the core of the duality between the sign and what it represents. It is a duality which is internal to the sign “which possesses in an intrinsic way the capacity to represent another thing other than itself, without this ‘other thing’ having the need to possess reality other than the one that has been conferred to it by the sign”.<sup>75</sup>

In order to overcome this obstacle, another attempt to solve the problem of representation without falling into dualism indicated above was advanced by Grice.<sup>76</sup> He makes a distinction between *natural meaning* and *nonnatural meaning*. The task of this distinction is to be able to explain “meaning” when it concerns communication<sup>77</sup>. The analysis begins by focusing on representation as a relation between existing things, which can therefore enter into a real relation and then to extrapolate from that to all forms of representation including those that are apparently non-relational.

According to H. P. Grice, there are natural signs, which signify because they enter into authentic relation with what they signify. A natural relation is strictly speaking not a representational relation because they lack a communicative intent. They only possess an indicative relevance. But we need to understand it in order to appreciate the nonnatural meaning, which constitutes the core insight of Grice’s thought about the problem of representation. Meaning is founded on a natural relation when the

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<sup>75</sup> Francois Recanati, *Philosophie du Langage (et de l’Esprit)*, Editions Gallimard, 2008 : p 132

<sup>76</sup> H. P. Grice, “Meaning” in *Philosophical Review*, 66, (1957): pp 377-388

<sup>77</sup> A. P. Martinich, “Philosophy of Language” in *Philosophy of Meaning, Knowledge and Value in the Twentieth Century*, Routledge History of Philosophy, Vol X, London and New York: Routledge, 1997, p 21

phenomena so related are such that one cannot occur without the other. It is a form of a conditional relation, for example, "if there is smoke, then there is fire", is really a statement that smoke is a sign of fire. What characterizes natural signs of this nature is their *facticity*, that is, the fact that the sign implies in reality, what it is related to. In our case therefore, to see smoke implies the fact that there is fire. In this instance, smoke is necessary for fire but fire is merely sufficient for smoke, therefore, it does not preclude other possibilities of smoke without fire such as the continued presence of smoke after the fire is dead or smoke caused by emergency braking of a fast moving vehicle on tarmac.

Grice distinguishes *natural meaning* from *nonnatural meaning* on the basis of facticity or non-facticity of a relation of meaning. The essence of natural signs is that the relation of meaning engendered is fact-implicating. So, if one says that "that smoke means that there is fire in that house" would imply that the addressee could indeed draw the conclusion that there is actually fire in the said house. In that sentence "to mean" has a factive import. Natural meaning is therefore a type of meaning in which the relation between the sign and what it represents is authentic. It is a relation on the basis of which one can formulate a law of the type if A then B where A is the sign and B is the represented. Such a relation justifies the inference of B from A thus confirming the facticity of the relation in question.

But not all meanings have this force of facticity. These are the nonnatural meanings. To utter the sentence, "Grice means that there is fire", does not imply that there is fire

because Grice could very well be wrong. The sentence simply attributes to Grice the intention to communicate something. The difference is that in the case of a natural meaning, the terms of the relation must both exist. The thing signified must exist if really there is to be a natural meaning at all. However, in the case of nonnatural meaning, the signified does not have to exist independently of the communicative intention. This is the cause of nonfacticity of nonnatural meanings. Martinich summarizes Grice's position thus:

A person means nonnaturally something by some thing or action if and only if the person intends to produce some effects in an audience by getting the audience to recognize through that thing or action that he intends that effect.<sup>78</sup>

The philosophical task at this point becomes one of elaborating a theory of representation or meaning which adequately explains also the apparently nonrelational representations.

Auletta<sup>79</sup> asserts that throughout the history of modern philosophy the problem of representation has ended up in one of three alternatives namely; spiritualism, skepticism and naturalism. The works of philosophers such as Malebranche and Berkeley who have turned to God to explain how representations can work demonstrate Spiritualism. They introduce God as an intervening factor in explaining the connection between representations and the external objects. Scepticism is best represented by Hume who propounds that the question of what is the guarantee that our representations correspond to the external objects is "inexplicable by human reason" so that "it will always be impossible to decide with certainty whether they arise immediately from the object, or

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<sup>78</sup> *Ibid.*, p 22.

<sup>79</sup> Gennaro Auletta, *Op. Cit.* p 136

are produc'd by the creative power of the mind, or are deriv'd from the author of our being".<sup>80</sup> The third alternative is naturalism supported by a group of American philosophers chief among whom is Fred Drestke. According to Recannati, Drestke is inspired singularly by Grice.<sup>81</sup> So we are in the presence of a train of thought on the problem of representation and we will see how Wittgenstein responds to these questions of representation.

### 3.2.2 Types of Signs

Having noted that sign is the core object of general semiotics, it is necessary to indicate the variations that can obtain among signs in order to avoid the danger of simplifying the notion of a sign. This will involve a description of the sign-types together with the interpretive relation that each one of them exhibits.

First we meet the most intuitive usage of sign to refer to a collection of entities which possess a manifest indication from which inferences can be made about something latent. Some examples are medical symptoms of a disease, evidence for a criminal offence, atmospheric indicators for a weather forecast among others. So, in this category of signs we encounter both natural and human signs. This dispenses with the condition that a sign must be produced with a communicative intention or by human sender. Consistent with the definition of Pierce something is a sign simply because it is interpreted as a sign of something by some interpreter. But what seems as the common characteristic of

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<sup>80</sup> David Hume, *A Treatise of Human Nature*, London: Oxford University Press, 1978 quoted in Auletta Gennaro, *Op. Cit.* p 84

<sup>81</sup> Francois Recanati, *Op. Cit.* p 137

this category of signs is the signifying relationship that they display. This relationship is of an inferential nature, which takes the form of a conditional statement: “if there is smoke then there is fire”. Hobbes in the *Leviathan* described these signs by his definition of a sign as the evident antecedent of a consequent or the consequent of an antecedent when similar consequences have previously been observed.<sup>82</sup> Pierce referred to this class of signs as *indexicals*

The second type of signs is of those that are produced with the direct intention to communicate an inner state or an external representation of state of affairs. Eco emphasizes that the existence of a certain rule, which enables the sender and the addressee to successfully transmit and understand the intended communication, must be presupposed. Examples of these signs are words as the basic elements of verbal language, road signs, signposts, trademarks, labels, and so on. They tend to be highly arbitrary in nature. Their signifying relationship according to Eco is that of equivalence rather than of inference.<sup>83</sup> So, a dictionary entry which describes a brother as a male sibling appears to be asserting an equivalence relationship to the effect that: a brother if and only if a male sibling. Or alternatively, a red on the traffic lighting system indicates stop; hence stop if and only if red light is on.

The third category of signs is subdivided further into icons and symbols. These signs are like the second category signs in that they are also arbitrary and having an express

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<sup>82</sup> Thomas Hobbes, *Leviathan*, 1.3

<sup>83</sup> Umberto Eco, *Op. Cit.* p 16

intention to communicate. But they are unlike the same category because their signifying relationship is inferential and not equivalence. It is, as it were, an intersection of elements of the first and the second category. Symbols are used to represent abstract objects and relationships. Examples are logical, algebraic, chemical formulae and diagrams. They are flexible signs that are open to any meaning attached to them. Icons in their turn represent concrete objects but with a meaning that might transcend what they depict. For example, political party symbols. But unlike symbols their meanings might be multiple but definite. Besides, icons tend to have always a resemblance with what they stand for which distinguishes it from a symbol which may have no resemblance whatsoever with what it represents. So, for instance, the no smoking sign at a filling station is really an icon because of the resemblance with an actual cigarette which is at the basis of its motivation.

### 3.3 SEMIOTICS IN THE *TRACTATUS*

According to Odell, Wittgenstein espouses what can best be described as a tripartite theory of meaning in the *Tractatus*. According to this theory, symbolic representation is a tripartite arrangement among:<sup>84</sup>

- a. a symbol, for example, 'horse'
- b. an object of some kind, a horse
- c. a cognitive process of intending

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<sup>84</sup> Jack S. Odell, *op. cit.*, p 55

This demonstrates that Wittgenstein, like Pierce, upholds a triadic relational character of a sign.. Wittgenstein of the *Tractatus* develops a semiotic theory which is an extension of reasoning and logic of the natural sciences in which systems of signs are constituted by the complex meaning relations that exist between one sign and another. It is effectively a semiotic theory of the logico-scientific semiotic codes.

Apparently then there is nothing radically new in Wittgenstein's semiotic theory in the *Tractatus* but De Mauro<sup>85</sup> points out the historical importance of the *Tractatus* which consists in a revision of the Aristotelian and rationalistic conception of language and propositions. The conception that language is made of propositions and propositions in their turn are made up of names whose meanings are objects. He observes that the old Aristotelian and rationalistic conception of language and meaning is rigorously expounded by Wittgenstein. Wittgenstein's exposition completely reveals the logical implications of this conception. In deed it is the very rigour and clarity which allows Wittgenstein to expose the irrefutable paradox of this conception as most clearly expressed in TLP 3.263: "the meanings of primitive signs can be explained by means of elucidations. Elucidations are propositions that contain the primitive signs. So they can only be understood if the meanings of those signs are already known." This is what would eventually lead Wittgenstein himself to revise this very traditional conception in the *Philosophical Investigations*.

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<sup>85</sup> Tullio De Mauro, *Op. Cit.* p 26

### 3.3.1 Linguistic Meaning and Communication in the *Tractatus*

In the *Tractatus*, Wittgenstein directs his attention to many subjects: for example, logic ethics, religion, psychology and epistemology. However, the focus of his attention is the determination of the possibility of propositional representation. Auletta states that, usually, one distinguishes between analogical and propositional representations. Analogical representations include pictures, diagrams, planes, maps, charts and portraits. Their common feature is that they resemble what is represented. Propositional representation on the other hand, includes linguistic and symbolic representations. Their characteristic is that they do not resemble what is represented. Instead, they are conventional hence, socially determined<sup>86</sup>. The major question in the *Tractatus* is the determination of the possibility for language to represent reality thereby being able to speak of it truthfully. A central concern of *Tractatus* is therefore, an inquiry into the status of propositions. The *Tractatus* presents in its analysis of meaning two levels of reality, which confront each other namely; the world and language. So, before we can fully understand the Tractarian theories on, meaning and communication it is imperative first to direct our attention to the ontology of the *Tractatus*. This ontology formed the basis on which the whole of the Tractarian system was built. The major problem for Wittgenstein is to determine how the linguistic order and the ontological order which are virtually heterogeneous and totally independent of each other capable of representing each other? This is the problem of propositional representation and the theory of meaning developed in the *Tractatus* is the 'early' Wittgenstein's solution to this problem.

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<sup>86</sup> Gennaro Auletta, *Op. Cit.* pp 94-95

### 3.3.2 Tractarian Ontology

Wittgenstein declared that “the world is all that is the case; the world is the totality of facts not of things.”<sup>87</sup> The successive propositions are elaborations on this opening proposition. The world has a particular structure, which can be unraveled through an analytic approach. It is made of facts. Facts are the obtaining states of affairs, which are in their turn determined by the objects. A fact is not a thing but it is what the case is after arrangement of things in a particular situation. To illustrate this difference we take as an example a sentence like *the book is on the table*. If this statement is true then it expresses a fact. On the other hand the *book* and the *table* are the *things* as it were. But that the book is on the table i.e. the arrangement of the *things*, such that it is the case that the book is on the table, is the fact.

A state of affairs as stated is “a combination of objects (things).”<sup>88</sup> It refers to both the actual and the possible combinations of objects/ or things. For example, going back to our instance above, it would be a state of affairs that the book is actually on the table, therefore a fact. But still, it would be a state of affairs if the book could just possibly be on the table but it actually is not. Likewise, if a cup instead of the book could be on the table then it is also a possible state of affair. We can then conclude from these two cases that all facts are states of affairs but not the converse, that is, not all states of affairs are facts. Facts are the obtaining states of affairs. So, once we are given the totality of states of affairs therein included is also the totality of facts, which is a subset of the totality of

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<sup>87</sup> T.L.P 1-1.1

<sup>88</sup> T. L. P 2. 01

states of affairs, as it were.

What determine state of affairs are the objects or things. Objects are understood in the *Tractatus* as the simple, irreducible substances of the world. Each object intrinsically contains all of its possibilities of entering into a state of affairs. In T.L.P 2.0123; Wittgenstein states; “every one of these possibilities must be part of the nature of the object.” This means that it pertains to the nature of objects that they can enter into a certain range of combinations or arrangements. Indeed, an actual combination of objects in a fact is just but one out of a range of possible combinations. It is important to realize that the objects, which Wittgenstein described, are purely logical constructs and are not the individual objects of our sensations. T.L.P 2.02-2.021 describes the Tractarian objects as simples, which make up the substance of the world. Further on in T.L.P 2.0271 he adds: “objects are what are unalterable and subsistent: their configuration is what is changing and unstable.” It is clear that physical objects of everyday sensation like chair, table, cup, book etc. are composite and alterable and for that matter cannot be an object in the sense of *Tractatus*. Wittgenstein states the nature of objects thus:

We do not infer the existence of simple objects from the existence of particular simple objects, but rather know them by description as it were—as the end-product of analysis, by means of process that leads to them.<sup>89</sup>

The Tractarian objects or things thus viewed are analogous to the traditional views of atomism as was formulated by Democritus in the fourth century B.C.E, which were

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<sup>89</sup> Ludwig Wittgenstein, *Notebooks: 1914-1916*, Translated by Anscombe G. E. M. Oxford: Basil Blackwell, 1969, p 25.

understood to be the smallest indivisible units of the physical reality. The atoms supposedly moved freely in a void and it is their combination and separation, which caused the integration and disintegration of matter.

According to this atomistic ontology, therefore, the world arises from a purely combinatorial nature of objects. Objects combine to form facts out of the possible states of affairs, which can be realized from their internal structure or forms. The totality of obtained facts -all that is the case- in its turn makes up the world. The world hence is viewed as ultimately constituted of and reducible to the atom-like objects. It was on this ontological atomism that Wittgenstein built his linguistic theory of logical atomism.

### 3.4 LANGUAGE

Wittgenstein gives what in essence is the Tractarian definition of a language as “the totality of propositions is a language.”<sup>90</sup> The propositions can either be elementary propositions or compound propositions constructed out of the elementary propositions. An elementary proposition is made out of names. Language is held to have a parallel structure with the ontological structure of the world above-exposed. As such, each level of structure in language is neatly matched to a corresponding level of structure in the world. It is in this respect that the definition of a language to which we have made allusion above should be interpreted.

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<sup>90</sup> T.L.P 4.001

In this scheme, an object is the correlate of a name/or a primitive sign; a state of affairs corresponds to an elementary proposition; a fact is the correlate of a (non-elementary) proposition. Here below is an illustrative table of the parallel levels of structure between language and the world.

Language	World
Propositions	Facts
Elementary propositions	States of affairs
Names	Objects/or things

Given this parallel structure between language and the world, the foregoing analysis of the ontological levels of the world can be extended and applied to their linguistic correlates. It is the basis of the theory of representation in the *Tractatus* which lies in the effort to establish the relation between the linguistic order and the ontological order.

Representation of a state of affairs is understood as a model or a picture which ought to have the same logical multidimensionality of the represented state of affairs. Propositions in the *Tractatus* are the logical pictures of states of affairs. They are the components of language and their defining characteristic is the bipolar nature of being either true or false. This bipolarity enables a proposition to represent states of affairs which potentially might occur or fail to occur. The class of propositions is divided into two in the *Tractatus* namely; elementary propositions and compound propositions.

Elementary propositions are the linguistic correlates of the ontological states of affairs. Just as states of affairs consist of a concatenation of objects, so, too, an elementary proposition is made up of nothing more than a combination of names. T.L.P 4.21-4.22 states that, "the simplest kind of proposition, an elementary proposition, asserts the existence of states of affairs. Elementary proposition consists of names. It is a nexus, a concatenation of names."

As such, an elementary proposition is thus a function of the names constituting it. This implies that they are compounds analyzable into smaller units which are the names constituting it. The character of names that constitute elementary propositions is very important if we are to clearly appreciate the theory of propositional representation in the *Tractatus*. Names are the components of elementary propositions. They are the basic units of meaning. This means that they cannot be analyzed further into smaller meaningful units. They stand for simple objects in reality. In some propositions in the *Tractatus*, names are referred to as primitive signs. Names stand for objects in the world. For that matter, just like the objects are simple, names are not analyzable any further: "a name cannot be dissected any further by means of definitions: it is a primitive."<sup>91</sup> Names can, therefore, be understood only by an acquaintance with their references. A complete reductive analysis of any language would end with these primitive signs, which cannot be further analyzed. It is the correspondence to objects that makes signs or words, names. But since we noted that objects in the *Tractatus*' viewpoint are logical and not physical objects, the objects for which names stand are

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<sup>91</sup> T.L.P 3.26

therefore the objects of thought. They are the simple references of thought like; things, properties or relations between things. It is precisely because objects are simple references of thought, that names can be said to be representatives of objects in the world since the former are taken in the *Tractatus* as the simple components of language. This mode of representation warranted the dual nomenclature of names and/or primitive signs. Robert Fogelin suggested that this dual nomenclature reflects two sides of the significance of names:

As simple signs, they are signs that admit of no further analysis via other signs. They are rock-bottom on the side of the language. As names, they represent things. Furthermore, this rock-bottom level of language is locked into the rock-bottom level of the world.<sup>92</sup>

At this level it is of importance to remark that *names* in the sense of the *Tractatus* are not ordinary names as used in the ordinary speech. For example a name like *Socrates* is not a simple name. Such a name is merely a contraction of complex expressions or symbols like *the teacher of Plato who drank hemlock*. Being complex, it stands in need of analysis. Wittgenstein refers to such contracted names as symbols or expressions and he insists that they have sense, which can be true or false whereas names or primitive signs cannot be true or false. Margaret Anscombe commenting on this fact observes, "the true names of the *Tractatus* will be, not physically simple signs, but one lacking the sort of complexity that the name 'Wittgenstein' has".<sup>93</sup>

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<sup>92</sup> Robert J. Fogelin, *Wittgenstein* Routledge and Kegan Paul, 1976, pp 25-26

<sup>93</sup> Margaret G. E. Anscombe, *An Introduction to Wittgenstein's Tractatus*, London: Hutchinson University Library, 1971, p 37

Naming is thus established as integral to language and it is names that execute this function. For a name to be an adequate representation it should have a logico-syntactic form which faithfully reflects the ontological form of the simple object it stands for. This form is determined by possible combinations of names in a proposition according to the logical syntactic rules which should reflect the possible combinations of objects on the ontological order. As such, any one combination of names in an elementary proposition is just but one of all possible combinations of the same names just like the state of affairs is just single out of many possible arrangements of objects.

Names build up into elementary propositions to depict possible states of affairs. When elementary propositions are true, they depict the essential nature of material properties in the world. Their simple structures reflect the articulation of objects in a situation. The elementary propositions make up the bedrock of all material propositions. The names in them simply *hang together*, that is, they are syntactically arranged on the device of immediate combination as is stated in T.L.P 4.221: "It is obvious that the analysis of propositions must bring us to elementary propositions, which consists of names in immediate combination."

From the *Tractatus*, the elementary propositions can be said to possess the feature of logical independence. Thus they are logically independent of each other. This means that their truth-values do not depend on each other but solely on the existence or non-existence of states of affairs. This means that no elementary proposition can be deduced from another. If they were not logically independent then it would be conceivable that

from the assertion of say, the colour of an object we could make a priori deductions about its shape or duration. But this is not the case because from the truth or falsity of an elementary proposition it is impossible to deduce the truth-value of any other elementary proposition. This is consistent with the nature of their correlates, the states of affairs, which are independent of each other. This makes it impossible to anticipate in advance what a state of affair would be on the basis of what factually is. So, once again, elementary propositions, just like names out of which they are constituted are known only on logical grounds. So even though Wittgenstein failed to give examples of objects and atomic states of affairs, he still felt that they must somehow exist as the necessary correlates in the world for the names and the elementary propositions of a fully analyzed language.

The syntax of the Tractarian language according to James Bogen, "allows as elementary propositions all but only arrangements of names which are isomorphic to possible concatenations of the objects they refer to".<sup>94</sup> Thus, each elementary proposition depicts the isomorphic concatenation of the objects it mentions and they are true or false in the measure that the objects their names mention are concatenated as the names are concatenated in the elementary propositions. An elementary proposition has sense only if it depicts a state of affairs, that is, a situation that can obtain. But even though they are independent of each other, elementary propositions can combine with each other to form compound propositions.

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<sup>94</sup> James Bogen, "Wittgenstein's Tractatus" in Shanker Stuart (ed.), *Philosophy of Science, Logic and Mathematics in the Twentieth Century*, Routledge History of Philosophy, Vol. IX, London and New York: Routledge, 1996, p 158

Compound propositions are formed out of elementary propositions by means of truth-functional connectives of conjunction, disjunction, conditional, negation and biconditional. They form the bulk of propositions or sentences in ordinary language. In the scheme of the *Tractatus*, their ontological correlates are the facts in the world. Because non-elementary propositions are compounded from elementary propositions they are said to be truth-functional of elementary propositions. This means that their truth-value depends on the truth-values assigned to their constituent elementary propositions. For example to say *John is sick and tired* is equivalent to a conjunction of presumably two elementary propositions, i.e., assuming the simplicity of the name John, and the qualities, sick and tired. The conjuncts being, *John is sick* and *John is tired*. The truth or falsity of this compound proposition is dependent on the truth or falsity of the constituents namely; *John is sick* and *John is tired*. It is only true when both constituents are true otherwise it is false.

In this scheme a conjunction is true if the conjuncts are true otherwise it is false; a disjunction is false if both disjuncts are false, otherwise its true; a conditional is false only if the antecedent is true and the consequent is false, otherwise its true and a biconditional is true if and only if both sentences have equivalent truth values, i.e. either both are true or both are false. In the *Tractatus* Wittgenstein brings into focus the representational status of the logical operators. He was not the first to do this since previously before him Frege thought that they were names of specific functions and Russell thought that they were names of logical objects analogous to Plato's forms. Wittgenstein denied that they are names and contended that they are merely tools for

generating compound propositions out of simpler ones and for setting set truth-conditions between propositions.

The theory of logical connectives reveals a complexity that is unique to compound propositions namely; logical necessity due to the logical relations created by them. As we have already seen in contrast to elementary propositions, compound propositions are not independent of each other. Of all the relations that might occur between propositions there are two limiting cases. These are tautologies and contradictions. The former are true in all possible worlds while the latter are false in all possible worlds. They are respectively said to be true and false unconditionally. Russell thought of the logical necessary truths as descriptions of the general properties while Frege in his turn thought of them as descriptions of relations between objects. In the *Tractatus* Wittgenstein proposes that tautologies and contradictions are compound propositions structured in such a manner that their bipolarity is neutralized thereby draining their propositional content. They are all equivalent because they specifically say nothing about reality. The only propositions that depict reality are the ones that fall within the bounds of contradiction and tautology.

Propositions which are neither contradictory nor tautologous are the ones that are intermediary between the two. Wittgenstein identifies such a proposition with thought. It is merely thought expressed in perceptible words, which words are either graphic or phonetic. In T.L.P 3.11-3.12, Wittgenstein states: "We use the perceptible sign of a proposition (spoken or written etc) as a projection of a possible situation... I call the

sign with which we express a thought a propositional sign."A proposition in itself contains the form of a situation, which it expresses, but not the content, which is the actual situation or fact. This form is what determines the sense of a proposition and warrants the assertion in T. L.P 3.14 that "a proposition itself is a fact". It is a fact precisely because its elements or words are articulated in a determinate way and not haphazardly put together to depict the structural form of a word. The thesis which Wittgenstein is advancing here is that it is thought that captures the relation of things in facts or situations and projects their perceived arrangement in propositions which can be perceived by the sense of sight or hearing. It is thought which imparts the logical structure of the world to the proposition. And it is this shared logical structure or form between propositions and the world that makes the proposition into a fact, too.

Unfortunately, the perceptible expressions in ordinary language do obscure this logical structure, hence the necessity for logical analysis of propositions to unveil their underlying logical structure. We have to note that even though compound propositions are facts by virtue of their form, the actual facts are not molecular or composite. It is thought which unites the facts by means of the logical connectives discussed above and hence projects them in the complex propositions. The totality of these propositions is what makes up language.

In the Tractarian system, language is the totality of assertive propositions. Only the propositions, which are capable of being true or false, make up language. The correlate

of language in the world is the totality of facts, which is the world itself. In a way, the nature of language and how it relates to the world became the main preoccupation of Wittgenstein. In our ordinary language, he maintained that there are two categories of propositions or sentences, that is, the meaningless or nonsensical utterances that do not qualify as propositions and the meaningful propositions. The meaningless sentences said nothing about facts or the world and, therefore, should simply be ignored. They lack any informative content. Meaningful propositions alone state facts and have a precise logical structure, which though hidden by the grammatical appearances of the sentences can be made evident through a detailed logical analysis.

Just as we have seen in the foregoing analysis of the components of language, in the *Tractatus*, Wittgenstein held that every meaningful proposition is either a truth-functional composite or instead, an elementary proposition itself. Only these depict situations in the world and hence have an informative content. Their totality is a complete picturing of the world and constitutes language. This means that from the insights into the workings of language we can grasp the deeper dynamics and structure of the world. This view of language as projective of the world led Wittgenstein to a negative conclusion that only the propositions of natural science can yield a meaningful language. All the other propositions, be they of philosophy, religion, etc, are meaningless and nonsensical because they are neither truth-functional nor atomic statements of facts.

As a consequence of this view of language as depicting the structure of the world, the

*Tractatus* takes the depth-logical structure of language, which makes it possible for language to depict the ontological structure of the world as the defining feature of all language. Since the world is objectively *out there*, all languages, which adequately picture it, must essentially and structurally be the same. Therefore, irrespective of the geographical and cultural diversities, all language is definable in logical terms, which would show that they are all the same. What happens in any language is that we arbitrarily attach names to objects and once this is done, we can then use these names with versatility to express various situations. This is what determines the individual natural languages like, English, French, Kikuyu, Luo, Kiswahili, etc. They arise when people arbitrarily attach names to objects and then build the languages out of these simple names by articulating them to express the various facts of the world. So in T.L.P 4.025, Wittgenstein wrote:

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 translating the constituents of propositions.

Therefore, notwithstanding the “superficial” differences of words and structures, in particular individual languages, it should be possible to reduce all of them to the essential, basic logical structure. This structure is expressible in terms of symbolic or notational logic. In doing this the symbols of logic would be arbitrarily chosen, too, but nevertheless assumed neutral and universally understood by everybody. Hence the *Tractatus* supported an essentialist view of language, which takes all language as definitely one language, and their essence lies in their basic logical structure. T.L.P 5.6-5.61 underscores the primacy of logic by remarking that it marks the limit of both language and the world. This basic, defining logical structure was termed by

Wittgenstein as the *logico-syntax*, which implies that all natural languages are syntactically the same.

### 3.5 PROPOSITIONAL REPRESENTATION

Having looked at the Tractarian correlation of the world with language, we can now attempt to elaborate his semiotic theory in the *Tractatus*. Semiotics as the theory of meaning-carrying signs would be derivable from the *Tractatus* because the concept of meaning is extensively treated in the *Tractatus*. It is closely linked to the concept of language, which we have just seen above, in that, language is the medium through which meaning is transmitted. Central to this concept of meaning in the *Tractatus* is the famous picture-theory of meaning.

Wittgenstein holds that language is projective of the structure of the world. The theory of meaning in the Tractarian theory of meaning lies in this representational connection between language and the world. As such, the picture-theory of meaning is an extension of the discussion on language and it puts forward a further explanation of the dynamics of representation between language and the world.

But the analogy of a picture as applied in the *Tractatus* should not be taken in the narrow and the naturalistic sense as a photograph or a portrait is a picture of a person. Instead a picture is taken in a very broad sense to include a gramophone record, the musical score, the sound-waves producing the musical sounds in a symphony; the

hieroglyphic script, etc.<sup>95</sup> In this broad sense a picture can be a false representation of what it pictures. Therefore, a proposition being a picture in the broad sense can be false. In order to understand well the details of the picture-theory of meaning, we have to make a fundamental distinction between pictorial relationship and pictorial form.

Pictorial relationship refers to the correlation between the elements of the picture with the objects in the world, which they represent. With the notion of pictorial relationship, Wittgenstein is attempting to show the connection between language and the world. The correlation is established at the level of names and objects. Names and the logical operators are the elements of propositions. Whereas logical operators have no references, names have objects for their references. This connection between names and objects, however, is not inherent and necessary but merely arbitrary.

In discussing the projective potential of general statements, Wittgenstein affirmed that this arbitrary correlation of sign and objects signified is itself "a condition of the possibility of propositions."<sup>96</sup> But since the assigning of names to objects is arbitrary, we have a situation wherein certain combinations of names may fail to have any meaning. And when this occurs, it is not because of anything illegitimate in the name itself but rather because we are mistaken about the applicable convention on the particular name or names. An example to illustrate this point can be readily found in T.L.P 5.473 where Wittgenstein says we cannot say sensibly that *Socrates is identical*,

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<sup>95</sup> T.L.P 4.014 – 4.0141

<sup>96</sup> Ludwig Wittgenstein, *Notebooks: 1914-1916*, Translated by Anscombe G. E. M., Oxford: Basil Blackwell, 1969, p 25

because the word *identical* has no adjectival meaning, i.e., there is no property called *identical*. Hence he says, "the proposition is nonsensical because we have failed to make an arbitrary determination and not because the symbol in itself, would be illegitimate."

In the pictorial relationship there is also an element of immediacy of correlation between names and objects. So the object for which a name stands can be understood only if it is known before hand. Wittgenstein employs the analogy of a graduated measure to express this immediacy in T.L.P 2.1512-ff. A proposition which contains the names is comparable to a measure and the names are the graduating lines that actually touch the object that is to be measured. A proposition without names will therefore be like a measure or ruler without graduating lines. Conclusively we can say that, with this notion of pictorial relationship, Wittgenstein establishes meaning as reference. The correlation between names and objects forms an integral part of the picturing relationship. This means that at the deep level of picturing, *meaning* is the reference of a linguistic expression. It establishes the congruence between names and objects and by extension between language and the world.

Pictorial form refers to the way the elements of the picture are related to one another such that they are representational of how things or objects are related in reality. With the notion of pictorial relationship we have seen how Wittgenstein attempted to show the external possibility of a picture and took names to be the linking element of language to reality. With the notion of pictorial form he explores the internal possibility

of a picture to depict the situation it purports to represent. In particular, the notion of pictorial form demands an investigation into the ways in which words stand to one another in a proposition.

For a picture to be a representation of what it pictures there must be some shared characteristics between the picture and what it represents. In the case of a proposition in a language, it is the pictorial form, which is shared or rather in common with reality. T.L.P 2.151 defines pictorial forms as “the possibility that things are related to one another in the same way as the elements of the picture.” As such there is an isomorphism of structure between the proposition and the situation depicted. As an illustration we take an example of a spatial form. If in a situation it is a fact that *the fork is to left of a knife*, then, we realize that in our assertion, the word “fork” is really to the left of the word “knife” and this coincides with the fact depicted. This is a reflection of a spatial pictorial form. In T.L.P 2.171 we find that, “a picture can depict any reality whose form it has. A spatial picture can depict anything spatial, a coloured one anything coloured, etc.”

Our example above is illustrative of what pictorial form is. But certainly the analogy limps when pressed further. For instance, when the same proposition is uttered verbally instead of written down the word *fork* comes before the word *knife* and this temporal succession will have nothing in common with the spatial case we have. It would then be a case of a temporal relationship used to represent a spatial relationship. This shows that even though representation takes place by virtue of shared forms, these forms have no

empirical characteristics. The shared forms are essentially logical forms and this implies that the world ontologically has a logical structure, which is common with the logical structure of the picturing positions. It is this logical structure, which forms the internal possibility of a proposition to picture. The correspondence of the two structures, i.e., of language and the world, is the guarantee of the truth or falsity of propositions. The capacity to be true or false is the *sense* of a proposition. After such a review of the notions of pictorial relationship and pictorial form, we can now focus on the general picture-theory of meaning.

### 3.5.1 Picture-Theory of Meaning

The *Tractatus* presents a detailed theory of meaning under the figure of a picture. The view of *Tractatus* falls within what has been broadly referred to traditionally as the referential theory of meaning. In essence, the picture-theory with the two foregoing notions of pictorial relationship and pictorial form holds meaning to be composed of reference and sense. Reference refers to what a name or a proposition stands for, i.e., the object or state of affairs. Sense on the other hand, refers to the truth or falsity of an expression. For that reason, a name has a reference but no sense, since it cannot be true or false. A proposition instead can be either true or false, so it has a sense. Anscombe argues that according to Wittgenstein in the Tractarian period, a name has a reference but no sense and a proposition has a sense but no reference<sup>97</sup>.

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<sup>97</sup> Margaret G. E. Anscombe, *An Introduction to Wittgenstein's Tractatus*, London: Hutchinson University Library, 1967, p 71

The elementary proposition is the primary bearer of meaning. For Wittgenstein, the proposition nevertheless, is not the sentences used to express it. He describes a proposition thus:

A proposition possesses essential and accidental features. Accidental features are those that result from the particular way in which the propositional sign is produced. Essential features are those without which the proposition could not express its sense. So what is essential in a proposition is what all propositions that can express the same sense have in common. And similarly; in general, what is essential in a symbol is what all symbols that can serve the same purpose have in common. So one could say that the real name of an object was what all symbols that signified it had in common.<sup>98</sup>

This is the central idea on which to anchor the Tractarian theory of semiotics. It opens up the possibility to the fact that a signifying system does not necessarily need to be a linguistic expression, but rather any symbolic system that is capable of carrying a propositional representation. A proposition is thus a sign that is projective of a particular situation in the world. The mode of propositional representation is thus understood fundamentally as the form of projection of the ontological order of reality in any other medium. It is in this regard that different sentences can be construed as expressing the same proposition and by the same token it is conceivable that different sign systems can be expressive of the same proposition. An illustrative case can be the one inherent to the problem of negation that Wittgenstein discusses a great deal in the *Tractatus*. Let us suppose that we have the proposition that "It is not the case that John sent a parcel to Peter". Many reasons can render this proposition true, for example:

- a.) It might not be John but rather somebody else who sent the parcel to Peter
- b.) May be John sent the parcel to someone other than Peter

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<sup>98</sup> T.L.P. 3.34-3.3411

- c.) May be John sent something else but not a parcel to Peter
- d.) Perhaps John sent nothing at all to no one
- e.) Perhaps neither John nor Peter exists

All these and many other sentences would yield the proposition referred to above. We can say then that the proposition is one thing they all have in common and express it as we have done above. We can also devise an artificial way of expressing the same such as the system of symbolic logic and express it as ' $\sim p$ '. Yet it is possible for us to imagine another system like the sign language of deaf and dumb in which the gesture of shaking the head horizontally or waving of hands in a particular way would express the same proposition. Indeed, there is no upper limit to the ways and media that can be used to express the same proposition. All these cases would be pictures of the same reality. So, for Wittgenstein, pictures, propositions and sentences acquire a broader connotation and are not just limited to words but to any symbolic system where facts are represented. "A picture is a model of reality"<sup>99</sup>.

Thus Bogen has identified two conditions that the Tractarian picture ought to meet in order to be an adequate picture of reality<sup>100</sup>:

- a) The circumstance that even if the proposition is false, the objects correlated with its names are elements to be found in reality as constituents of positive and negative facts.

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<sup>99</sup> T.L.P. 2.12

<sup>100</sup> James Bogen, *Wittgenstein's Philosophy of Language: Some aspects of its development*, London: Routledge and Kegan Paul, 1972, p 41

- b) The circumstance that the syntactical rules, which govern the arrangements of names in elementary propositions prevent configuration of names, which do not correspond to possible configurations of objects and hence to possible facts.

These two conditions respectively correspond to the conditions we have established of reference and sense. The overall implication of this theory of meaning is that the objective world as the ultimate guarantor of references and consequently, of sense, is the basis of meaning. And since it is supposedly a datum to every observer, the meaning of propositions, just like language, is universal, objective and unconditioned by culture or linguistic diversities. So in order to determine the meaning of any proposition, all we have to do is "take a look at reality."

The fundamental idea in the *Tractatus* therefore is that meaning consists of both sense and reference. The co-ordination of sense and reference that is in other words, of pictorial form and pictorial relationship is necessary for meaning to be possible and achievable. For a language therefore to be meaningful, its propositions must be able to represent how its references could be standing in reality. The pictorial form of representation has to correspond to the form of reality and as such makes it possible for the things which the propositional elements stand for to be related in exactly the way the propositions shows them to be.

The construction of a proposition as a sign whose essence is to depict the structure of reality enables Wittgenstein to define precisely the notions of sense, truth and truth-

conditions of propositions. For a proposition to be a picture it is not necessary that it depicts something actual. It is merely sufficient that it depicts a possible state of affairs. An elementary proposition depicts a possible state of affairs and this state of affairs constitutes its sense. If the state of affairs obtains then the proposition is true or else it is false. The compound propositions are in their turn truth-functions of their constituent elementary propositions. The number of possible combinations of the truth-values of their constituent elementary propositions provides their truth-conditions. The truth-conditions of a compound proposition constitute its sense. In function of these truth-conditions, the compound propositions form a scale bounded by two extremes of contradictions and tautologies. In between there are the contingent propositions. Contradictions are false under all conditions while tautologies are true under all conditions. In this sense, tautologies and contradictions are senseless because their truth-values are unconditional. Nevertheless, in as much as logical propositions lack sense, they are not meaningless or nonsensical because they have a linguistic function, which is, to set the limit or extremities between meaningless propositions and meaningful ones. They are also serving as the limiting case for contingent meaningful propositions since their truth-values are invariant across all possible worlds.

Consequently for Wittgenstein, a proposition is endowed with sense only if it is either an elementary proposition or a compound proposition constructed out of the elementary ones and positioned within the spectrum bounded by tautology and contradiction. This delineation of the domain of propositions endowed with sense implies the disqualification of many types of sentences that constitute various discourses such as

metaphysics, ethics, aesthetics and religion. Wittgenstein refers to all these discourses as “mystical”<sup>101</sup>. This is reminiscent of the position of the school of logical positivism but which nevertheless was different from the tenets of the *Tractatus*.

### 3.5.2 The *Tractatus* and Logical Positivism on Meaning

The *Tractatus* and the logical positivists agree on several points that it is easy to take the Tractarian theory of meaning to be a logical positivist doctrine. For example both the *Tractatus* and logical positivism held that a genuine and meaningful proposition is a truth-function of its elementary constituent propositions and logical tautologies and contradictions are devoid of factual content.

However there is a remarkable difference between the *Tractatus* and logical positivism. The latter rejected the doctrine of the picture theory of meaning of the *Tractatus* according to which a genuine proposition is the one that truly pictures the world. The logical positivists instead upheld the doctrine or principle of verification according to which a genuine meaningful proposition is one that is reducible to a report of what is immediately given in experience or what can be so given, that is, what is empirically verifiable. The verification principle of the logical positivists can be stated as: *the meaning of a statement is its method of verification*.

Admittedly, there are some propositions of the *Tractatus* that easily would pass as upholding the verification principle, for example, T.L.P 4.024: “To understand a

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<sup>101</sup> T.L.P. 6.522

proposition means to know what the case is if it is true or yet another, where a proposition lies against reality as a ruler." Yet these pronouncements can still not be taken as explicitly propounding the verification principle. Indeed, further comments by Wittgenstein in the same sections negate such a conclusion. For example the assertion in T.L.P 4.024 – 4.025 that a "proposition is understood by anyone who understands its constituents." Not that you must know how to verify what it states as the positivists would hold. For that matter even such Tractarian positions, which tend to lend themselves to a positivistic interpretation when read in isolation, do not really propound verification, particularly when read in the context of the whole.

Another remarkable difference between the Tractarian theory of meaning and the logical positivists is regarding the doctrine of simple objects. In the *Tractatus*, simple objects are not the data of sensation but rather logical constructions. This is opposed to the empirical demands of the logical positivists. To the positivists, in accordance with their principle of verification, the empirical knowledge of the references of words is what guarantees the construction of the senses of the propositions stating the states of affairs.

So we can conclude that the picture theory of meaning of the *Tractatus* is not a verificational theory of meaning and this constitutes the fundamental difference between the *Tractatus* and logical positivism.

### 3.6 CRITICAL REMARKS ON TRACTARIAN SEMIOTICS

The following remarks are aimed at pointing out the flaws or the inconsistencies in Wittgenstein's arguments we have so far seen concerning propositional representation in the *Tractatus*. We will try to identify the inconsistencies and give their implications for the foregoing semiotic theory. This will pave the way for the adjustments that Wittgenstein undertook in his semiotic theory in the *Investigations* in the following chapter<sup>102</sup>.

#### 3.6.1 Language

As we have seen above, the parallel structures of language and the world are fundamental in order to grasp Wittgenstein's theory of language. However, when subjected to serious philosophical scrutiny these structures reveal fundamental asymmetry hence failing to correspond as the *Tractatus* presupposed. The inconsistencies are identifiable in the ontology of the *Tractatus*, the problem of negation, the problem of non-elementary propositions and the linguistic essentialism of the *Tractatus*.

The Tractarian ontology manifests an internal inconsistency in its two principal tenets namely that the world is all that is the case, the world is the totality of facts, not of things. (T.L.P. 1-1.1). On the other hand further on, Wittgenstein upholds that objects or things are unalterable substances that make up the world. These statements though

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<sup>102</sup> For these critical remarks I have heavily relied on Stephen O. Owino, *Cross-Cultural Communication as a Possible basis for reconciling Wittgenstein's Tractatus and the Philosophical Investigations*, Kenyatta University: Unpublished MA Thesis, 2002

apparently contradictory are actually not contradictory when they are interpreted in the framework of analysis. The objects, with all their possibilities cannot be perceived by us except in their obtaining relations. We can only perceive objects as being in states of affairs as Wittgenstein contended. Therefore even though objects are logically the fundamental *building blocks* of reality, what we can perceive are not the objects themselves but rather the facts of which they are constituents. The objects can therefore only be known through a logical analysis of facts.

But the very conception of what an object is supposed to be in the *Tractatus* is what poses the first problem. The objects themselves are extremely abstract entities that we would doubt if they are actually existent. The failure of the *Tractatus* to furnish us with an instance of an object is attributable to this fact of their highly abstract form. This is hard to reconcile with the other point that facts, which are made up of the highly abstract objects, are perceptible in experience. We fail to grasp how Wittgenstein makes the transition from purely abstract logical objects to construct physically concrete facts. The transition is not justifiable. It therefore weakens the reverse operation of analysis. We cannot be justified in arriving at the simple objects by mere analysis of concrete or the possible states of affairs.

The conception of a fact as subsistent is equally not convincing. The assertion that the world is made up of facts and not of things, prompts us to inquire deeper into what a fact is. What we do observe as making up the world are physical objects standing in relation to one another and at the same time possessing internal qualities like colour,

texture, shape etc. Facts are supposed to be the combination of objects in reality. The objects making up the facts can be located in space and time. But a fact in itself cannot be so located. What Wittgenstein referred to as a fact is properly analogous to Kant's categories, like space and time, which are lacking existence in reality, but are nevertheless mental structures of perception. And if this be the case then we see that objects making up facts belong to a different order from the order of facts. Facts are not physical entities and hence to suppose that physical objects create facts is vacuous and inconsistent. Objects are not the constituents or elements of facts. A fact turns out to be merely a way of stating that things are thus-and-so. We cannot point to a fact as we would point to a cup or a house. Instead we can only point out a fact by showing how the objects stand out.

Closely bound to the foregoing criticism on the doctrine of facts is the problem of negation. The *Tractatus* held that the elementary propositions are basically assertive in character. They are basically used to state what the case in reality is. Negation as such turns out to be merely an operation, which reverses the sense of any given proposition so as to state what is not the case. Negation therefore presupposes its affirmation. It reveals to us what is characteristic of a proposition, namely that it can state what is the case or what is not the case. But this contradicts itself because it severs the proposition from its original presupposed ontological foundations. The paradox here is, are there negative facts corresponding to the negative propositions? P. M. Hacker clearly expresses this puzzle thus:

... If what one thinks is identical with what is the case if one's thought is true, how can one be thinking anything at all if one's thought is false? For if what one

thinks is not the case, the state of affairs in question does not exist. Yet one thinks something for all that.<sup>103</sup>

On the account of this observation, we realize that negative propositions, which form an integral part of our language, have no direct correlate in the world as Wittgenstein had presupposed. This casts a shadow of doubt to the total conception of parallel structures between language and the world, which would make it possible for language to depict the world.

The next inconsistency, which we can detect in the *Tractatus*, is in the doctrine of non-elementary propositions. The problem of non-elementary propositions poses to us logical inconsistency at two levels namely; the ontological level and the logical level. Even though, Wittgenstein upheld that the basic sensible unit of a language is the elementary proposition, he acknowledged that the bulk of our ordinary language is made up of non-elementary or complex propositions. And these propositions are descriptive of facts. The puzzling question arises then at this point: are there complex facts to which complex non-elementary propositions refer? Facts can only be elementary or atomic. As such then, non-elementary propositions have no direct correlates in the world. Hence the foregoing criticism of the doctrine of negation would be equally relevant to the doctrine of non-elementary propositions at the ontological level.

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<sup>103</sup> P. M. Hacker, *Wittgenstein's Place in the Twentieth Century Analytic Philosophy*, Oxford, Blackwell Publishers, 1997, p 31

Logically, the *Tractatus* upheld that the truth-value of the non-elementary propositions is a function of the truth-value of their constituent elementary propositions. This is undeniably true when we consider non-elementary propositions with a limited range of constituent propositions. In such cases we can determine the truth-value of the non-elementary proposition. But we are faced with a difficulty when we are confronted with general propositions with an unlimited range of constituent propositions. For example, *all men are mortal* is supposedly a result of a conjunction of, "John is mortal", "Jennifer is mortal", "Mwaniki is mortal", etc. But it is impossible to investigate all these cases (past, present and future) and determine their truth-values. Hence, going by the definition of truth-functions it is questionable if such general propositions are truth-functions. Their status is not clearly defined in the *Tractatus*.

Lastly, we can detect an inconsistency in the essentialist conclusion of the *Tractatus* about language. This holds that there is a universal logical structure, common to all languages. This makes it possible for them to depict facts. This conception is grounded on the view and assumption that the essential function of propositions is to describe states of affairs and facts and nothing more. As such, for all the natural languages to speak of the world, they must of necessity be alike in their underlying logico-syntactical structures, which supposedly correspond to logico-ontological structures of the world. This conclusion is unwarranted because it erroneously restricts the role of language only to factual descriptions, while it is common knowledge that language use transcends the genre of mere description of facts. It extends to include the expressive functions, ceremonial functions, aesthetic functions, etc. These functions do not have any common

form with the descriptive function of language. Therefore, the *Tractatus*' conception of the nature of language is not exhaustive at all.

Again, such a universalistic conception of language is falsified by the overwhelming evidence that diverse linguistic families of the world have radical differences that defy any essentialist characterization. Their grammatical structures, for example, Bantu and Nilotic linguistic families, are removed from each other so much so that our attempts to crystallize from them a common underlying logical syntax would be fruitless. Hacker has echoed this point:

Far from the logical syntax of any possible language having to mirror the logical structure of the world, the rules of a language are autonomous. They owe no homage to reality. They do not reflect metaphysical possibilities, determined by the essential nature of objects represented, but rather themselves determine logical possibilities – that is, what it makes sense to say. ...Different languages may be constituted of different rules, constrained only by human interests and needs, human discriminatory capacities, shared abilities and reactive propensities...<sup>104</sup>

In other words, they are cultural factors and not the logical structures of the world that determine the grammatical rules in our languages and by extension determine the possible logical inferences we can make about our world. It is then that we can abstract a given logical inference in one language and formalize it in the formal language of logic.

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<sup>104</sup> *Ibid.* p 80

### 3.6.2 Meaning

The Tractarian theory of meaning is essentially expressed in the picture-theory of meaning. But in the light of the above demonstration of lack of correspondence between language and reality, the whole edifice of the picture-theory also collapses. The picture-theory presupposes an isomorphism of structure of language and reality. Only then would it be possible for language to depict the true form of structure of the world or reality and communicate it, (the world). The doctrine of the picture-theory presented as consisting of two aspects namely: the pictorial relationship and the pictorial form, is therefore weakened as described below.

The concept of pictorial relationship refers to the correlation between the linguistic elements, namely, names and propositions and the ontological elements, like objects and facts. This is the aspect then of the picture-theory that is entirely assailed by the observation that there is no actual isomorphism of structures of the world and language. It is true, for instance that by ostensive definitions, names can be connected to objects (both physical and conceptual), but still, even the objects so defined are not the meanings of the words or names. We have examples of fictitious entities, general terms, historical or past events and people, who cannot be defined ostensively, yet intuitively, we hold them as meaningful. Thus, pictorial relationship that establishes meaning as inherently referring to the world – that is the referential theory of meaning – is only applicable to a minimal number of cases like the case of proper names. And even in this case the connection between the name and its object is not an intrinsic one but rather a connection that is arbitrarily and conventionally established. For example a proper

name, "John" referring to an individual is arbitrarily given to the person by the parents and the rest of the community accepts it as his name. And the name would not lose meaning at the demise of the individual.

The other concept of pictorial form is also weakened by the same lack of isomorphism of structure. Pictorial form is the way the elements of a picture, which in our case is language, relate to each other so as to depict how the elements of the *pictured* relate to each other. It presupposes a form common to both language and reality. Wittgenstein referred to this shared form as the logical form. It is inherent in the structure of reality and can be explicitly displayed by language when it is rigorously analyzed. But by denying that there is a correspondence of structures of language and reality, we equally minimize the possibility of a shared logical form between language and reality. Hence the claim underlying the concept of pictorial form that a proposition, precisely an elementary proposition, consists of names combined in such a way that they reflect how objects which they name, are combined in reality, becomes untenable. Thus the idea of logical form has nothing to do with the logical form of reality. It can simply be conceived of as the grammar of language and its expressions determined by the rules for their use. It is just the grammar and the context, which determine the combinatorial possibilities of words and license the employment of the possible and actual combinations

### 3.7 CONCLUSION

This chapter has focused on the reconstruction of semiotic theory in the *Tractatus*. It has given a general description of semiotics and isolated the problem of representation as a specifically philosophical semiotic problem. In doing this we have shown that representation is a core philosophical problem particularly when we are confronted by aspects of reality that are outside of our perceptual range. The only way we can conceive of that which is outside of our perceptual range is through some form of representation such as in the form of a picture, a proposition and even a theory. In a way then, representation turns out to be a relation some of whose terms may be non-existent or which might be a false representation. The determination of the nature of this relation and the adequacy of a representational system is, therefore, an intricate problem.

Wittgenstein in the *Tractatus* has dealt with the problem of representation as we have demonstrated. The focus of Wittgenstein in this work was on the nature and adequacy of propositional representation which specifically involves the question of the possibility of language or any other sign system to represent reality in ways that can be judged as either true or false. The *Tractatus* is founded on the presumption that there are two isomorphic orders or reality. One is the ontological order while the other is the semiotic order. The common logical structure of these orders is what makes it possible for one to be a representation of the other. The correspondence between reality and language is, thus, the necessary condition for the possibility of adequate propositional representation. The *Tractatus* has established a range of representational meaningfulness as involving propositions or their equivalents that are intermediary

between tautologies and contradictions. Whatever falls outside that range is devoid of any propositional content.

But the chapter has also involved criticisms of the basic assumption of logical isomorphism in the *Tractatus* thereby revealing some shortcomings that make it imperative to adjust Wittgenstein's semiotic theory. These shortcomings are to be addressed in the next chapter when Wittgenstein tackles the same problem in the *Investigation*.

## CHAPTER FOUR

### SEMIOTICS IN THE *PHILOSOPHICAL INVESTIGATIONS*

#### 4.1 INTRODUCTION

This chapter focuses on the theory of semiotics in the *Philosophical Investigations*. It begins by exposing Wittgenstein's critique of two different but related approaches to the question of meaning namely, semantic objectivism according to which the meaning of a word is its reference, that which the word denotes or names. The second approach can be called semantic subjectivism or mentalist approach according to which the meaning of a word is not the object named as such, but rather the internal representation or idea associated with the word. After the critiques the chapter outlines Wittgenstein's alternative social conception of meaning which seeks to highlight the multiple facets of the process of signification. Finally, the chapter focuses on the semiotic theory in the *Investigations* which includes an attempt to synthesize Wittgenstein's theory of representation from both the *Tractatus* and the *Investigations*.

## 4.2 THE CRITIQUE OF THE OBJECTIVE CONCEPT OF LANGUAGE AND MEANING

In the *Philosophical Investigations*, Wittgenstein became dissatisfied with his ideas of signs expounded in the *Tractatus*. He thus pursued a new line of thought regarding signs in the *Investigations*. The general theory of signs in the *Investigations* could be situated in the framework of his work on the theory of meaning of which linguistic meaning, which he primarily concerned himself with, can be extrapolated to include a theory of signs in general. But before we can delve deeper into the *Investigations'* theory of signs in general it is illuminating to try and see the motivation behind the ideas expressed in the *Investigations*.

We have seen in the previous chapter that the questions of the nature and the possibility of meaning were at the centre of analysis in the *Tractatus*. This same interest for meaning would still remain central in the *Investigations* too. From the *Investigations* and the intermediary works, especially in the *Blue and Brown Books*, Wittgenstein pursues a critique of semantic objectivism and semantic subjectivism. The first is pursued by Wittgenstein in his attack of "Augustinian" concept of language, the second is critiqued in the rejection of private language and finally Wittgenstein proposes his theory of the process of signification by introducing the concept of rule-following. We will attempt now to give brief expositions of these three tenets without which one may not adequately understand the semiotic view of Wittgenstein in the *Investigations*.

The view that meaning of a word resides in the object that it denotes gets immediate attention at the very beginning of the *Investigations*. Wittgenstein refers to it in these opening sections as “Augustine’s conception of language”<sup>105</sup>. This Augustinian conception of language is a generic expression describing all the theories of meaning, which presuppose that, the meaning of a word be that which it denotes. The *Tractatus* also falls within this rubric. By this expression Wittgenstein is referring to a passage in the confessions of St. Augustine which describes how he (Augustine) learnt his language by noting how the meaning of words were explained to him by indicating the things that words signify.

When they (my elders) named some object, and accordingly moved towards something, I saw this and I grasped that the thing was called by the sound they uttered when they meant to point it out. Their intention was shewn by their bodily movements, as it were the natural language of all peoples: the expression of the face, the play of their eyes, the movement of other parts of the body, and the tone of voice which expresses our state of mind in seeking, having, rejecting, or avoiding something. Thus, as I heard words repeatedly used in their proper places in various sentences, I gradually learnt to understand what objects they signified; and after I had trained my mouth to form these signs, I used them to express my own desires.<sup>106</sup>

So according to Augustine, the acquisition of the meaning of words consists in establishing an association between a verbal expression and an object and in his description they are defined by simple ostentation, that is, pointing out the instances of a word. Wittgenstein captures this “Augustinian” approach in the very opening remark of the *Investigations* thus:

These words, it seems to me, give us a particular picture of the essence of human language. It is this: the individual words in language name objects-sentences are combinations of such names. In this picture of language we find the roots of the

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<sup>105</sup> PI 4

<sup>106</sup> Augustine, *Confessions* 1.8, quoted by Wittgenstein in PI 1

following idea: Every word has a meaning. This meaning is correlated with the word. It is the object for which the word stands.<sup>107</sup>  
This is one of the pervading conceptions of meaning that have held us captive which philosophical therapy should free us from according to Wittgenstein.<sup>108</sup>

Nevertheless, this concept of meaning is not entirely wrong because there are words that are certainly used to refer to objects. What Wittgenstein faults is the tendency, in the *Tractatus*, to absolutise the referring function of words thereby, reducing all the usages of language only to the referential function of names. In so doing, the 'early' Wittgenstein fails to recognize the diversity of the categories of words and the multiplicity of uses to which language can be put. In fact, language in the *Investigations* is a set of practices inscribed in the interactions between individuals. Such practices can serve a multiplicity of functions in which reference is just but one function. Referential theory, in claiming that the essence of signification resides in denotation, really is merely an abstraction of the concept of reference from the set of practices of which it is an element. Reference by means of words is a game within language but not the game of language. Wittgenstein presents the inadequacy of such an image in the following passage:

It is as if someone were to say: 'A game consists in moving objects about on a surface according to certain rules...' -and we replied: 'You seem to be thinking of board games, but there are others. You can make your definition correct by expressly restricting it to those games'.<sup>109</sup>

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<sup>107</sup> PI 1

<sup>108</sup> PI 114-115

<sup>109</sup> PI 3

The "Augustinian" model of signification is based on a specific description of how we acquire meanings of words through ostensive definitions and in order to contest this model, Wittgenstein attacks its very basis by contrasting the method of ostensive definitions to that of training<sup>110</sup>. "Training" in this context does not refer to reflex conditioning or to stereotyped reactions. By "training", Wittgenstein is referring to the fact that learning of a language takes place by means of repetition and performance of certain actions which are embedded in a given context and involving interaction with other individuals. Let us take an illustrative case that Wittgenstein provides:

Let us imagine a language for which the description given by Augustine is right. The language is meant to serve for communication between a builder A and an assistant B. A is building with building stones: there are blocks, pillars, slabs and beams. B has to pass the stones, and that in the order in which A needs them. For this purpose they use a language consisting of the words "block", 'pillar', 'slab', 'beam'. A calls them out; B brings the stone which he has learnt to bring at such-and-such a call. Conceive this as a complete language<sup>111</sup>

In order to grasp the gist of the Augustinian model, we can extend the thought experiment above by imagining that the same materials serve as seats within the community of A and B. Their designation is such that Blocks are used by men, Pillars by women, Slab by visitors to the homestead and Beams by children. It is easily noticeable that in learning how to use the word slab for instance, B has to know the context, when to bring it to the builder or when to offer it to a visitor. In both cases, in the Augustinian model, learning may have involved ostentation but Wittgenstein points out that the same ostensive definitions produce different results because of the context in which they are learnt. One involves the training to bring stones while the other

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<sup>110</sup> PI 5: "A child uses such primitive forms of language when it learns to talk. Here the teaching of language is not explanation, but training."

<sup>111</sup> PI 2

involves the training on sitting patterns. In this respect ostentation itself requires a context for it to be effective. In effect then, the meaning of a word cannot be grasped independently of the usages to which they are put in the practice and context of a language.

### 4.3 CRITIQUE OF THE SUBJECTIVE CONCEPT OF LANGUAGE AND MEANING

By locating the notion of meaning around the notion of usage, Wittgenstein intends to put emphasis on the public practice of language. This enables him to carry out an effective critique of the second conception of meaning, which we can refer to as the subjective concept. According to this conception, words signify the contents of consciousness such as ideas, images and perceptions. This implies that words do not refer directly to objective reality but rather only indirectly through the mediation of the subjective items of consciousness. These subjective entities are therefore the direct referents of words. Such an argument, Wittgenstein contends is at the very basis of the so-called argument of the private language and he pursues its critique intensively in the *Investigations*. The following quote describes this language, which is in contrast with the Augustinian language presented at the beginning of the text.

A human being can encourage himself, give himself orders, obey, blame and punish himself; he can ask himself a question and answer it. We could even imagine human beings who spoke only in monologue; who accompanied their activities by talking to themselves. ...But could we also imagine a language in which a person could write down or give vocal expression to his inner experiences-his feelings, moods, and the rest-for his private use? Well, can't we do so in our ordinary language? But that is not what I mean. The individual words of this language are to refer to what can only be known to the person

speaking; to his immediate private sensations. So another person can not understand the language.<sup>112</sup>

This is an imaginary (or hypothetical) language whose defining property is to be essentially a private language. Such a language can only be used to speak to oneself and moreover, it can be understood by its speaker because its content is only accessible to the speaker. The major problem that confronts the proponents of subjectivist theories of meaning such as phenomenologists and intuitionists is how to account for intersubjectivity in communication. Wittgenstein set out then to demonstrate the impossibility of private language in order to be able to propound a theory of language, which is essentially public and gives an intuitive account of intersubjectivity in communication.

A private language according to Wittgenstein would be a language that describes only the subjective sensations in the consciousness of the speaker and those sensations are presumed to be inaccessible to others distinct from the speaker. He provides an analogy to illustrate the difficulties. The private language is described as a "personal diary" in which a speaker systematically notes a given sign whenever he experiences a given sensation.<sup>113</sup> Suppose then that somebody else has the chance to read such a diary, it is predictable that he/she would not be able at all to understand the signs used. What exactly would necessitate such incomprehension? Wittgenstein's analysis aims at responding to this.

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<sup>112</sup> PI 243

<sup>113</sup> PI 258: "I want to keep a diary about the recurrence of a certain sensation. To this end I associate it with the sign 'S' and write this in a calendar for every day on which I have the sensation"

Contrary to the obvious subjectivist answer that the incomprehension is caused by the fact that the signs refer to entities that are not accessible to others, Wittgenstein contends that it derives from the fact that the so-called signs of the so-called private language are not signs at all in reality and the private language is not a language either. A language should be regulated by certain basic rules, which allow the discrimination of correct from incorrect employment of signs. For example, a definition requires the existence of criteria that allows us to decide whether a term is applied correctly in a given discourse. But in the case of a private language, the existence of such rules and criteria is impossible.

Going back to the example of Wittgenstein's diary, by what criteria would the speaker determine the correct application of its signs? In order to be decisive the criteria must be justified but according to Wittgenstein, "a justification consists in appealing to something independent"<sup>114</sup>. On the contrary, in the private language, the justification is subjective since the very speaker who assigned the sensations associated with the signs is the same authority to judge the correct application of the signs by referring to his sensations. The only justification for the rule would be the recognition, by the subject, of the identity of the sign with its sensation. Consequently, a private language would be a language in which one lacks the criterion of correctness. It is a language in which, "whatever is going to seem right to me is right. And that only means that here we can't talk about 'right'"<sup>115</sup>. A criterion, which is simply subjective, is not a criterion, a rule

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<sup>114</sup> PI 265

<sup>115</sup> PI 258

without criteria is not a rule and a language without rules is not a language. The so-called "private language" is therefore not a language. This is the conclusion of Wittgenstein's analysis in the *Investigations*.

The decisive argument that allows Wittgenstein to assert the impossibility of private language is based on the fact that language is necessarily a public activity governed by rules. This fact leads Wittgenstein to draw an analogy between linguistic practice and other types of activities, such as games, which are ruled-governed. Wittgenstein operationalises this analogy by the concept of language-game. He defines a language-game as "the whole, consisting of language and the actions into which it is woven."<sup>116</sup> To characterize language as belonging to the category of games has two main points of interest in the *Investigations*.

First, the metaphor allows Wittgenstein to highlight the social and collective nature of linguistic activities. In fact games can generally be considered as forming a social institution, a group of shared practices. Even the solitary games such as patience games are still social because the rules that guide them are based on a collective consensus. In this sense a game is a product of culture, which in its turn plays an essential role in the network of human relations. Likewise, language is inscribed in culture and this justifies Wittgensteinian interpretation of language using the category of games. "The term 'language-game' is meant to bring into prominence the fact that the speaking of

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<sup>116</sup> PI 7

language is part of an activity, or of a form of life."<sup>117</sup> A "form of life" can be interpreted in this sense as the whole cultural background which forms the basis of meanings the sharing of which, constitutes the necessary condition for the possibility of mutual comprehension: "What has to be accepted, the given, is-so one could say-*forms of life*."<sup>118</sup> The emphasis on the cultural roots of language thereby basing language on form of life we can say, the method of language games, enables Wittgenstein to anchor linguistic forms on their contexts. It is an antidote to the confusions that emerge when we try to investigate language as an abstract reality.

In the second place, the analogy between language and games allows Wittgenstein to underscore the multiplicity and diversity of linguistic practice, which just like games cannot be reduced to a single model. The concept of games cannot be unified under a homogenous order of reality, instead, the term denotes a multiplicity of activities that are impossible to describe by a unique characteristic common to all of them.

Wittgenstein expresses it thus:

Consider for example the proceedings that we call 'games'. I mean board-games, card-games, ball-games, Olympic-games, and so on. What is common to them all? - Don't say: 'there must be something common, or they would not be called 'games''- but look and see whether there is anything common to all. ... And the result of this examination is: we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail.<sup>119</sup>

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<sup>117</sup> PI 23

<sup>118</sup> PI IIxi p 226

<sup>119</sup> PI 66

So, we can see that absolutely no single characteristic can be proposed to define the category of games that included all the activities designated by the term "game" without exception. The term 'games' is an equivocal term, which embodies various analogical relations between such activities referred to as games. Wittgenstein uses the expression of "family resemblances" to depict this equivocation. The relations that exist between the various games are of the same type as the one that exists between the members of a family such as "build, features, colour of eyes, gait, temperament, etc. etc."<sup>120</sup> There is not a single feature that all the family members share in common. Consequently, if language is approached as a form of a game then it should also display such a multiplicity such that the unity of language games is not a fixed unity formed according to a single model, but rather a multidimensional unity, which can be expressed in terms of family resemblances. It is this multiplicity that Wittgenstein alludes to in the following passage in which he criticizes the *Tractatus*:

Review the multiplicity of language-games in the following examples, and in others: Giving orders and obeying them; describing the appearance of an object or giving its measurement; constructing an object from a description (a drawing); reporting an event; speculating about an event; forming and testing a hypothesis...It is interesting to compare the multiplicity of the tools in language and of the ways they are used, the multiplicity of kinds of word and sentence, with what logicians have said about the structure of language. (Including the author of the *Tractatus-Logico-Philosophicus*).<sup>121</sup>

The significance of this analysis is that it leads us to an awareness of the multiplicity of linguistic forms and functions which enables us to avoid the tendency of reductionism like that inherent in the objective and the subjective conceptions of language and meaning.

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<sup>120</sup> PI 67

<sup>121</sup> PI 23

#### 4.4 SOCIAL CONCEPTION OF LANGUAGE AND MEANING

Having seen that the *Investigations* opposes two conceptions of language and meaning by attacking the reductionism of the objective conception of meaning and the focus on inner, private language of the subjectivists, the *Investigations* proposes a new approach to language and meaning which we can refer to as the social conception of language and meaning. In this view, language is located on the public domain to which a given human community has equal access. The analysis of language in terms of games served the purpose of relocating language on the public domain but the task in the *Investigations* would then be on how to explain the dynamics of such social conception of language and meaning. Wittgenstein introduces “rules” and “rule-following” as the basic concepts necessary to explain the social conception of language and meaning. The concern for Wittgenstein consists in determining the equivalent of “rules of a game” in language in order for the analogy of language and games is to be complete.

At first sight, we are inclined to think of such rules of language as the grammatical rules in a language and this seems even to be supported by Wittgenstein in the philosophical grammar<sup>122</sup>. In this case to examine a language is to examine its grammatical rules. But the notion of rules is a complex notion, which requires various levels of analysis. Wittgenstein in the *Investigations* highlights two different senses that must be clearly distinguished if we are to fully appreciate rule-following in linguistic sense. In the first

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<sup>122</sup> Ludwig Wittgenstein, *Philosophical Grammar*, Translated by Kenny, A. University of California Press, 1974: I, III, Par. 44

instance, a rule can be understood in the normative prescriptive sense according to which a rule is a constraint imposed on actions or processes and to which they must conform. But a rule can also be understood in a descriptive sense in which it is interpreted as a regularity that events obey. The former conception of rules is rigid and does not give room to exceptions. The latter is instead flexible and allows for the possibility of some latitude to the agents. The rules of language according to the *Investigations* fall within the category of descriptive rules. In order for us to clearly perceive this difference, we have to take note of a fundamental distinction Wittgenstein made between what one might call "a process being in accordance with a rule" and "a process involving a rule."<sup>123</sup>

Any kind of activity is in accordance with a rule if it keeps the regularities expressed by the rule. But it involves a rule if the actor actually uses a rule to guide and assess their actions. The examples to illustrate this distinction might be the rules of courtesy and the architectural plan of construction. Supposing that in a given culture, it is customary to bow heads in greeting each other. Acting so would be in accordance with the rule since it is the regular way. Any other way of greeting e.g. shaking hands would be irregular and going against the rule. It is not involving a rule because; bowing the head is not guided and assessed by the rule itself. Instead, a constructor, following the architect's plan to guide and assess his work can be appropriately said to involve a rule. This distinction when applied to a linguistic theory would mean that in speaking meaningfully we employ a process which is in accordance with the rules and not

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<sup>123</sup> Cf. PI 54, 82 and Ludwig Wittgenstein, *The Blue and Brown Books*, edited by Rhees Rush, Oxford, Basil Blackwell, 1958, p 13

involving the rules. To say that a linguistic activity involves the rule would mean that we know and consciously apply the relevant rules to cases, which fall under them. But this is not ordinarily the case. Most people would speak fluently without minding about the rules. They speak in accordance with the rules, but they cannot give any discursive account of the rules. A linguistic process involving the rules might apply to a scientific linguist performing his duty, for example, of determining the syntactico- semantic structure of an unknown language.

The difficulty, however, in acting and particularly, in speaking in accordance with the rules is that no rule taken in itself can really determine its correct application. This constitutes the demise of the fast and hard stance of the rules previously maintained in the *Tractatus*. Wittgenstein observes this with an example:

A rule stands like a signpost... but where is it said which way I am to follow it; whether in the direction of its finger or (e.g.) in the opposite direction?- and if they were not a single signpost, but a chain of adjacent ones..... is there only one way of interpreting them?<sup>124</sup>

His implicit answer to this is in the negative. Moreover he notes that the application of each rule is almost always governed by some other rules and there is no limit, in principle, to the number of rules whose addition to the existent ones might become necessary.<sup>125</sup> So, the contention of Wittgenstein here is that rules, inclusive of linguistic rules do not determine their own interpretation and application. In other words, they

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<sup>124</sup> PI 85

<sup>125</sup> PI 86-87

cannot tell us how they (rules) are to be understood and even if we suppose that they do still they do not guarantee that we understand them properly.

If meaning of words and expressions in a language is nothing more than the rule-bound use of words and expressions and at the same time, we are reminded that rules do not have necessarily one and only one correct understanding established by the rules themselves, then we can have different meanings to the same words in the same context as a function of the various alternative understandings and applications of the rules.

The distinction between the two senses of rules indicates the shift in focus in the *Investigations* in the understanding of meaning within Wittgenstein's thought and a new model of semantical analysis emerges. Michael McCarthy aptly captures this shift thus:

The *Tractatus* explicated sentential meaning (Sinn) in terms of truth conditions. Propositions were essentially vehicles of truth whose sense depended on metaphysical atoms subject to universal and invariant normative laws. The foundations of linguistic meaning were set in an irreducible level of being radically independent of human deliberation and choice. The conditions of meaning were given to men rather than formed by them in their collective activity. By contrast the *Philosophical Investigations* conceives of linguistic expressions by virtue of the intersubjective conventions, tacit or explicit; that regulate their use in the language games to which they belong. These rules of use are variable and not rigidly binding, and they derive their authority from the community of practice that promulgates them. The foundations of meaning have become sociological rather than metaphysical, paralleling the shift from invariant logical laws to historically conditioned grammatical rules<sup>126</sup>. The *Tractatus* therefore corresponds to the prescriptive normative conception which is comparable to rails<sup>127</sup> extending to infinity while the *Investigations*' view corresponds to the descriptive conception which is comparable to a signpost<sup>128</sup>.

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<sup>126</sup> Michael H. McCarthy, *The Crisis of Philosophy*, Albany: State University of New York Press, 1990, p

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## 4.5 SEMIOTICS IN THE *INVESTIGATIONS*

Wittgenstein hints at a change in his semiotic theory by the shift in his dominant metaphors. In the *Tractatus*, the dominant metaphor was that of language as an isomorphic picture of reality, but in the *Investigations* it is that of language-game. The former is semantic while the latter is pragmatic. The representational theory of signification espoused above in the *Tractatus*, claims that signs stand for something which can be ideas, objects or anything else. However, such a theory soon runs into the difficulties of how this relationship between a sign and its referent is produced and sustained. Concretely, we can pose questions revolving around the meaning of sign such as these:

- How do we get a sign to stand for something?
- Is that for which a sign stands the meaning of the sign?

In elaborating the new theory of meaning commonly known as the *use-theory* of meaning, Wittgenstein is really attempting to offer an answer to the question, "What comprises the meaning of a sign?" The core concern of Wittgenstein in the *Philosophical Investigations* is less with the nature of the sign but rather with the interpretability of the sign. In the *Investigations*, he calls upon philosophers to examine linguistic expressions within the forms of life that give them purpose. In doing this we adequately clarify the meaning of expressions by specifying the functions of these

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<sup>127</sup> PI 218

<sup>128</sup> PI 85

expressions and the rules regulating that function. The *Tractatus* and virtually all work carried out in the philosophy of language up until the late 1950s according to Martinich, presupposed that the primary locus of meaning was in words and sentences. In this sense philosophy of language was synonymous with semantics. The pragmatic side of language, which concerns an investigation into the connection between people and language, was almost totally ignored.<sup>129</sup>

Ordinary-language philosophy to which the 'later' Wittgenstein's philosophy belonged began to shift focus in their linguistic investigations on the relation between language and people. The basic question becomes "what do people do with language?" and the answer intuitively lies in the word "communicate". Thus, communication takes a central position in the investigation of meaning that is explained insofar as it concerns communication. This can be referred to as "communicative meaning"<sup>130</sup> and it focuses on investigating the conditions necessary for the possibility of communication in a broad sense. In this case it is realised sooner rather than later that linguistic communication is a very narrow band within the sphere of communicative meaning that includes many non-linguistic modes of communication. Meaning is perceived as an intentional behaviour that is directed towards another person. Meaning can be analysed in this regard according to Grice thus:

A person means something by some thing or action if and only if the person intends to produce some effects in an audience by getting the audience to recognize through that thing or action that he intends that effect.<sup>131</sup>

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<sup>129</sup> A. P. Martinich, *Op. Cit.* p 21

<sup>130</sup> *Ibid.* p 21

<sup>131</sup> A. P. Martinich, *Op. Cit.* p 21

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<sup>129</sup> A. P. Martinich, *Op. Cit.* p 21

<sup>130</sup> *Ibid.* p 21

<sup>131</sup> A. P. Martinich, *Op. Cit.* p 21

In language, the *Investigations* underscored this intentionality in its earlier passages.<sup>132</sup> The synchrony between the intention of the utterer and the audience's perception of the intention as such is the measure of the degree of success of communication. Wittgenstein identified this intentional communicative meaning with use of a word in a language-game, which is commonly known as the *use-theory of meaning*. Let us now look briefly at the use-theory of meaning.

Wittgenstein does not expound a rigorous and compact theory of meaning in the *Investigations*. On the contrary, Wittgenstein presents the notion of meaning in a series of diverse remarks, anecdotes and aphorisms throughout the text, occasionally dropping the theme and coming back to it later. Such a theory can then only result through a reconstructive and interpretive effort, which is the undertaking of this section.

Wittgenstein asserts, "For a large class of cases – though not for all – in which we employ the word 'meaning' it can be defined thus: the meaning of a word is its use in the language"<sup>133</sup> Meaning in this context can be taken to refer to the instances of usage of a word or alternatively to the context and purposes of the speaker. But both interpretations are misleading. A look at other paragraphs highlights the fact that meaning for Wittgenstein refers to the basis of understanding and correct interpretation of a sign and not to the result of interpretation. It is indeed the necessary condition for the interpretation of a sign. "Use" can thus be interpreted as referring to the complete

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<sup>132</sup> Cf. PI 4 and PI 47

<sup>133</sup> PI 43

expression "rule of use" of a sign. The theory can therefore be stated that the meaning of a word in a language, L, consists of the rule of its use in L. This means that if one has known the rule of usage of a word in a language, then one has in effect known all there is to know about the word. This interpretation is the result of many further explanations and illustrations.

What we have said above about linguistic meaning can then be expanded to include meanings of signs in general. Thus, the meaning of sign is in reference to the operation of a whole sign code. The theory does not say that we need to know the meaning of a sign in order to use it correctly but rather it is the meaning that guarantees its correct usage. Correctness of use is not a result of meaning but rather it is the very meaning. Rudi Keller elaborates on this theme by proposing that according to the later Wittgenstein it is the rule of its use that makes a sign interpretable. "To know a symbol means to know under which conditions it is usable for the realization of which intentions".<sup>134</sup> It is the meaning of a sign that helps the addressees to decipher correctly the intentions of the sign-user. The only way to do so is by means of an inference made on the basis of knowledge about the rules of use of the employed signs. Meaning of a sign is therefore not the referent of the sign but rather the rules of use of that sign within its code, which would allow us to interpret its communicative intent correctly in a given semiotic text. They are the keys to interpretation of signs.

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<sup>134</sup> Rudi Keller, *A Theory of Linguistic Signs*, translated by Kimberley Duenwald, Oxford, Oxford University Press, 1988, p 21

According to De Mauro, the *Investigations* represents a methodology and ontology entirely different from the *Tractatus* and these must be taken into account if we are to grasp the semiotic theory expressed in it. The new methodology of the *Investigations* involves the search for the conditions in which we know phenomena rather than the discovery of phenomena. It is as such a search for the modalities of our statements in terms of which alone we come to know phenomena.<sup>135</sup> Wittgenstein states that:

We feel as if we had to penetrate phenomena: our investigation, however, is directed not towards phenomena, but, as one might say, toward the 'possibilities' of phenomena. We remind ourselves, that is to say, of the kind of statement that we make about phenomena.<sup>136</sup>

With regards to ontology, the later Wittgenstein rejects the traditional view that we saw in the preceding section which holds that reality is composed of primary elements. These primary constituents of reality are the ones the early Wittgenstein referred to as 'objects' and their linguistic correlates are names which are the primitive signs in a language. The later Wittgenstein rejects this view and proposes that we can not speak of primary or simple elements in any absolute sense. The simplicity or complexity of an object is a function of the co-ordinates in relation to which the object is considered. The simple or composite object is not a datum existing prior to the choice of co-ordinates and hence to the experience of man. De Mauro asserts this by stating that Wittgenstein in the *Investigations* demonstrates the falsehood of the "simplistic idea that the whole world is ordered, before man's vision of it, in perfectly distinct categories of 'objects'."<sup>137</sup>

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<sup>135</sup> Tullio De Mauro, *Op. Cit.* p 43

<sup>136</sup> PI 90

It is language that intervenes in the determination of the co-ordinates according to which we categorize simple and complex objects. De Mauro suggests that in Wittgenstein's thought language does so in two distinct but related ways: one metalinguistically and the other directly. Metalinguistically language intervenes to categorize objects as simple or composite by defining the words *simple* or *composite*.

Wittgenstein states this thus:

We use the word 'composite' (and therefore the word 'simple') in an enormous number of different and differently related ways...to the philosophical question: 'Is the visual image of this tree composite, and what its component parts are?' the correct answer is: "That depends on what you understand by 'composite'".<sup>138</sup>

Directly, language intervenes at the level of immediate construction of categories of objects. Words are most often used as common landmarks by individuals and communities to designate categories of acts, objects and indeed abstract ideas which are notions without sensorial reference - cf. PI 45-46; 371-373; 381 & 384; 65-67. The last references on this list provide us with reasons why we can speak of *games*, *numbers* or *leaves* as related classes despite their differences. It is because at their roots there is an affinity between the different objects which is revealed by words.

The primary consequence of this viewpoint for semiotic analysis is that in order to describe the meaning of a semiotic object like a word, we need not focus on the thing or concept it designates but instead we should focus on the use of the semiotic object. This

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<sup>137</sup> Tullio De Mauro, *Op. Cit.* p 45

<sup>138</sup> PI 47

is the famous use-theory of meaning in the *Investigations* which is customarily contrasted to the picture-theory of meaning in the *Tractatus*. Wittgenstein aptly puts it:

For a large class of cases, though not for all, in which we employ the word 'meaning' it can be defined thus: the meaning of a word is its use in the language. And the meaning of a name is sometimes explained by pointing to its bearer.<sup>139</sup>

The fact that Wittgenstein includes in his definition of meaning as use also ostensive definition of names by pointing to their bearers is important because it does strongly point to the fact that Wittgenstein did not intend use-theory to imply formal use of signs without any extrasymbolic correlation. Signs are not mere formal systems regulated by complicated and subtle laws, but rather the production of propositions and symbolic texts correlated to extrasymbolic entities and behaviour. Signification then is constituted by the conformity between the semiotic system and the entities correlated with the system. While this is in agreement with the position of the *Tractatus*, De Mauro observes that in the *Investigations*, Wittgenstein "seeks to transform semantics from the science of meaning or meanings into the science of the signifying activity."<sup>140</sup>

In this regard the *Investigations* rejects the traditional idea of semiotic forms and their meanings as classes of entities that are co-related by either reason of the system or by identity of the human spirit which provides the nexus for the semiotic system and the structure it represents. Instead, it propounds a new conception in which a semiotic system has the meaning it does because they are so used by humans and the continued guarantee of its validity is founded only in its use.

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<sup>139</sup> PI 43

<sup>140</sup> Tullio De Mauro, *Op. Cit.* p 47

But use-theory of meaning can lend itself to misinterpretation not only in the formal sense to which we have alluded above, but it can also derive from the equivocal character of the word "use" which can very easily be given an individualistic interpretation according to which meaning depends on what the speaker uses the word or any other semiotic object to mean. Pushed to its logical extremes the individualistic interpretation would imply that communication is impossible because the speaker and the listener cannot have the same use in mind always and the listener will be compelled to ask the speaker constantly, what he (speaker) means by that and the speaker might also ask the listener, what he (listener) means by "what do you mean by that?". This in principle might go on ad infinitum. But it is clear that this runs against what actually happens in a communicative context.

In the *Investigations*, Wittgenstein offers explanations aimed at avoiding this individualistic interpretation of "use". He contends that meanings of semiotic systems are protected from individual whims by socio-historical constraints imposed by the community of its users. Besides such social constraints, signs are also parts of complex and elaborate body of signs whose parts cannot be changed from moment to another arbitrarily:

Doubtless the ostensive teaching helped bring this about, but only together with a particular training. With different training the same ostensive teaching of these words would have effected a quite different understanding. 'I set the brake up by connecting up rod and lever.' - Yes, given the whole of the rest of the mechanism. Only in conjunction with that is it a brake-lever, and separated from its support it is not even a lever, it may be anything, or nothing.<sup>141</sup>

The meaning and value of a sign is therefore embodied in the ethnography of the society in which it is adopted. John Canfield adds that in the *Tractatus*, "use" refers to the mental projection of a propositional sign onto its sense by means of a thought. In the *Investigations*, "use" has nothing to do with the mental; rather, it refers to something social.<sup>142</sup> This derives from the fact that language is an instrument that facilitates exchange between people. He contends that according to Wittgenstein, a symbol-token is used when it is uttered in the language-game. A language-game in this regard is a custom, a socially-constrained pattern of interaction between individuals. The second factor which keeps the sign from individual whims, is the system of signs to which a given sign belongs. The concept of context as the basis of use and meaning provided Wittgenstein with a powerful tool for broadening the conception of sign and thus be able to adequately address the problem of representation.

#### 4.6 SYNTHESIS OF WITTGENSTEIN'S THEORY OF REPRESENTATION

We observe therefore that Wittgenstein in the *Tractatus* considered the sign as a relation between three elements namely, the signifier, the signified and the interpreter. But in the *Investigations* he adds a fourth element to his theory of signs and this is the context, which is socio-historical in nature to the concept of a sign. For him therefore, a sign becomes now a four-term relation. Context disambiguates a sign. It is possible at this

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<sup>142</sup> John V. Canfield, "Wittgenstein's Later Philosophy" in *Philosophy of Meaning, Knowledge and Value in the Twentieth Century*, Routledge History of Philosophy, Vol X, London and New York: Routledge, 1997, p 252

point then to highlight some of the conditions of representation proposed by Wittgenstein in the foregoing analyses. Josef Perner identified these conditions as necessary features that distinguish a representation from a resemblance<sup>143</sup>.

First, in the *Tractatus*, Wittgenstein conceives of the representational relationship as a projective correspondence between the representation and the represented object, which are respectively a proposition and a fact. But from the critical remarks it is clear that this correspondence is not strictly isomorphic in which case the elements of the represented object and those of the representing medium are supposed to be in a one-to-one correspondence. The *Tractatus* leaves unanswered the fundamental question of the criterion on the basis of which the elements pertinent to a representation are decided. The answer is found in the *Investigations* in the suggestion that such elements are a matter of choice dependent on the use in a given context. It is the context, which confers an interpretive perspective in which a certain entity is isomorphic to another hence becoming the latter's representation.

The second feature is that of *asymmetry of representation*. From the *Tractatus* it is manifestly clear that the proposition is a picture of the fact, but the fact is not a picture of the proposition. This is the core of asymmetry of representations. We could say that it is actually the property of all representations. So, in this sense, my passport photograph represents me but I do not represent it. But this feature engenders a philosophical problem that the *Tractatus* again does not resolve. This is the problem of *meta-*

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<sup>143</sup> Josef Perner, *Understanding the Representational Mind*, Cambridge, Massachusetts: MIT Press, 1991  
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*representation*. It springs from a duality that can exist between a sign and its referent where it becomes possible for a referent to be a representation of its sign. This can easily be illustrated by the case of a real-estate development plan. The blueprint of the houses may be given to a constructor for whom it is a representation of a house. Then the constructor puts up a prototype on a table, and then the first house actually constructed and put as a display for prospective buyers. For the buyers, the house is the sign of the original plan. They use it to see if the house is all right for them. A supervising architect may use it also to verify if it corresponds to the original plan. For him too, the house is a sign. If we take the blueprint as the original sign, then the prototype is its referent and in its turn it becomes a sign of the real house. It is therefore a sign of a sign. In this order, for the buyer, the house is a sign of a sign of a sign. The prototype is a meta-representation while the house is a meta-meta-representation.

In the *Tractatus*, this problem is encountered when a proposition is identified with a thought that it represents. Both of them can be signs of each other thereby violating the principle of asymmetry of the sign. It is again in the *Investigations* that Wittgenstein offers a solution to this problem of meta-representation. Wittgenstein proposes that in a communicative process, it is the context, which determines that an object is a representation of another. So, in one context, one object might be a representation while in another context it becomes the represented thing by the very referent it represented in the former context. In this case asymmetry of the sign is preserved because we are distinguishing the contexts of representation. The asymmetry of the sign in the *Investigations* is both functional, that is use-based and contextual. It is not ontological.

An ontological asymmetry that can be found in various philosophical schools such as Platonism holds that the represented thing is intrinsically to be represented and the sign is intrinsically to be a representational item.

The third feature is that of *singularity of representation*, which only means that the referent of any sign, whether it is an individual object or a general property, is always a determined one. The referent should not be more or less like any other thing. A sign must have a specific focus for it to be a sign. This is illustrated by the simple example that even, in the case of identical twins, a picture of one is not a picture of the other. In case of linguistic signs however, we are confronted with a number of difficulties, such as imprecision of terms, ambiguity of structures, variability of meanings and diversity of natural languages that threaten the principle of singularity of representation. Again, the concept of context clearly intervenes in the *Investigations* to resolve this problem by fixing the precise referents of linguistic signs.

The problem of negation in the *Tractatus* addresses other two representational features namely; misrepresentation and non-existence. Misrepresentation refers to the fact that for any representation there are possible misrepresentations and non-existence means that a sign's referents need not exist in reality. The problem of negation has already been alluded to in the critical remarks on the Tractarian semiotics in the previous section. The solution to these difficulties is again found in the *Investigations*. It is the context of a semiotic system, which confers the representational adequacy to a sign. The adequacy of a sign is therefore not an absolute value but rather a variable depending on

the interpretation and usage given to a sign in a specific context. We have examples of how the context determines the adequacy of signs. A drawing of a village home which aims at showing its position relative to given river and an adjacent hill would be adequate for that purpose even if the position of the cow pen relative to the gate is not exactly represented. In this context the faulty positioning of the cow pen and the gate would not be considered as a misrepresentation and indeed if anyone conversant with the structure of the homestead would raise this anomaly in this given circumstance the answer would correctly be that "it does not matter". Yet, this would turn out to be a grave misrepresentation if the model is used to cross-examine a witness in a court of law where evidence is being adduced to determine the guilt of an accused animal thief suspected of stealing a cow in the said cow pen. In the same vein, while in a class of solid geometry, a sphere would be a gross misrepresentation of a pyramid, on a tourist map, a spherical point on a map to indicate the position of the great pyramid in Egypt would not be a misrepresentation. So, we can appreciate, that the context of representation is what determines whether a sign is an adequate representation or a misrepresentation. The same reasoning holds for the question of non-existence too such that it is the context that determines which entities exist or not. In a class of biology, a drawing of a flying horse is a drawing of a non-existent species while in a class of fine arts it is a drawing of an actual creative imagination of the artist.

Finally, the other feature, which is unique to the *Investigations*, is that representation is pluridimensional. This means that a sign can represent different things at the same time and the same context depending on the perspective of interpretation given to the sign.

So, a picture of me taken at a conference while making a presentation can at the same time be a picture of who my listeners were; the conference room and its multimedia facilities, my attire and gender. But from it, one would not deduce what language I was making the presentation in, my nationality, the listeners at the back of the room excluded from the focus of the camera. These are facts not represented in the picture. The situation would be different certainly for someone who watched the videotape of the same conference because he would be in a position to deduce for instance, the language I presented in. It is the context that determines the specific perspective we assume in interpreting a sign system while preserving its pluridimensionality.

We now turn to the second philosophical question of representation, which is, "what is the guarantee that our (mental) representations correspond with the external objects?" Wittgenstein's answer to this question lies more in his intermediary writings, specifically, in the *Remarks on the Foundations of Mathematics* and *On Certainty*<sup>144</sup>. In brief his position is that there is neither intrinsic correspondence nor any need for a guarantee, instead, it is the usage in a language game and the practical consequences for a given form of life that institute the apparent correspondence between the representations and the represented. In the *Tractatus*, Wittgenstein in the picture-theory of meaning asserted that the correspondence between the form of the propositional sign and the fact is the guarantee of correct representation. But the question that remains open is how these structures are related, that is, how a representing structure is related to the structure of its referents in the interpreters mind. In contradistinction to the

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<sup>144</sup> By intermediary works of Wittgenstein I am referring to any work of his apart from the *Tractatus* and the *Philosophical Investigation*. The term is therefore not having a chronological connotation.

*Tractatus*, the *Investigations*, the *Remarks* and *On Certainty* share a common contention that sentences can be meaningful without being used to describe reality. It is this point upon which Wittgenstein would indicate the relationship between a representational structure and its referents for the interpreter.

In the *Remarks*, Wittgenstein pursues the investigation of the connection between rules and necessity. The necessity he investigates is not physical necessity but propositional necessity traditionally tied to logico-mathematical propositions. Generally speaking, logical inferences as well as mathematical proofs and propositions have been held to be necessary and indeed more so than even propositions about laws of nature and causal relations. The philosophical question has been throughout the centuries that of determining the foundation of such a necessity. To this question, realism that is most clearly represented by Plato has provided a long-standing answer to the effect that the necessity of logical and mathematical propositions has an ontological foundation. Plato explains this foundation in terms of a world of ideas in which the mathematical and logical entities exist and whose properties become known to us by demonstrations. In the *Remarks*, Wittgenstein refuses the ontological explanation and proposes that logico-mathematical propositions are necessarily true not because they describe necessary facts but rather because they are of a normative character. So these propositions must be explained in different terms to adequately account for their necessity.

Precisely, the *Remarks*' examination reveals that logico-mathematical propositions are essentially rules of grammar whose function is not to describe an ideal reality as Plato

held but rather whose function is to specify a set of norms or rules for the manipulation of signs and the operations of the mind. This leads us to infer that for Wittgenstein, the grammatical rules are not merely limited to the role of determining the structural articulation of the elements of a sign system. They also perform the role of establishing the proper functioning of a language game. It is to the class of such rules that must be included according to Wittgenstein, the necessary propositions such as logic and mathematics. But, this point of view seems to put the *Remarks* in conflict with the *Investigations* where it was held that the rules of grammar are not hard and fast thereby permitting the flexibility of the language games. It is ironical then that the very rules of usage that were introduced by Wittgenstein to explain and justify flexibility should be the very ones to explain necessity in the meaning of some propositions. Even Wittgenstein seems to have anticipated this difficulty as is evidenced in the following quote:

But now suppose someone says: 'Nonsense-such considerations play no part in mathematics'. -But the question is not one of uncertainty, for we are certain of our considerations, but of whether we are still doing (Russellian) logic<sup>145</sup>

In placing logic and mathematics within the frame of the language games of daily practical life, Wittgenstein was shifting the focus from a rigid interpretation of these propositions to that of an interpretation which emphasizes the diversity of uses to which these necessary propositions can be put. It is in no way suggesting that we renounce their necessity but that we should revise our very grammar of the notion of necessity. In doing this, the *Remarks* reveals to us that necessity includes also forms that are founded

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<sup>145</sup> Ludwig Wittgenstein, *Remarks on the Foundations of Mathematics*, Oxford: Basil Blackwell, 1967, II, par. 49: In the subsequent pages, in case of references, it will be abbreviated as R.F.M.

on human volition. Volition is the basis of our freedom yet at the same time the basis of some determinations in human life. This insight has an interesting ethical implication too, which reconciles determinism and freedom in ethics by suggesting that we are always free within the frame of determinations. We are not absolutely free. That is why Wittgenstein invites us to recognize the multiple uses of the word "inexorable":

We now draw attention to the fact that the word 'inexorable' is used in a variety of ways. There correspond to our laws of logic very general facts of daily experience. They are the ones that make it possible for us to keep demonstrating those laws in a very simple way... This suggests the use of precisely these laws of inference, and now it is we that are inexorable in applying these laws.<sup>146</sup>

The logical and mathematical propositions are thus necessary in the sense that with them we are enabled to play the game of necessity.

Wittgenstein carries this analysis of grammatical rules further in the work "*On Certainty*" in which he analyses the status of certain class of propositions which are evidently empirical yet apparently true such that no one dares to doubt their truth. For example, "the earth exists" and "this is my hand". They are presumed to be immediately evident, therefore certain. Yet they are not necessary propositions because if someone subjects them to doubt then it is impossible to prove them by rational analysis such as the case of mathematics and logic. Given these conditions of certainty and contingency of these kinds of propositions one quickly encounters the skeptic problem that such propositions can be subjected to doubt. Whereas, the necessary propositions of mathematics and logic have provided the most effective response to neutralize skepticism, this latter class of propositions seems to be the skeptic's strongest weapon. The British philosopher, Moore, provided an answer to this problem, which answer

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<sup>146</sup> RFM I par 118

seems to have provoked Wittgenstein's response.<sup>147</sup> In brief, Moore's position is that these propositions are part of common sense and from this fact comes the proof that they constitute a specific class of knowledge.

The strategy adopted by Wittgenstein to respond to the skeptic problem is to demonstrate that these propositions do not constitute knowledge and therefore are not amenable to doubt. The origin of the certainty of these propositions is purely grammatical. It also involves the rules of a game without which the game would not be played. In this instance the game is not that of necessity but of doubt. Doubt is a language game, which involves discussions, and discussions would not take place unless certain propositions are capable of being doubted. But this can only take place within the framework of some other propositions that are fixed and indubitable: "That is to say, it belongs to the logic of our scientific investigations that certain things are indeed not doubted."<sup>148</sup> Such propositions, which are not doubted, also ensure that the game of doubting does not slip into infinite regress as he says that "a doubt that doubted everything would not be a doubt."<sup>149</sup> In order to clarify this position, Wittgenstein makes a distinction between empirical propositions and grammatical propositions.

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<sup>147</sup> Moore G. E. referred to in OC 1 variously cited in the article "Proof of an External World" in *Proceedings of the British Academy*, Vol. XXV, 1939; and also "A Defence of Common Sense" in *Contemporary British Philosophy*, 2<sup>nd</sup> Series, Ed. Muirhead, J. H., 1925. Both papers are also in Moore's *Philosophical Papers*, London: George Allen and Unwin, 1959

<sup>148</sup> Ludwig Wittgenstein, *On Certainty*, Oxford: Basil Blackwell, 1974, par. 342: In the subsequent pages in case of references, it will be abbreviated as OC

<sup>149</sup> OC 450

The empirical propositions are the ones that express the contents of our experiences. They are variable elements of language because they can be true or false. When they are true and justified, then they become objects of knowledge<sup>150</sup>. On the other hand, the grammatical propositions do not have truth-value. They are therefore not objects of knowledge; instead they are the conditions for the possibility of the language game of doubting. They are constants in this language game. They are the minimal rules that guarantee the possibility of linguistic interaction within a given community:

But I did not get my picture of the world by satisfying myself of its correctness; nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false.<sup>151</sup>

So when we assert that a certain proposition is indubitable, we are basically asserting that "with the word 'certainty' we express complete conviction, the total absence of doubt, and thereby we seek to convince other people. That is subjective certainty."<sup>152</sup> However, it is important to note that this distinction is not ontological such that certain propositions are just to be grammatical while others have the vocation to be empirical. These roles are functional and depend on the specific language game. It is therefore possible to have one and the same proposition being grammatical in one language game and transforming into an empirical proposition in yet another language game:

Any empirical proposition can be transformed into a postulate – and then becomes a norm of description...one almost wants to say 'any empirical proposition can, theoretically, be transformed...'<sup>153</sup>

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<sup>150</sup> OC 243

<sup>151</sup> OC 94

<sup>152</sup> OC 194

<sup>153</sup> OC 321

With the foregoing analysis of necessity and certainty, we see that for Wittgenstein the spectrum of "rules of grammar" is much wider than is traditionally taken to be. The broadened range of these rules is the one that provides an explanation for the correspondence between representations and their objects in the interpreter's minds. Ruth Millikan commenting on the importance of "use" in establishing this relation of correspondence has aptly put it that "semantic value of a representation is determined by whatever mapping relation is in fact doing the work of successfully guiding the organism through its activities in its world when controlled by representation"<sup>154</sup>.

#### 4.7 CONCLUSION

We have seen how Wittgenstein's semiotic theory is an attempt to grapple with the philosophical problem of representation. In doing this analysis we have observed how the concept of a sign itself has progressed steadily by ever acquiring richer connotations. It started with a narrow concept of a sign as a natural sign of certain effects. Then progressively, the sign was perceived as a dyadic relation between the signifier and the signified. Then came the triadic conception which added the interpreter to the definition of a sign. Finally, with Wittgenstein we have encountered a much richer concept that integrates the context of sign users to the very essence of a sign thereby making it a four-term relation and, thus, finding a powerful tool for resolving some of the old puzzles of philosophical problems of general semiotics. His analyses reveal the conditions under which we may say that an entity is a representation of something else and guarantee that our representations correspond to external objects.

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<sup>154</sup> Ruth G. Millikan, "Biosemantics" in *Journal of Philosophy* 86, p 293

## CHAPTER FIVE

# MODEL-THEORETIC ANALYSIS OF WITTGENSTEIN'S SEMIO-LINGUISTIC THEORY

### 5.1 INTRODUCTION

This chapter focuses on synthesizing Wittgenstein's semiotic theory. The purpose is to unfold a unified semiotic theory from the respective works of Wittgenstein. This is pursued using a model-theoretic approach which then allows the theory so exposed to be amenable to a more rigorous formulation. The theory was proposed by Alfred Tarski but in this section we employ the general outline of it elaborated by Henry Hiz so as to render it relevant for semiotic systems in general. The chapter begins by clarifying the difference and relation between semantics and semiotics in order to model Wittgenstein's semiotic theory as semio-linguistic. It seeks to show that it is only when we consider the two works together as constituting a unified system of thought that we can be able to develop Wittgenstein's semiotic theory in the standard form consisting of syntax, semantic and pragmatic components.

### 5.2 SEMANTICS AND SEMIOTICS

At this juncture it is important to highlight a fundamental distinction which exists between meaning in semiotics and meaning in semantics. Ordinarily, we express

whatever we want in words. In this way we are able to communicate information, a question, command, a riddle, an opinion, a protest, etc. We do so in words and sentences which are linguistic utterances. But quite often we convey a lot of meanings not in words but by other media other than words. For example, dressing for different occasions, gestures, buildings, music, paintings and cultural markings can convey meanings without the use of words. Semantics is that part of meaning which deals with meaning as carried in words, while semiotics deals with meaning transmitted by any other medium and not necessarily with words. Semantics is therefore a specialized branch of semiotics as it were, and its elaborate development as a branch of linguistic research provides an appropriate paradigm for study in general semiotics.

Model theory is a part of the discipline of logic which concerns itself with meaning relations that exist between sentences of a formal language and its interpretations. It provides an appropriate paradigm for semantics because it places semantic discourse on an objective plane thus avoiding subjectivism that can easily obscure semiotic research. Thus, Model-theory concerns itself with the meanings of formalized languages and it was proposed and elaborated by Alfred Tarski.<sup>155</sup>

The investigation and understanding of formalized languages requires a working knowledge of the principles of formal logic. Logic can be described as the systematic investigation of consequences of meaningful sentences. In investigating the nature of deductive sciences, Tarski observed that "every deductive discipline is a system of

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<sup>155</sup> Alfred Tarski, *Op. Cit.*

meaningful sentences".<sup>156</sup> The concept of meaningful sentence has no specific content. Instead it is relative to a given formal discipline. It is understood as a well-formed sentence of a concrete discipline. When we are given any arbitrary collection of meaningful sentences together with certain rules of inference applicable to the collection of sentences, it is possible for us to derive new meaningful sentences as consequences of the original set. The collection of the consequences of the sentences of the original set are also sentences which means that our rules of inference can yield only sentences. Tarski makes the two concepts namely; sentence and consequence, the most basic concepts in logic and asserts the following:<sup>157</sup>

- a. That every sentence which belongs to a given set is to be regarded as a consequence of that set
- b. That the set of consequences of a set of sentences are solely sentences
- c. That the consequences of consequences are themselves consequences
- d. That every consequence of a given set of sentences is a consequence of a finite subset of the set and vice-versa
- e. That two sets of sentences are logically equivalent if their sets of consequences are identical
- f. That in a deductive system every set of sentences implicitly contains all its consequences

Model-theory then as formulated by Tarski aims to demonstrate how a formal language attributes meaning to its well-formed sentences. This is specifically referring to how

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<sup>156</sup> *Ibid.* p 63

<sup>157</sup> *Ibid.* p 64

sentences of a formal language can be meaningfully described as true or false. According to Tarski, the formal discipline must be about a given structure, that is, what its sentences are talking about. So in order to ascribe meaning to sentences of a formal language, we must necessarily have also a third domain of interpretation which associates the elements of the formal language to the elements of the structure that is talked about. Meaning must therefore involve, in terms of model-theory, three categories, namely, the symbols of the formal language, the structure talked about and the system of interpretation which relates the elements of the previous categories.

It is clear from the foregoing discussion that the core steps of model-theory employ the structure of a formalized language which imposes limitations on its applicability to semiotics as a whole which transcends the bounds of formalized languages. So, only very general investigations of model-theory can be helpful to semiotics. Hiz Henry has attempted this application of model-theory to semiotics in general.<sup>158</sup> He propounds that in semiotics what we do is to draw consequences not from meaningful sentences alone but from meaningful objects in conjunction with a set of sentences. Sentences form a subset of meaningful objects. A meaningful object is any entity which has meaning, for example, buildings, musical piece, clothing, cigarettes, high heels among infinitely many others. Sentences are meaningful in the nexus of language and likewise all meaningful objects are meaningful only in the context of a signifying or semiotic system. Hiz observes that Tarski and logicians in general are concerned with consequences of sentences in a language. These kinds of consequences he refers to as

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<sup>158</sup> Henry Hiz, "Logical Basis of Semiotics" in Sebeok, A. (ed.), *A Perfusion of Signs*, Bloomington and London, Indiana University Press, 1977

semantic consequences. But consequences from meaningful objects other than sentences he refers to as semiotic consequences. Accordingly, logic investigates semantic consequences while semiotics investigates semiotic consequences.

Most importantly, Hiz observes that whatever the nature of the meaningful object, its semiotic consequence must still be a sentence. He defines semiotic consequences as "sentences inferable from a meaningful object...and from sentences assumed".<sup>159</sup> Thus the semiotic meaning of a meaningful object depends on the set of assumed sentences and other assumed meaningful objects. Specifically, it consists in the increase of the field of consequences of the set augmented by that meaningful object. It is curious however, why Hiz insists that we can only draw semiotic consequences from meaningful objects in conjunction with assumed sentences, such that it is not clear whether we can draw consequences from meaningful objects alone. The reason is possibly based on the principle of logic known as *deduction theorem* which is at the very foundation of the technique of conditional proof. It holds that when to a given set of sentences you add another sentence and the resulting union validly implies a given conclusion, then it is also valid to state that the said set of sentences unadulterated by the new one implies a conditional whose antecedent is the previously added new sentence and the consequent is the previous conclusion.

But more fundamental to this is the fact that there are unlimited possibilities of transferring the whole system of speech symbolism into other forms of symbolism.

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<sup>159</sup> Henry Hiz, *Op. Cit.* p 46

Edward Sapir points this out clearly by establishing that we always operate with symbols of different orders in order to communicate. He suggests that "the essence of language consists in the assigning of conventional, voluntarily articulated, sounds, or of their equivalents, to the diverse elements of experience"<sup>160</sup>. For example, the word "house" becomes a linguistic fact only when it is associated with our experiences of actual houses. The mere utterance of this word or mere writing of it would not make it a linguistic fact. A word is said to be arbitrary when the word as such has no other significance for the user other than to serve as a symbol to refer to its denotation, whenever it is necessary to do so.

If we assume the primacy of spoken speech then we realize that language is primarily an auditory system of symbols and vision for instance is not brought into play. But it is possible to transfer this system to a visual system of symbols by the invention of writing. At this juncture, the written word becomes the symbol for the spoken word. It is thus a symbol of a symbol, that is, a symbol of the second order. We can transfer the written language further into the symbolic system of the Morse code in which written words are represented by sequences of long and/or short ticks. This transfer would be of the third order because the Morse code now is a symbol of a symbol of a symbol. In principle then there is no limit to the possibilities of such transfers. Sapir therefore asserts: "We shall no doubt conclude that all voluntary communication of ideas, aside from normal speech, is either a transfer, direct or indirect, from the typical symbolism

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<sup>160</sup> Edward Sapir, "Language Defined", in Anderson Wallace, *Introductory Readings on Language*, New York, Holt, Rinehart and Winston, Inc. 1962, p 8

of language as spoken and heard, or at the least, involves the intermediary of truly linguistic symbolism. This is a fact of the highest importance."<sup>161</sup>

### 5.3 WITTGENSTEIN'S SEMIO-LINGUISTIC THEORY

In the light of Hiz's theory we can offer a synthesis of Wittgenstein's semiotic theory. Any theory of semiotic systems relates three domains namely, the domain of signs, objects and interpreters. Each domain may have its own structure amenable to analysis at different levels of abstraction. But actually the analysis, not of the domains in isolation, but rather the interrelationships between these domains is the object of a semiotic theory. These relationships are of three types namely, syntax, semantics and pragmatics. It is in line with this classification that we attempt to reconstruct Wittgenstein's theory of semiotic systems.

**5.3.1 Syntax:** In order to understand the syntactic theory of a semiotic system we must first appreciate the fact that any sign system involves signs in various relations to other signs. These relations constitute a relational structure of the given sign system. Wittgenstein contends that the sign system should have the same form as the situation it claims to depict. The first consequence of this view is that one can consider the mappings of natural attributes of the objects signified into the sign system in order to determine the attributes of signs. This is particularly relevant with regards to pictorial signs. With such mappings it is easy for us to describe the notion of iconic signs in terms of their degree of iconicity as the extent to which the attributes of signs are in

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<sup>161</sup> Edward Sapir, *Op. Cit.* pp 12-13

relations corresponding to the relational attributes of the objects signified. Wittgenstein expresses this as an isomorphism of the logical form between the sign system and reality or situation it depicts. The relational structure of the sign system constitutes its sense in virtue of which it is a picture of the situation it represents.

The second consequence of Wittgenstein's syntactic theory of signs is that for any given object we can consider all the signs which might possibly represent it. Maria Nowakowska refers to the class of signs which are co-referential as the "potentiality distribution" of the object signified.<sup>162</sup> Therefore in line with Wittgenstein's thought, in partitioning the signs into categories corresponding to the various media of representation for example, verbal, pictorial, symbolic, numeric, etc, we derive the bounds of the potentiality distribution of the object to various sign categories. The concept of potentiality distribution can be employed to set up an axiomatic theory of signs in the following manner:

- a) Set up a collection of sign-systems
- b) Use potential distribution to effect a partition of the collection into equivalence classes
- c) Introduce the operations of complementation, addition and multiplication
- d) Interpret complement as the environment, addition as juxtaposition of the sign systems e.g. different teaching aids for the same content

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<sup>162</sup> Maria Nowakowska, "Formal Fuzzy Semiotics and Cognitive Processes" in Borbé, T. (ed.), *Semiotics Unfolding*, Vol. 1, Berlin, Mouton Publishers, 1979, p 240

consecutively and multiplication as the superposition of the sign-systems as in multimedia

- e) Allow for the distinguished elements: non-sign or the blank and the initial collection of signs as the null and the unit elements respectively
- f) Employ the concept of semiotic consequence and the set-theoretic relation of inclusion to set up an ordering relation

**5.3.2 Semantics:** Semantics describes relationships between signs and objects. The domain of objects consists of anything that can be thought of. These can be concrete objects such as stones and chairs; abstract ones like democracy or pairs; and relations between the objects of thought. Among relations are included qualities of objects. Any collection of objects constituting a subject of thought is referred to as a structure. There are two kinds of structures namely; constrained structures and free structures. A constrained structure is one that is well-defined such that for any object whatsoever we can determine whether or not it belongs to the said structure. A free structure on the contrary is one which is not well-defined. So for some objects, we cannot tell whether or not they belong to the structure. It is arguable that the "early" Wittgenstein is focusing more on the constrained structures while the "later" Wittgenstein focuses more on the free or fuzzy structures.

In order to construct a constrained structure and relate it to a given semiotic system, we must have two levels of attributes. The first level is the one of the attributes in terms of

which we construct the common structure of objects. These are the essential characteristics by means of which we can determine the elements of the structure. But besides this level of attributes we require a second level of attributes by means of which we distinguish individual members of the structure. For example the set of attributes such as having been admitted to the university and paying tuition fees may construct the structure of University students, but the registration numbers may be employed to distinguish each student from all the rest in the university. The latter set of attributes can be seen as the ordering principle in the structure and it is the set of attributes in respect of which the individual members of a given structure might differ. Mario Bunge has devised a method of discretizing all the domains of signification which allows one to infer qualitative features of a system from its quantitative models. He states that:

The discretization of a continuous system model is not always a trivial exercise. Sometimes it is suitable to discretize the state variables themselves, as when one stipulates that any values below threshold count as 0, and any above threshold count as 1. At other times one is interested in growth and decline rather than absolute values. In such cases the rates are discretized, namely thus: the state of the variable is assigned the number 1 if its rate is positive, and 0 if negative. In this case the momentary state of the system is represented by an n-tuple of zeros and ones exhibiting the state of each variable.<sup>163</sup>

A semantic theory of signs should therefore consist in deriving a function which relates a class of signs to a given structure in such a way that any object within the structure has a given sign to represent it. Such a function can be seen as the interpretation of the sign system. However, the *Tractatus* does not shed much light on the nature of the interpretation function because it leaves us unclear about the domain to which it belongs. Besides, it is not clear how it relates to the three domains of objects, signs and

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<sup>163</sup> Mario Bunge, *Treatise on Basic Philosophy*, Vol. 5, Dordrecht: D. Reidel Publishing Company, 1983, p 190

interpreters.

In the *Tractatus*, Wittgenstein makes a distinction between *saying* and *showing*. "What can be shown cannot be said" – TLP 4.1212. He pursued the theme of *showing* in PI and in there it turned out to be sayable. The distinction here is vital and related to the distinction between reference and sense. 'What can be said' has to do with the referential character of the semiotic system while 'what can only be shown' has to do with the sense of the system. In the *Investigations* it boils down to the rules of use. However, at this juncture it is the *saying* that concerns us most.

As we highlighted in chapter three, the ontology of the *Tractatus* runs parallel to its semantic theory. Van Peursen argues however, that a closer scrutiny of the details of this correspondence reveals that Wittgenstein departs from the standard logical practice of constructing a logical system which begins first by a choice of primitive (undefined) terms, symbols, axioms and rules of inference that are arbitrary, which means not informed by any ontological or material considerations. After such a choice, one then proceeds to interpret the resulting logical system in a particular way by setting up a *model* of the system. The model usually includes elements from the factual world which are taken to be represented by the formal symbols of the logical system. Finally, one attempts to discover if the model fits reality by way of verification or falsification. For Wittgenstein as Van Peursen observes, an arbitrary choice of this kind is impossible

because one can only frame an intelligible structure if it agrees with the structure of reality.<sup>164</sup>

Thus, language in general, and propositions in particular, fall under the more general term, "picture". A picture of reality, whether it comes about through a combination of elements of language or of other things, as in the reconstruction of a car accident by means of small dolls and toy cars, is itself a model. "A picture is a model of reality"- TLP 2.12. Here the model is not an interpretation of a formal system of symbols, but rather each system of symbols is already part of a picture or model. Thus for Wittgenstein, a system is formal not because it is arbitrary, but because it represents possible rather than factual reality: "pictorial form is the possibility that things are related to one another in the same way as elements of the picture"- TLP 2.151. This model-character of language can only be shown but not said.

This means then that the obtaining of a situation is just but a specification of what is given already in the logical network or logical space as one of the possibilities. The logical space of a proposition is captured by rows of a truth-table. In this regard, the logical operators by means of which we generate compound statements can be equivalently interpreted as symbols that demarcate the bounds of the whole of logical space which limit any new factual possibilities. The possibilities depicted by a picture tell us effectively what the situation would be if it were to arise as depicted. But that it actually does arise cannot be inferred from the logical space. In this we find

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<sup>164</sup> Cornelis Anthony Van Peursen, *Ludwig Wittgenstein: An Introduction to his Philosophy*, Translated by Ambler Rex, London: Faber and Faber, 1969, p 46

Wittgenstein echoing Leibniz in asserting that the actual world is just but one of a number of possible worlds. It is the guarantee of soundness in which we merely attempt to see if a given situation depicted by a proposition is actually so in the actual factual world. Peursen aptly captures this idea of Wittgenstein:

A statement has meaning in so far as it reproduces a state of affairs. Yet it 'reproduces' it by way of experiment or by way of a model, for what the statement has in common with the state of affairs is the logical form, the possibility of a state of affairs occurring or not occurring. That a situation does in fact occur cannot be expressed in language, any more than the fact that the logical form of language agrees with the form of reality.<sup>165</sup>

In the *Investigations*, Wittgenstein offers a new and expanded conception of a sign. He adds the context of the users of a sign as an integral element of a sign. A sign is then seen as a relation of four terms namely; the interpreter, the symbol, the object referred to and the context. But besides the sign, there is the interpretation function which maps a given sign to a set of values. Here lies one of Wittgenstein's semiotic insights. As opposed to the *Tractatus* which had considered as only meaningful, statements which can be true or false, the *Investigations* expands the domain of semiotic values to include truth-neutral values such as the moral and aesthetic values. He notes further that the sets of axiological values are inherently fuzzy unlike the set of logico-epistemological values of true and false which are determinate but the process of assigning their respective values is the same. Pierce who also held that logic along with ethics and aesthetics constitute all experience and thought and that they are all representable by signs, aptly expresses the idea thus:

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<sup>165</sup> Cornelius A. Van Peursen, *Op. Cit.* p 56

The work of the poet or novelist is not so utterly different from the scientific man. The artist introduces a fiction; but it is not an arbitrary one; it exhibits affinities to which the mind accords a certain approval in pronouncing it beautiful, which if it is not exactly the same as saying that the synthesis is true, is something of the same general kind.<sup>166</sup>

Axiological procedure, no matter what value it is applied to, has a specific structure to it. This structure derives from the fact that there exists only a value of something for someone. The core of this structure is the relation between an object, value of the object and the interpretation of that value.<sup>167</sup> In this regard, the interpretation function is what grounds the possibility of communication between emitters of signs and their audiences. It is the common background experience that gives the inertia of stability and continuity to this interpretive function. Truth-value is just one of the possible values that a sign might take. We can talk of the adequacy of the sign system to refer to the entire range of values that can be attributed to a sign. These might include logico-epistemological systems evaluated on the scale of truth, moral values on the scale of goodness, aesthetic values of beauty, methodological values of testability or provability and pragmatic values of feasibility.

**5.3.3 Pragmatics:** Contextual analysis is the basis of a pragmatic dimension in Wittgenstein's semiotic theory. Pragmatics is that branch of semiotics which investigates the relations between a sign system and its users. This relationship is embodied in the contexts of the signs used. In a way then, pragmatics attempts to

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<sup>166</sup> Charles Sanders Peirce, *Collected Papers*, vol. 3 par, 27

<sup>167</sup> Nadin Mihai, "Sign Fuzzy Processes and the Value Continuum" in Borbé, T. (ed.), *Semiotics Unfolding*, Vol. 1, Berlin, Mouton Publishers, 1979, p 201

formalize the connection between a semiotic system and the contexts of usage. The need for a pragmatic theory of semiotic systems has been brought into focus by the ordinary-language philosophers and it is founded on three key problems. These are: the problem of context-dependence of expressions, the problem of analysis of the force of speech acts and finally, the problem of formulation of rules of conversation.<sup>168</sup>

The problem of context-dependence points to the fact that what is expressed by a proposition normally depends not only on the meaning of the constituent parts of the complex expressions by means of which the proposition is stated but also that more often than not, it depends also on extra-linguistic facts about the situation in which the proposition is asserted. Examples of context-dependence is readily illustrated by expressions which employ personal pronouns like *I* and *you*, tenses like *am*, *was* and *will*, and demonstrative pronouns like *now* and *here*. Besides these obvious cases we also have sentences containing logical constants *all* and *some* whose meanings depend on the contextually determined universes of discourse. Pragmatics attempts to investigate how context constrains the content of such cases.

The second problem involves the analysis of force of a speech act. The theory of speech acts which was first proposed by John L. Austin<sup>169</sup> and later elaborated by his student John Searle<sup>170</sup> brought this problem to the fore. Austin distinguished three aspects to

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<sup>168</sup> A. P. Martinich, *Op. Cit.* p 25

<sup>169</sup> John L. Austin, *How to do Things with Words*, 3<sup>rd</sup> Edition, eds. Urmson, J. O. and Warnock, G. J. Cambridge, Massachusetts: Harvard University Press, 1962

<sup>170</sup> John Searle, *Speech Acts*, Cambridge: Cambridge University Press, 1969

speaking which are distinguishable namely; the locutionary act, the illocutionary act and the perlocutionary act. The locutionary act consists in the mere utterance of an expression, the illocutionary act consists in what is done by uttering the sentence for example, stating, questioning, commanding, among others. Perlocutionary act consists in the effect produced in the audience by the utterance for example persuaded, irritated, or indifference, among others.

The problem of force of a speech act precisely is encountered in the analysis of illocutionary acts. It is standard to analyze illocutionary speech acts into two components, the content and the force. In order to illustrate the point we can use the following cases:

"I assert that the Vice-Chancellor will be at the seminar"

"I question whether the Vice-Chancellor will be at the seminar"

"I bet that the Vice-Chancellor will be at the seminar"

"I promise that the Vice-Chancellor will be at the seminar"

Each of the above sentences has the same content which is the sentence "*Vice-Chancellor will be at the seminar*" which has a subject and a predicate. The other part of the speech act is its illocutionary force. It indicates what is performed by the speech act. The content acquires a different force with the utterance of each sentence above. It is variously stated, questioned, bet or promised. The analysis of the content of a speech act falls within the domain of semantics but the analysis of force falls within the domain of pragmatics and it involves problems such as: what is it to assert a proposition? How

is assertion different from questioning whether it is true? How does an assertion alter the context in which it is made? How is it related to the beliefs and intentions of speaker and audience?<sup>171</sup>

The third problem is that of formulating rules of conversation and showing how they can be exploited for effective communication. H. P. Grice in his theory of conversation referred to such rules as *conversational maxims* which when combined with the context results in *conversational implicatures*. For example it is as a result of conversational implicatures that we might find an assertion inappropriate even though it is true; an inference may be valid but we still feel that it is unreasonable in a given context.<sup>172</sup>

The concept of context becomes in the 'later' Wittgenstein a central presupposition just like in the *Tractatus* the concept of compositionality according to which the contents of a complex expression is a function of the contents of its components, was a fundamental presupposition. Even though Wittgenstein never sought to directly solve the above-mentioned problems, his concept of context is amenable to the solution of the three problems at the core of ordinary-language philosophy and which can be extended to include semiotics in general. Thus employed, the same context on which context-dependent utterances are dependent ought to be the same context in terms of which speech acts are analyzed and also the rules of conversation and constraints are stated.

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<sup>171</sup> R. Stalnaker, "Logical Semiotic" in Agazzi, E., *Modern Logic: A Survey*, D. Reidel Publishing Company, 1980, p 440

<sup>172</sup> H. P. Grice, "Meaning" in *The Philosophical Review*, 66 1957, p 379

The development of such a unifying concept is one of the ways of developing a systematic pragmatic dimension of semiotics.

Stalnaker asserts that in order to make sense of the activity of communicating, one must admit the existence of alternative possibilities and he indeed takes "alternative possibilities" as a basic primitive notion which is useful in developing a formal pragmatic theory just like it is necessary in developing formal semantic theory based on possible worlds semantics. He accordingly interprets a context as a set of possible worlds, but this is not necessarily a set of all logically or ontologically possible worlds but rather it includes only the possibilities "which are regarded, in the particular situation, as the live options...These possibilities will be the ones compatible with all the information which is taken for granted in the conversation -with the presumed common background knowledge of speaker and audience".<sup>173</sup> This is what he calls a *context set*.

The term context has some equivocation associated with it since it can be understood as referring both to the conditions surrounding the usage of a sign and also to the other signs which precede and follow a sign in a given situation. For purposes of clarification it is enlightening to identify the different types of contexts. Robert Moore has identified three categories into which the different types of contexts may be classified; physical, psychological and verbal.<sup>174</sup>

Semiotically, the physical context involves the place where the signs are used, the time when they are used and the activities going around the emitter of the sign. For example,

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<sup>173</sup> R. Stalnaker, *Op. Cit.* p 442

<sup>174</sup> Robert H. Moore, "Contexts" in Anderson, W. (ed.), *Introductory Readings on Language*, pp203-204

if a passer-by were to see a young man carrying a luggage and saying to himself " how it feels good to be through with all this!" as he walks through the gate of a university, the passer-by relying on the physical context would most likely interpret the young man to be referring to his having completed his university studies. The psychological context involves the experiential background, the present mood or the future expectations of the emitter. For example, if the same passer-by should hear the same utterance from a nephew of his whom he knows was at the university, then regardless of the physical conditions under which the exclamation was uttered he would know that his nephew is happy to complete his university cycle. It is psychological context which provides a clue for an interpretation of the exclamation. Finally, the verbal context, which can be extended to include the context of a system of signs in general, involves the signs that are used together with a given sign. Our passer-by for instance may overhear a total stranger telling a friend through a phone-call that "after four difficult years of university studies, I am happy to be through with it". It is neither the physical nor the psychological context that counts for him but rather the verbal context which gives him the interpretive resources.

A context set, taken as what an individual sign emitter and audience take to be the common background of the semiotic process they are involved in, consists of these three types of contexts. In communication, the fundamental presumption is usually that the interlocutors have the same context sets. If this presumption is fulfilled we can refer to the context as convergent. But if the context sets of the participants are different, we can refer to the context as divergent. This establishes a context set as a dynamic rather

than a static reality. Based on the foregoing discussion on the types of contexts, it is comprehensible that context sets are constantly dynamic for at least three reasons. First, they adjust to changes in the physical environment, second, they change in response to psychological changes which give evidence to the fact that the presuppositions of the participants are divergent and thirdly, the context sets change in response to the ongoing semiotic processes. For example, in a conversation process, if one accepts what the other is saying, the accepted proposition forms part of subsequent presuppositions of the ongoing conversation. A context can then be taken as a union of the set of individuals who are the participants in a conversation with the corresponding context sets of each participant. Context defined this way can provide a precise framework in which the analyses of force, context-dependence, conversational maxims and presuppositional constraints can all be stated as relations between a sign and its context.

It can be used for example to account for conversational constraints in which a semiotic system is seen to be having common background presuppositions if their communicative function is to be realized. The analysis of presuppositions in pragmatic terms of context throws some light to this phenomenon in meaning-making processes. A statement of the form *if P then Q*, for example, if Kibaki is the president of Kenya then Kibaki is over 35 years old presupposes the propositions that Kenya is a sovereign state and that Kenya has a president. In yet another example, a no smoking sign at a petrol station presupposes the fact that there are cigarettes and at least that some motorists or their passengers smoke. These presuppositions behind a semiotic system are part of the common background knowledge of the sign system users. The concept of

context as has been presented provides us with a tool which allows us to provide a formal analysis of presuppositions. Presuppositions have been presented in semantic terms as a relation between sentences in terms of truth-conditions. In this view, a sentence, S, presupposes a proposition, P, just in case, in all possible worlds, if S expresses a proposition with a truth-value, then P is true in all the possible worlds.<sup>175</sup> In other words, P implies both S and not-S. But the problem posed by this interpretation of presuppositions comes when its proponents are confronted with the so-called the problem of truth-gaps. This is a problem which we can easily appreciate when we consider a complex expression whose truth-value is a function of the truth-value of its components. The problem comes in when we want to determine the truth-value of the complex when some of its components have indefinite truth-values. For instance, in standard logic, the truth value of a disjunction is a result of the truth-value of its disjuncts. But what would be the truth-value of the disjunction if one of the disjuncts was false and the other one undefined? The entire disjunction would be undefined too.

Stalnaker, proposes that we need to transfer the problem of presuppositions from the domain of semantics to the domain of pragmatics and he employs the idea of context to provide the analysis of presuppositions which avoid the problem of truth-value gaps. He says that "a speaker presupposes a proposition if and only if it is entailed by the speaker's context set".<sup>176</sup> This means that the presupposed proposition is true in all the three contexts of the speaker, namely, the physical, psychological and the verbal. He

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<sup>175</sup> Bas C. Van Fraassen, *Formal Semantics and Logic*, New York: The Macmillan Company, 1971, pp 94-95

<sup>176</sup> R. Stalnaker, *Op. Cit.* p 446

further points out an immediate interpretation of this description of presupposition thus: "one might say that a sentence presupposes a proposition if and only if the appropriate use of that sentence requires, for one reason or another, that the speaker presupposes the proposition".<sup>177</sup> In this case, the presuppositions become pragmatic maxims that constrain the appropriateness of the speech act.

The major advantage of Stalnaker's insight is that presuppositions can now be applied to any semiotic system and not only restricted to truth-functional expressions. Besides, it can explain contextual constraints that govern both the propriety and the content of any semiotic entity. Another consequence of this is that any symbol would have no content in the possible worlds or context sets in which their presuppositions are false. Presuppositions in this case, just like the consequences, of signs must be propositions.

The other case we may consider in this regard of context is the question of context-dependent expressions. The clearest and intuitive instances of these are the demonstratives and the personal pronouns. Their extensions clearly depend on the contexts of their use. A sentence such as "I have left him there just now" expresses a proposition whose truth-value is contingent on who is talking, where "there", "now" and who "him" refer to, to whom he/she talking. David Kaplan in his theory of demonstratives has given an analysis of context-dependent expressions as functions, which take in contexts of use as arguments and map them into contents. Contents in their turn take in possible worlds or circumstances as arguments and map them into

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<sup>177</sup> *Ibid.* p 446

extensions. In the case of a sentence, the content is the proposition made while the extension is its truth-value.<sup>178</sup> In this analysis then the context becomes an n-place relation whose terms are all the features of the circumstance on which the extensions of the expressions depend. An interpretation of a context would then be a function from these n-place relations to ordinary extensions such as individuals, places, time, and truth-values.

This analysis of context is in resonance with Wittgenstein's analysis in which contexts determine the content of an expression amenable to a specific extension. The novelty of Wittgenstein's idea is that the content need not necessarily be propositional. They can be expressions of any form so long as they carry a content whose transmission is the principal role of communication. Context therefore, determines the content of any context-dependent expression thereby bestowing it with a given value or extension. Thus, pragmatic rules constraining language use equally determine the content of context-dependent expressions. Stalnaker captures the same thought by stating that "these rules can be motivated in terms of the purposes of discourse only if we can represent what is said in an utterance in abstraction from the means used to say it".<sup>179</sup> This opens up the possibility of extending the same analysis of contexts and their ability to form the foundations for a pragmatic theory to the whole range of meaning-creating systems.

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<sup>178</sup> David Kaplan, "On the Logic of Demonstratives", *The Journal of Philosophical Logic*, VIII 1978 p 86

<sup>179</sup> R. Stalnaker, *Op. Cit.* p 449

## 5.4 CONCLUSION

This chapter has attempted to formulate a unified semiotic theory of Wittgenstein pursuant to the expositions in the previous chapters. The synthesis has been guided by the theoretical framework of model-theory as proposed by Tarski but extended by Hiz. This approach has the major advantage of ensuring objectivity of semiotics and the accessibility of semiotic process. It has demonstrated the complementarity of the two works of Wittgenstein. The *Tractatus* provides a syntactic and semantic analysis of the logico-epistemological discourse that can take the values of true or false, but the *Investigations*, extends the analysis to include non-assertive values. Besides, the latter introduces the concept of context that enables Wittgenstein to introduce the pragmatic dimension to his semiotic theory. Together, therefore, the two works of Wittgenstein constitute a complete semiotic theory with syntactic, semantic and pragmatic dimensions. The Chapter has also exposed Stalnaker's formalization of the concept of context so that it is fitting for formulating a model-theoretic framework for general semiotics. This has aided us in perceiving the formal structure of Wittgenstein's four-term conception of signs. The fourth term which is the context provides the interpretation domain that brings the other three domains of objects, interpreters and signs together.

## CHAPTER SIX

# POSSIBLE AREAS OF APPLICATION OF WITTGENSTEIN'S SEMIO-LINGUISTIC THEORY

### 6.1 INTRODUCTION

This chapter aims at indicating some areas in which Wittgenstein's theory of semiotic systems can be applied. Two specific areas of possible application are suggested in the chapter. The attempt at application revolves around the fact that the chief philosophical goals of semiosis are representation and communication. The first area for possible application lies in the possibility of employing Wittgenstein's philosophy of semiotics as a theoretical basis for unifying the analytical and structural semiotic trends founded respectively on the traditions of Pierce and Saussure. This would provide a richer theory of representation which effectively can be applied as a multidisciplinary methodology which is becoming the dominant practice in the humanistic, linguistic and social disciplines. Secondly, his ideas can be helpful in developing a foundational theory for elaborating a philosophy of communications.

## 6.2 RECONCILING THE ANALYTICAL AND STRUCTURAL SEMIOTICS: A METHODOLOGICAL IMPORT

The first area where Wittgenstein's thought can be applied is to provide a theoretical framework to reconcile the divide between the main strands of semiotic research. The logical strand proposed by Charles Sanders Peirce and the more sociological one proposed by Ferdinand de Saussure and which have inspired parallel and at times competing theories. Wittgenstein's earlier philosophy was much akin to Sanders' approach while the later philosophy is a kin to Saussure's approach. By developing a synthesis of his thought, we have therefore created a nexus for marrying these two approaches and revealing that they are not contradictory but rather complementary.

The antagonistic nature of the two trends has been highlighted by Milton Singer by pointing out the six key areas in which a comparison between the two can be made so as to put their differences in the open.<sup>180</sup> First, is on the general theory of signs where he observes that Peircean semiotic is philosophical, normative and observational while Saussurean semiology is a descriptive generalized linguistics. Secondly, on the dominant subject matter of their theories; Peircean theory focuses on logic, mathematics, sciences and logic-centred colloquial English while Saussurean theory focuses on natural languages, literature, legends and language-centred myths. Thirdly, while the two trends agree on the relational nature of signs, they differ in that Peirce understands it as a triadic relation between a sign, object and the interpretant while Saussure takes it to be a dyadic relation between the signifier and the signified.

<sup>180</sup> Milton Singer, *Man's Glassy Essence: Explorations in Semiotic Anthropology*, Advances in Semiotics, Bloomington: Indiana University Press, 1984, p 42

Fourthly, there is the epistemological status of the subject which as a result of the various conceptions on the relational nature of the sign conditions also the epistemological conceptions of the subject. Consequently, for Peircean semiotics, the subject is included in the semiotic analysis as an integral part of a general theory of signs, but for Saussurean approach the subject is merely presupposed by but not included in semiological analysis. Fifthly, on the question of the ontology of the objects of signs; Peircean semiotics presupposes the existence of the objects of signs whereas Saussurean semiology does not take the objects of signs as given but rather as determined by the semiological relations of the signs. Lastly, there is the question of arbitrariness of linguistic signs which in the Peircean system is accepted but arbitrariness includes natural signs such as icons and indexes whereas for Saussure, the arbitrariness is shrouded by the apparent necessity for the speakers of a language.

The *Tractatus* which was written largely within the framework of truth-conditional semantics pursued meaning of sign systems in abstraction from its users and contexts of use. It focused attention to the formal and empirical semantics of logic and science. The *Investigations* on the other hand recognizes the inadequacies of this approach and attempts to incorporate the users and their contexts in the semantic analysis. Through the concept of "form of life" he gives a specification of context as an aspect of the users' socio-cultural reality.

The semiotic abilities of a society which ability in its turn, determines the informational wealth or poverty of a population is crucial in modern day information economy.<sup>181</sup>

Luciano Floridi exploits the concept of an infosphere in order to lay the foundations for description of this ability. He defines an infosphere as “the whole system of services and documents, encoded in any semiotic and physical media, whose contents include any sort of data, information and knowledge with no limitations either in size, typology or logical structure.”<sup>182</sup>

The fundamental elements of an infosphere are thus data, information and knowledge. He describes a data as anything that makes a difference such as a light in the dark, a black dot on a white board, a sound in silence. It is a semantic atom below which there can be no smaller unit of meaning. A datum can be conceptualized as an answer without a question. Information instead is described as meaningful data. This means a datum together with a relevant question and finally knowledge is information together with relevant explanation.<sup>183</sup> An illustration of these descriptions can be the following case:

- a) “Socrates”. This is just a datum
- b) “Who was the teacher of Plato?, Socrates”. This is information
- c) “Who was the teacher of Plato?, Socrates, because, all the historians of philosophy without exception have recorded it so”. This is knowledge.

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<sup>181</sup> Luciano Floridi, *Philosophy and Computing: An Introduction*, London and New York: Routledge, 1999, p115

<sup>182</sup> *Ibid.* p 8

<sup>183</sup> *Ibid.* p 106

The correctness of knowledge or information is not necessary for knowledge in this particular framework. This concept is particularly illuminating when we place it in the context of digital information technology which is transforming the academic disciplines at their very foundations. Most people are cognizant of the changes that information technology has brought into the production of organized knowledge such as the reduction of the time-lag between production and utilization of knowledge, the promotion of international co-operation and free sharing of information among scholars and researchers up to and including the possibility of remote online teaching. But Floridi points to other aspects of information technology's innovations that are more radical and which properly call for adjustments of both intradisciplinary and interdisciplinary methodologies of knowledge production.

The novelty of digital infosphere is that it is open to use, reuse and constant growth as more knowledge is acquired. This openness is almost limitless. The ordering principles of digital data are equally flexible and can be varied to suit the needs of specific users or disciplines. Since, there is a direct correlation between an ordering principle and the range of questions that can be asked about a given infosphere, it turns out that in the digital age it is now possible to question the data domain and shape it according to principles that are completely different from the ones that initially led to the collection and organization of the infosphere. This contrasts radically to the strictly book age when an infosphere was necessarily rigid and unalterable. The set of questions that could be raised about the infosphere was equally limited to a very small number. For example volumes of a book on English poetry may limit us to questions such as the authorship,

typology and chronology of the poems. Such linear relations are replaced now by "complex relations among data-producers, data-collectors, data-processors and data-consumers... in which information may be used and recycled to acquire further information and eventually make strategic decisions or provide new explanations."<sup>184</sup> Within the infosphere itself the data form a complicated but complementary web of dependencies in which one data output can be reorganized to become a data input for other information processes.

The patterns of these relations require a new approach which would accommodate the flexibility and complexity of the digital infosphere. Such a method of research must necessarily incorporate quantitative, comparative and qualitative dimensions. Floridi calls it the method of *ideometry* and contends that it is in line with the development of history of thought, which through time becomes progressively more and more self-reflective and metatheoretical. He defines ideometry as the critical study of patterns resulting from a comparative and quantitative study of databases and textbases in order to derive qualitative inferences from whatever region of the infosphere that has been subjected to investigation.<sup>185</sup> While Floridi points us to this direction he does not get us there. It is suggested therefore that some of the insights gleaned at from Wittgenstein's semiotic theory may form a framework for such a methodology.

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<sup>184</sup> Luciano Floridi, *Op. Cit.* p 111

<sup>185</sup> Luciano Floridi, *Op. Cit.* p 112

## 6.2.1 Wittgenstein and ideometric analysis

The key concept in developing an ideometric framework would consist in Wittgenstein's concept of "form of life" which can be interpreted to mean a context. Context is key in the sense that it is what determines the dominant semiotic function of signs in a given communicative situation. The divide between the Peircean and Saussurean conceptions of semiotics may ultimately be reduced then to simply a question of the contextual constraints in a given moment of communication. Sophia Marmaridou argues that the concept of "use" in Wittgenstein's thought transforms meaning to be equivalent to the use of signs to construct reality as a meaningful experience. Such a construction is done within the constraints of a context such that context turns out to be an integral parameter in the specification of meaning.<sup>186</sup> A precise specification of the concept of context is therefore necessary in any theoretical effort to reconcile the analytic and systemic approaches to semiotics.

There have been efforts aiming at the precision of the concept of context. For example, Mario Bunge defines a context as an ordered triple whose elements are respectively, a set of statements, a set of predicate constants and a universe of discourse related in such a way that:<sup>187</sup>

- a.) The statements are the ones which have specific predicate constants
- b.) The objects bearing the predicates are members of the given universe of discourse

<sup>186</sup> Sophia S. A. Marmaridou, *Pragmatic Meaning and Cognition*, Amsterdam/Philadelphia: John Benjamins Publishing Company, 2000

<sup>187</sup> Mario Bunge, *Treatise on Basic Philosophy*, Vol. 1, Dordrecht: D. Reidel Publishing Co. p 57

He concludes that in terms of these two conditions it is possible to derive two kinds of contexts namely; a formal context such as logic, mathematics and philosophical semantics and factual contexts such as history, the natural sciences, among others. This position is also echoed by Sperber and Deirdre by claiming that a context is simply a set of assumptions about the world which aid in understanding representations about the world.<sup>188</sup> Such a thought can equally be traced back to Pierce himself who explicitly states that "communication takes place in a context of ideas that continue to exist as a shared coin and cognition is what the interpreting user contributes to communication."<sup>189</sup> But this analysis focuses only on the verbal context while disregarding the physical and the psychological contexts.

While it might be true that a context includes a set of assumptions held by an individual it is arguably inadequate as a specification of context which must also include the social conditions of the actors in a communicative relation. Thus, the specification of context as a semiotic variable must also include the socio-cultural parameters that support the assumptions. Wittgenstein provides such a perspective which incorporates the social dimension of context in the *Investigations* by construing language as a social institution and communication as a social activity. Given this perception of language, context must similarly be viewed as a social variable that conditions the particular language-games. But Wittgenstein's view is not to be taken as a static view of context. In deed it is also dynamic because language is employed not just within the frame of social

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<sup>188</sup> Dan Sperber and Wilson Deirdre, *Relevance: Communication and Cognition*, 2<sup>nd</sup> Edition, Oxford: Blackwell, 1986, p 15

<sup>189</sup> Charles S. Pierce, C. Sanders, *Collected Papers*, Cambridge, MA: Harvard University Press, 1931-1958, p 37

determinations but also as a means to construct and change the social determinants. Thus Wittgenstein views context as dynamic socio-cultural complex of signs and practices which regulates a specific form of life.

Such a construction of context reveals an implicit richness such that we must specify context in terms of multiple elements which exceed the three elements in Bunge's analysis. While this may serve to capture the richness of semiotics and provide a basis for reconciling the two competing alternatives to semiotic research it does also indicate the complications which are to be expected in specifying contexts. This follows naturally since the relations between the elements must certainly be more complex in enriched contexts.

A context then turns out to be the environment of the infosphere which concretely consists of its producers, collectors, processors and consumers. We become part of a context by being components of one or more of these categories. In this regard, semiotic abilities are determined by the strength of the relationship between a context and its infosphere. This ability consists in access, control and use of data, information and knowledge that constitute an infosphere; the ability to transform data into information and finally the ability to transform information into knowledge. The interaction between a context and an infosphere is consonant with Wittgenstein's dynamic conception of context thereby establishing semiotic process as flexible and capable of continuous modification according to the users' needs in specific times and places.

Ideometric analysis would then ensue from the recognition that Wittgenstein adopts a constructionist view of semiotics in which sign systems are presumed not just to be passive representations of reality but rather they construct and shape whatever they represent. Specifically it can be fruitfully applied to a systematic analysis of documentation taken as part of semiotic productions. Documentation can take various forms including, written and visual texts, narratives, conversations and discourses. Ideometric analysis can be brought to bear on all these forms of documentation in order to achieve meaningful interpretation in ways that accommodate both the quantitative and qualitative dimensions of the contents of the documentation. The ultimate goal of ideometric analysis is to reveal how social, cultural, political and individual understandings construct and shape what is documented and it attempts to track such constructions in the various forms of documentation. In this section we will only indicate how Wittgenstein's ideas can be applied to the analysis of different forms of socio-cultural documentation.

First, Wittgenstein's ideas can be employed in carrying out content analysis of both written and visual texts. This can employ both enumerative and thematic content analysis simultaneously to a text. The enumerative approach would provide a numerical or quantitative overview of the text such as word frequency, rank ordering of words and key words in context. From such quantitative measures relationships and patterns might be discovered which can highlight the structures of communication in a context. As Floridi has indicated one enumerative analysis might give us just but one particular view of the text while another enumerative analysis based on a different principle might

give us yet another perspective on the same text. These perspectives might fit the conceptual frame of language-games of Wittgenstein in which the same linguistic resources can be used to perform different functions in different contexts. But enumerative analysis in isolation is quite inadequate and superficial and must therefore be complemented with a thematic analysis which would enable one to gain an in-depth and reflective interpretation of the text in question. The thematic analysis subjects the result of enumerative analysis to questioning and interpretation. This has the effect of creating information and knowledge out of the enumerative results as well as contextualizing the information thus acquired. This method of semiotic analysis and interpretation of texts has the advantage that it does meet the requirements of ideometric analysis of combining quantitative and qualitative approaches to texts. It also does simplify large documents by reducing them to enumerative information which can then be used to establish meaningful relationships between a text and its context. Lastly, it also has the advantage of incorporating such pragmatic elements such as intentions and attitudes of the interlocutors which quite often are contributive to the construction of meaning in communication processes.

The other key area of possible application of Wittgenstein's theory is in the field of narrative analysis. Narratives may be defined as sequences of events unfolding over time. Narratives can therefore cover a broad variety of textual possibilities. Digital information technology synthesizes two fundamental modes of narratives namely; the literary and the experiential. The distinction lies in the fact that in the literary mode, the narrator is not an actor while in the experiential mode the narrator is simultaneously an

actor in the sequence of events. Semiotically, we can say that interlocutors in the literary mode are engaged in presentation while in the experiential mode they are engaged in representation. These semiotic modes of inquiry may require different approaches of investigation to which Wittgenstein's ideas may fruitfully be brought to bear on.

The literary mode may be informed by the *Tractatus* since it favours a logical focus on the text and the sequencing of events without factoring in the interaction between the narrator and the context. This may be termed as the socio-linguistic approach which finds favour with information and knowledge that call for objectivity of presentation. The presentational perspective of a semiotic system would presume that a sign system is basically employed to represent reality as it is. But while it might be relevant in investigations where contextual aspects can be disregarded, another approach appropriate for the experiential mode of narratives is necessary. Such an approach would incorporate a contextual component in its investigation. This we can refer to as the socio-cultural approach. In philosophy it would befit analysis of texts on existentialism, phenomenology and idealism which are texts which require the narrator to be simultaneously an actor in the course of events. The *Investigations* would provide the appropriate framework for such an approach. It is an approach of investigation which would involve the broader interpretive frameworks that people use to give meaning to their experiences. It would raise contextual questions such as; who? Why? Where? When? How?, among others. These two methods employed synthetically would

provide a more powerful tool that can both aid to gain insights into the structure of texts and allow for contextual constructions and interpretations of texts.

The third methodological import of Wittgenstein's theory is that it does provide a tool for contextual analysis. The context as integral to a conception of sign is a core contribution of the 'later' Wittgenstein. Therefore, his insights in this regard can be contributory towards methodologies that must incorporate contextual analysis. Contextual analysis is important in that it does highlight the elements of the broader social systems which constrain or facilitate communicative behaviour. It sheds light on the background assumptions that underlie the social organization of the conduct of a society. Such an organization would be reflected and reinforced by the semiotic interaction on a given social setting. Semiotic actors, in Wittgenstein's conception of rule-following in the construction of meaning, are engaged in activities that produce and understand conduct. Contextual analysis would then concretely consist in the reproduction, description and explication of the set of procedures that actors employ while participating in intelligible and socially organized semiotic interactions. Speech act theory may be exploited as a device for specifying these procedures. Wittgenstein has pointed out in his use-theory of meaning that there are several functions of signifying systems and therefore restricting signification just to one function would be reductive and misleading. Speech-act theory provides a framework for analyzing the various functions that a semiotic system may be put to in a specific text and context. Assertives state facts for example, "it is very hot in here". Performatives create facts, for example, "I pronounce you man and wife". Commissives elicit commitments, for

example, "I promise to repay you next week". Directives aim at producing some action or response, for example, "Do not kill" and finally, expressives enable the emitters' feelings to be diffused through the sign system for example, "I am so sorry". A systematic documentation of the procedures that guide the conduct of actors in each speech act would furnish us with a methodological tool for contextual analysis.

Discourse analysis is another area where Wittgenstein's ideas may be helpfully applied. As a philosophical method it derives from the works of Michel Foucault.<sup>190</sup> Foucault was mainly interested in exposing the technologies of power that are inherent in the discourses of cultural knowledge. Nevertheless, his ideas do furnish a guideline for methodological framework which is known as discourse analysis. Wittgenstein's theory may be used to add some creative adaptation to this framework. Discourse analysis is relevant especially in the evaluation of socio-cultural theories which can be contrasted to theories in the natural sciences. According to Bunge, "a theory is not just a stray opinion but a hypothetico-deductive system, i.e. a set of formulas generated by a bunch of initial assumptions with the help of logic and mathematics. By virtue of the generality of some of those initial assumptions, as well as by the transformation possibilities afforded by logic and mathematics, every theory is an infinite set of formulas."<sup>191</sup> But such a characterization of a theory would befit natural science theories whose predictive reliability is built in the mathematical hypothetico-deductive system. In socio-cultural sciences and the humanistic studies a component of context analysis and latitude for human freedom, choice and creativity make their theories to have low

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<sup>190</sup> Michel Foucault, *The Archeology of Knowledge*, Trans. by Smith A. S., London: Tavistock, 1972  
<sup>191</sup> Mario Bunge, *Philosophy of Physics*, Dordrecht/Boston: D. Reidel Publishing Company, 1973, p 29

predictive power even if they may have high explanatory power. Thus, the proper interpretation of the latter theories requires further attention to the genesis and structure of the discourse.

Discourse analysis is the study of linguistic units greater than a sentence. Precisely, a discourse "is an extended sequence of sentences produced by one or more people with the aim of conveying or exchanging information."<sup>192</sup> According to Foucault, a sentence is the basic unit of a discourse. The units that make up a sentence are signs. A system of signs would generate a sentence only if they possess an internal relationship. In discourse analysis, the resulting sentence is seen as related to a group of other sentences whose conditions of emergence such as authorship are just as important in understanding the meaning of the new entrant into the wider group of sentences. The following are the defining characteristics of a sentence according to Foucault.<sup>193</sup>

- a. It must be associated with an identifiable person who is making it
- b. It has to be part of a domain of other statements made by others
- c. It has to be meaningfully related (relevant) to the issues around which the domain it is embedded into has developed

A string of sentences would then generate a discourse which has the following conceptual organization: a.) Forms of succession for example, a chain of arguments; b.) Forms of co-existence, that is, relations among the statements of acceptance or

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<sup>192</sup> Allan Ramsay, "Discourse", in Mitkov, R. (ed.), *Computational Linguistics*, Oxford University Press, 2003, p 112

<sup>193</sup> Michel Foucault, *Op. Cit.* p 15

exclusion and c.) Procedures of intervention and authentication of information and knowledge

Thus, Foucault is elaborating a highly pragmatic interpretation of a discourse whose analysis must necessarily involve contexts and actors. Wittgenstein's concept of language-games can be exploited to provide broad outlines for a method of discourse analysis, particularly one whose principal goal is to uncover competing but peripheralised viewpoints to a dominant discourse. A language-game can be interpreted as a domain whose elements are discourses. A dominant discourse within a language-game is the one sanctioned into a system of ideas by powerful individuals and groups within the context of the language-game. Discourse analysis can then be employed here to track the changes that a discourse has undergone over time in function of the players and their socio-cultural environment which prompted the change; to locate the challenges to a given discourse and the fate of these challenges. This highlights Foucault's contention that discourses are mostly part of the various technologies of power.

Equally important is the possibility of using Wittgenstein's approach of linguistic analysis as an aid in discourse analysis so as to acquire clarification of complex discourses. This might aid in the process of discourse segmentation which aids in tracking the structure and relations between the segments of a discourse. Such segmentation can help us in identifying the constituents of a discourse in terms of their objects, sentences, themes, arguments, unities and disunities among all of these

elements thereby acquiring a better comprehension of complex discourses such as the ones involved in organized knowledge systems.

Lastly, Wittgenstein's semiotic theory may also be exploited to elaborate a method of inter-semiotic translations. This is more so the case in the digital information technology which employs multimedia to store and process information. In the digital context, each medium such as linguistic, audio and visual are data sets in themselves thereby establishing the digital information as a multiple data set. Moving from one data set or transcription from one data set into the other can provide advantages to researchers as they can gain access to various perspectives and reflection of reality in particular contexts. The recognition that meaning might be carried by non-linguistic systems is the basis for such an effort that aims at inter-translatability of the semiotic systems. This method would require the development of projection procedures which can be used to map information from one semiotic system into another. This happens in a natural and spontaneous manner in ordinary contexts, for example, in instances when one narrates to friends ones experiences in a foreign land one just visited. The experience might be a visual one in which events occurred in a continuous manner. This experience can then be projected into the narrative mode which is a linguistic system of representation with features that are not continuous but rather discrete. Such a projection is possible because of some implicit principles which render it possible.

The need for such inter-semiotic switches is necessary in multimedia and multi-data contexts in which detailed research and information exchange is currently based on. The

approach must incorporate an investigation on how signs are infused with meaning and on how the latter can be extracted from one system and projected into another system. In T.L.P. 4.012, Wittgenstein already hinted at the possibility of multimedia transmission of meaning by pointing out that language is just but one medium of meaningful systems within a broader framework of other semiotic systems in his general theory of representation. He gives the examples of gramophone record, the music score, the sound waves and an orchestra as all representing the same musical idea. They stand in a pictorial relationship with each other in function of their ability to represent the same musical idea. This relationship is due to the common shared structure of both the represented reality and the representing medium. The collection of all the systems which share a common representational relation to a given state of affairs are said to be isomorphic and can therefore be transformed into each other.

The main advantage of projective transformations between semiotic systems is in investigations which aim at identifying the forms, structures and processes of meaning transmissions in particular contexts. This is particularly so when one is attempting to interpret and determine the commonly accepted meaning of signs in a given culture thereby clarifying broad cultural values. This can be greatly useful in establishing the reliability of research findings in the socio-cultural and humanistic disciplines.

But even though the *Tractatus* may have insights along the lines of inter-translatibility, we ought to factor in the *Investigations* caution that meaning is complex and multidimensional such that the common meaning derivable through projective

transformations may just be a common layer of meaning while each semiotic system preserves more or infinite possibilities of meaning which are not necessarily shared by the other systems with which it is isomorphic with respect to a given state of affairs. A semiotic system is a multidimensional space of meaning in which one layer of meaning in common with other systems is just but one possibility. The *Investigations* would therefore inform a search in which alternative and deeper meanings are sought after. Pauline Rosenau has given a guideline on how to pursue this goal of acquiring alternative and deeper meanings of a sign system<sup>194</sup>:

- a. allow the arguments of the text to confront and challenge each other
- b. identify contradictions and generalizations
- c. disentangle the complexities of all dichotomies and hierarchies of meaning
- d. read against the grain of the text in order to discover alternative interpretations
- e. seek out links with other texts and marginalized voices
- f. avoid finite interpretations, that is, the ones that put a closure to further interpretations

Such a method would enable an in-depth analysis and interpretation of semiotic systems while establishing their relationship with other systems within specific contexts. It can aid in achieving the meanings of the components of a semiotic system which may be overlooked when we consider only the emergent meanings of the system as a whole.

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<sup>194</sup> Pauline Roseneau, *Postmodernism and the Social Sciences*, Princeton, NJ: Princeton University Press, 1992, p 120

### 6.3 PHILOSOPHY OF COMMUNICATION

The second area where the philosophy of Wittgenstein can be used is to act as a foundation for elaborating a general philosophy of communication which consists in an examination of the questions related to the nature and function of human communication. According to Arneson, it involves an inquiry into the conditions for and consequences of, human communication. So, the different philosophies of communication are just the varying lenses through which we examine these conditions and consequences<sup>195</sup>. In this regard we hope that Wittgenstein's thought can provide one such lens. Philosophical reflection on communication is prompted especially in the contemporary times by globalization. Globalization as a process is the outcome partly of developments in communication and transportation which have compressed time and space thereby causing people to interact on a global scale. It has brought about with it huge economic, cultural and informational flows. Concurrent with these flows is the increased awareness about ethnocentric conceptions of life. As Arneson aptly puts it:

People have an awareness of the numerous conflicting and partial narratives to which one may adhere at differing times. One cannot assume that each individual one comes into contact with will hold similar understandings of the world.<sup>196</sup>

In order to understand Wittgenstein's relevance to the elaboration of philosophy of communication, it is important to recognize the multiple facets of globalization. Chris Baker has identified some of the most important such as the world capitalist economy, the global information system, the integration of the nation-states and the emerging

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<sup>195</sup> Pat Arneson, "Philosophy of Communication: Entering the Conversation" in Arneson, P. (ed.) *Perspectives on Philosophy of Communication*, Indiana: Purdue University Press, 2007, p 8

<sup>196</sup> *Ibid.* p 2

united world military order.<sup>197</sup> Specifically, communication technologies have expanded the interactions and cultural flows in today's societies. Indeed, societies are continuously registering and processing information but in the contemporary times information exchange is one of the fundamental interactions in the globalized social system. Thus viewed, semiotic systems turn out essentially to be the various communication channels in a society. Information can then be considered as basic concept in the attempt to elaborate a philosophy of communication. It is in this regard that Wittgenstein's theory of representation can be used to elucidate the concept of information.

We may categorize information into two categories towards which Wittgenstein contributed in his two chief works. These may be referred to as propositional information and non-propositional information. The *Tractatus*' perspective captures the former while the *Investigations* captures the latter. Information is that which a sign system transmits to some recipients. Bunge points out that "information is defined on the set of pairs signal-subject, where a subject is a viewer or hearer competent to decode the signal. Information, to be received, requires a receiver, i.e. a system equipped with suitable receiving and decoding devices."<sup>198</sup>

Propositional information is one that is conveyed by means of assertive sentences or a sign system capable of representing such statements. The amount of information

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<sup>197</sup> Chris Barker, *Cultural Studies*, 3<sup>rd</sup> Ed., Sage Publications, 2008, p 155

<sup>198</sup> Mario Bunge, *Treatise on Basic Philosophy*, Vol. 1 Dordrecht: D. Reidel Publishing Company, 1974, p 135

conveyed by such systems is thus equivalent to the proposition designated by the sign system. One benefit of propositional information is that its theory is easier to construct since it is possible to abstract it from the pragmatic context and users and treat it in isolation. Such an abstract theory of information is what Bunge has referred to as the semantic theory of meaning which operates on the following postulates:<sup>199</sup>

1. If S and P are sign systems respectively representing sets of propositions A and B then:
  - a. the information conveyed by S is larger than or equal to P if and only if B is a subset of A
  - b. the information gain acquired from S over P is the relative difference between A and B, that is the information contained in A that is absent in B

The consequences of these postulates are that a sign system is rich in information to the extent of its propositional content and that a sign system is accurate in information to the extent of the truth of its propositional content. Such an abstraction can be helpful in developing a formal system of information theory which might be useful in determining the news value of information transmitted by a sign system, level of distortion of information along the emitter-receiver axis and a measure of the spread of ignorance which is essentially the amount of uncertainty with which the receiver interacts with the received information. The *Tractatus* can contribute towards an elaboration of a semantic theory of information especially in contexts and disciplines where objectivity of the information is crucial.

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<sup>199</sup> *Ibid.* p 136

Whereas such an idealization might be desirable for the purposes of formalization, the pragmatic dimension of information might not be overlooked. It is clear that even in the case of propositional information the amount of information transmitted will depend on pragmatic factors such as the background knowledge of the recipient. It is in the light of this that we can explain the fallacy of misplaced originality. This is the fallacy that describes the tendency to exaggerate the novelty of an idea by people who are new to a discipline. They are likely to be exhilarated by information that the practitioners of the discipline find absolutely obvious. For instance, a logical theory of deduction might impress someone hearing and understanding it for the first time as very insightful hence very informative while to a seasoned philosopher it would convey no information at all because it is already known to him or her. Such background knowledge which is a pragmatic matter is clearly contributive to the amount of information conveyed and received by an individual. The *Investigations* brings to the fore such pragmatic elements in the consideration of both propositional and non-propositional information. It can therefore be useful in the elaboration of pragmatic theory of information. Such a theory is appropriate for the elucidation of sign systems that convey non-propositional information.

Non-propositional information constitutes an important dimension of globalization. According to Barker it is due to three key factors namely; movement and settlement of populations beyond their original physical locations, acceleration and intensification of economic networks and finally, the globalization of digital and electronic

communications<sup>200</sup>. These processes carry along with them unintended flows of cultural meanings which are not necessarily propositional. The transmission of such values would also be of concern to the philosophy of communication. But the analysis of such non-propositional information would require necessarily a pragmatic component which brings into play both the people and their contexts into the analysis.

The general feature of non-propositional information is that they violate the principle of substitution of equivalents which demands that when you replace a statement in a given complex expression with its equivalent then the resultant statement should preserve the truth-value of the complex expression before the substitution. They involve certain attitudes to propositional information such as belief, doubt, knowing, conceiving. Bunge observes that they usually appear in two forms, one that is explicit and one that is implicit<sup>201</sup>. The explicit form is one which can be directly reported as a given attitude of a given person towards a given proposition. For example, "Owino knows that Wittgenstein authored the 'Tractatus'". The analysis of such a statement reveals that its construction necessarily involves the propositional attitude itself as a function which relates the person, the proposition and the context as its terms. Replacing the proposition in this statement with one which has the same truth-value may vary the value of the whole statement. The implicit form instead can be expressed as a generalization on the proposition. For example, "It is puzzling that Wittgenstein wrote the 'Tractatus'". This can be reformulated as "there is at least one person who is puzzled that Wittgenstein wrote the Tractatus". Its analysis would therefore maintain

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<sup>200</sup> Chris Barker, *Cultural Studies*, 3<sup>rd</sup> Ed., Sage Publications, 2008, p 158

<sup>201</sup> Mario Bunge, *Op. Cit.* pp 121-122

the fundamental structure of the explicit form given above. Pragmatic analysis therefore requires that propositional attitudes be represented as part of cultural meanings.

This would be quite relevant in the elaboration of a semantic approach which can be termed as the pragmatic semantics for the disciplines engaged in cultural studies. This seems to be coming from the desire to broaden the scope of semantic approach in philosophy. This has already begun with the elaboration of empirical semantics for the natural sciences which are engaged in the investigation of natural systems in order to extend the formal semantics adapted to pure mathematics and logic. There may be need therefore to elaborate a semantic theory for the socio-cultural systems. Wittgenstein's later philosophy can therefore be put in the perspective of the dissatisfaction with the formal-empirical semantics which abstract from the users and the contexts thereby making them inadequate for the investigation and communication of cultural phenomena which is becoming increasingly important in today's globalized world.

Attempts to apply Wittgenstein's thoughts in elaborating a semantic theory relevant to cultural contexts are most adequate at this juncture. Wittgenstein's contribution as de Mauro<sup>202</sup> remarked lies more on his proposed methodology than on the content of his theory of signs. In this chapter we are going to anchor this methodological import on the concept of a semiosphere as proposed by Lotman to give a systematic structure to this method which Wittgenstein himself did not expose in any explicit way. It is a method which departs radically from the analytic method and pursues a systemic approach to

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<sup>202</sup> Tullio De Mauro, *Op. Cit.* p 47

communication. We are going therefore to see how this method leads towards the construction of a given locality as a semiosphere that can enter into communication or dialogue with other semiospheres. Stalnaker has captured the need for such a study of a context of use thus:

Once upon a time, formal syntax was a rigorous, well developed theory, while semantics was just an informal intuitive commentary on it. At that time, anyone who liked to theorize rigorously tended to push semantical problems into syntax... Later, when semantics was a rigorous, well developed formal theory but pragmatics was a speculative informal subject, there was a tendency to try to let semantics – the study of content – explain as much about the use of language as it could. It is intuitively clear that the context in which language is used has a strong influence on the content language is used to convey, and a fully adequate semantic theory must take account of that influence.<sup>203</sup>

### 6.3.1 The Notion of a Semiosphere

Semiotics, which is principally concerned with the communicative action between sign emitters and receivers, presupposes that the communicating agents exist within a given semiotic space. This is the semiosphere and it is definable as the semiotic space necessary for the existence and operation of different language-games and signs systems. Youri Lotman develops the concept of a semiosphere on the analogy of another concept of biosphere.<sup>204</sup> The concept of a biosphere that inspired Lotman is taken from Vernadsky who defines it as the set of the organic totality of living matter and the conditions necessary for the perpetuation of life.

All living groups are intimately linked to one another. None can exist without the others. This invariable link between different groups and strata of life is one of the immemorial aspects of the mechanism at work at the terrestrial crust which has displayed itself throughout the geological era.<sup>205</sup>

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<sup>203</sup> R. Stalnaker, *Op. Cit.* p 453

<sup>204</sup> Youri Lotman, *La Sémiotique*, Translated from Russian by Ledenko Anka, Limoges: PULIM, 1966

And regarding the conditions necessary for the perpetuation of life, he adds much clearly that:

The biosphere has a well-defined structure that determines without exception all that is produced within it...A human being that we observe in nature, just like all living organisms and like each living being, is a function defined within the specific limits of time-space of biosphere.<sup>206</sup>

This reveals the biosphere as a collection of groups of living organisms together with the mutual relations that exist both within the groups and between the groups as influenced by the determinants of the biosphere itself. There are a number of structural characteristics that a semiosphere shares with a biosphere such as heterogeneity, asymmetric structure, and binary structures upon which the analogy is founded. Just like life cannot exist outside of the biosphere, there can be neither meaning nor communication outside of a semiosphere. Human beings are physically immersed in specific real time-space co-ordinates of the biosphere but the human mind simultaneously elaborates a semiotic space, some of whose models are founded on the constants of the real space. Lotman describes this semiotic space as having a geometrical structure thus:

The substructures of a semiosphere, despite their differences, are organized within the framework of a general system of coordinates: along a temporal axis comprising the past, present and the future and a spatial axis comprising internal space, external space and the boundary between them<sup>207</sup>.

A semiosphere is characteristically heterogeneous which implies that all the semiotic systems that constitute a semiotic space are diverse but linked with one another. The

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<sup>205</sup> V. I. Vernadsky, *Oeuvres Choisies*, Vol. 5 Moscou, 1960, p 102

<sup>206</sup> V.I. Vernadsky, *Réflexions d'un Naturaliste: La Pensée Scientifiques en tant que Phénomène Planétaire*, Livre 2, Moscou, 1977, p 32

<sup>207</sup> Youri Lotman, *Op. Cit.* p 25

heterogeneity is also a mark of the diverse functions of the semiosphere itself. This is evidenced by the diversity of a language in terms of determinants such as age, profession and gender; the difference in life spans of the various sign systems in a given semiotic space. For example, the dressing codes have a shorter life span than the literary mode, the mode of dance changes faster than the architectural mode. Lotman asserts that all cultures possess an integral mechanism for multiplying the signifying modes that compose its semiotic space. But the elements of a semiosphere are not isolated from each other. They are linked in dynamic ways in constantly varying proportions. This is what maintains the unity and dynamism of a semiosphere.

Ironically, to Lotman, the nature of these dynamic relations between the elements of a semiosphere is what distinguishes a semiosphere from a biosphere and thereby making the analogy between the two to grind to a halt<sup>208</sup>. In a biosphere, the biological evolution of species implies the extinction of others by the principles of natural selection. We can only access whatever is currently part of the biosphere. On the contrary, in the case of a semiosphere, the elements that come down to a generation from past cultural periods continue to play a significant role in the cultural development of the given generation. Such elements are therefore active still in a semiosphere that uses them ultimately.

A semiosphere is also marked by its asymmetric structure, which means that there is no one-to-one semantic correspondence between its different sign systems and language-

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<sup>208</sup> *Ibid.*, p 15

games. Nevertheless, there are possibilities of translation from one system to the other along a spectrum of translatability, which ranges from one extreme of complete translatability to one of impossibility of translatability. The capacity for translation from one system to the other is what makes the entire semiosphere permeable for exchange of ideas and information, thus communication. The asymmetric structure comes out more clearly according to Lotman when we reflect on the relation between the centre and the periphery of a semiosphere:

At the centre of a semiosphere, most developed and structurally organized languages form themselves, and in the first place, the natural language of this culture. We can say that if no language (including this natural language) can function without being immersed in a semiosphere, then in the same manner, no semiosphere can, as Emile Benveniste has emphasized, exist without a natural language as the organizer of the centre.<sup>209</sup>

The fact that emerges from this is that beyond the horizons of a structurally organized language, we encounter a number of peripheral languages within the semiosphere which generally serve for certain cultural functions and also other sign systems which are less formalized but which serve as carriers of meaning on condition of being included in a semiotic context.

The centre comprises structural organization expressed in the form of self-descriptive grammars, legal and customary codes, which form the normative basis of a given semiosphere. Whatever lies outside of the centre is considered peripheral and is in constant conflict with the centre. It is not derived from the normative structures but exists rather independently even though constantly it is invaded by the centre in an

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<sup>209</sup> *Ibid.* p 16

effort to reduce excessive diversity in a semiosphere. The centre of a semiosphere gains more structural organization by elaborating the normative guidelines but in so-doing it loses its internal reserves for indetermination which renders it flexible, more apt to receive information and develop dynamically. It is the periphery, which guarantees the fecundity of a semiosphere. In this sense, the centre also plays the role of a metadiscourse, in which the semiosphere is capable of autodescription.

While the structural formations of the centre and the periphery in a semiosphere preserves its internal unity and dynamism, there is yet another unifying factor which is still equally fundamental in defining a semiosphere namely, the frontier. It is the boundary that "separates the internal space of a semiosphere from its external space"<sup>210</sup>. It is equally the principle, which underlies the fact that a semiosphere is composed of conflicting structures yet it remains a unit. The unity of a semiosphere finds its expression when it begins to describe itself in terms of the first person personal pronoun and it is the notion of a frontier that provides the mechanism for effecting this semiotic individualization. Lotman has defined the frontier as "the external limit of a first person form"<sup>211</sup>. It is the point at which we establish a binary division between "our space" and "their space". Ordinarily, an individual or a group of individuals can belong concurrently to several frontiers such as one that separates men from women, the living from the dead, towns from villages, educated from non-educated among others. The individual or the group of individuals constitutes an intersection of these frontiers and it

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<sup>210</sup> *Ibid.* p 20

<sup>211</sup> *Ibid.* p 21

is only the context that allows us to determine the specific semiosphere a given frontier limits.

But the frontier is equivocal in the sense that it is a boundary of a semiosphere and at the same time it belongs to both contiguous semiospheres that it separates. In this way it separates and unites at the same time. This is very important because it implies that the frontier is an active point at which external semiotic systems are transformed into internal semiotic systems relative to the given semiospheres while at the same time each preserves its characteristics. We can now demonstrate how a semiosphere can be both heterogeneous while retaining its unity.

Any semiosphere with the form of a first person pronoun implying the presence of a frontier is simultaneously composed of multiple layers of sub-semiospheres. A semiosphere can thus be interpreted also as a multilayered system whose elements each constitute a semiotic "I" within the semiosphere. A common link, which runs between the sub-semiospheres and the centre of the principal semiosphere, is what ensures the unity of the latter. This implies that in one context a principal semiosphere can be also a sub-semiosphere in function of where we set the frontier. No semiosphere is ontologically inclusive of the others or ontologically to be a sub-semiosphere to the others. It is merely a function of context. Lotman has provided a good example to illustrate the hierarchical structure of semiospheres and how it can lead to problems when various semiotic systems encounter each other thus:

The notion of 'personality' is only identified with physical individuals in certain cultural and semiotic conditions. But it can designate a group where it might

include possessions, or it can be associated with a certain social, religious or moral position. It is in this sense that in some systems a spouse, the children and slaves can be included in the personality of the master, the patriarch; the husband or the patron and not possess any individual personality of their own; while in some systems they have their own separate personalities. Problems and rebellions begin when two coding methods are in conflict: it is the case for example when socio-semiotic structure describes an individual as a part of a whole, while the individual himself feels that he is an autonomous unity, a semiotic subject rather than a semiotic object.<sup>212</sup>

This same example of collective personality instead of individual personality can partly explain ethnic vendettas and nepotism endemic in African socio-political arena. So, when an individual commits murder, the legal code as a semiotic system holds him individually responsible, but in some customary semiotic systems, the murderer's entire community is responsible and liable therefore to punishment deemed fit such as revenge killings. By the same token, the phenomenon of nepotism is closely related to the strong perception of the collectivity as a unique personality and one in which the importance of the individual is extremely reduced. The individual is thus not thought of as such but in relation to his relatives such as brothers, nephews, cousins, etc. Given such a fusion between the individual and his community it becomes consistent within the given semiotic system that when a member of a community is promoted, then the entire community is promoted and when the same individual is demoted then the entire community feels demoted too; what in Kenya gets its commonest expression in the constant cry "*we are being finished*", whenever a prominent personality loses his position.

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<sup>212</sup> *Ibid.* p 32-33

Nevertheless, a semiosphere is not an isolated system; it is an openness, which establishes itself as dialogical and adventurous. These are the determinants that render a semiosphere dynamic and interactive. Dialogue between semiospheres can only take place if the participants in the communication process are capable of overcoming their semiotic barriers. Mutual translatability is the means for overcoming such barriers. On a semiospheric scale the dialogue implies that a semiosphere oscillates between positions of transmission and reception. The frontier plays a significant role in this process of dialogue by providing a minimal degree of invariance of meaning. This is a necessary condition since in the one case where there are no semiotic differences it is pointless to talk of a dialogue between semiospheres; indeed, it would reduce all semiospheres to one only. On the other hand, where there is mutual exclusion between the semiospheres dialogue becomes impossible. Dialogue then is a semiotic exchange between different semiospheres but which nonetheless have certain commonalities as grounds for such an exchange.

According to Lotman, the reception and transmission phases of a semiosphere take place in five principal steps<sup>213</sup>:

1. The texts and codes coming from the exterior of the frontier preserve their foreign character at the moment of reception and it is viewed as such by the receiving semiosphere. Nevertheless it begins to acquire a prestigious status in the interior of the receiving semiosphere. Knowledge of its texts and codes are considered superior and belonging to the elites in the semiosphere

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<sup>213</sup> *Ibid.* p 47- 48

2. A fusion between the two sources of information namely; the external and the internal, begins to take place. It is the moment of translations, imitation and adaptations between the two sources.
3. The phase of appropriation when the receiving semiosphere begins to isolate the semiotic texts from the culture that transmitted them. The idea predominant at this period is that the ideas and texts which have been received were realized badly and should now be altered and correctly appropriated and applied in the new semiosphere
4. Dissolution of the received texts in which they become integral components of the receiving semiosphere and find themselves included in the grammars of auto-descriptions of the semiosphere
5. Diffusion in which the receiving semiosphere begins to produce and transmit its texts and codes from the centre to the periphery and ultimately to other semiospheres beyond its frontiers

This process nevertheless describes an ideal scenario as Lotman himself realized immediately by pointing out that:

In the context of a real process of cultural contacts, what we have just described schematically may not be fully realized. The cycle requires in any case favourable historical, social and psychological conditions...just like in any dialogue, a situation of mutual attraction must precede the actual contact.<sup>214</sup>  
When applied to the historical aspects of a semiosphere then it is easy to see that a historical process seen along a continuous temporal line would reveal periods of intensities alternating with periods of relative calm but when the same processes are

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<sup>214</sup> *Ibid.* p 48

placed in the order of semiotic exchange would reveal reception which are analogical to a pause in a dialogue and moments of transmission analogous to moments of contribution in a dialogue.

But the alternating phases of reception and transmission in a semiosphere are not apparent to its inhabitants. It takes the observations of an observer external to the semiosphere to be able to perceive these dialogical phases. *Adventure* is the method that Lotman proposes that can enable even the internal observer to perceive the dialogical character of his/her semiosphere. It consists in abstracting and seeing the entire semiosphere itself as a text endowed with its own specific organization.<sup>215</sup> In summary, this method reveals in any semiosphere, not just the existence of the centre and the periphery but also the distinctive characteristics of each zone. The centre of a sphere is constructed as an integrated structural totality. For this reason it generates laws, reconstructs the world as an organized entity and having a defined meaning. It plays a normative role in a semiosphere. Its parts are organically interconnected. On the other hand, the periphery is structured as a chain joint by independent units. *Adventure* is an attempt not just to describe the semiosphere but also an attempt to connect and organize the two zones by means of semantic interpretations. This is very significant because it means that individuals can step outside their semiospheres theoretically, even if not physically, in order to subject it to scrutiny as though they were viewing it from an external point of view. Without *adventure* it would be impossible for inhabitants to study their own semiosphere.

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<sup>215</sup> *Ibid.* p 72

### 6.3.2 Wittgenstein and the Semiosphere

At this juncture we attempt to put Lotman's ideas into a different set of terms and interrelationships in order to create coalescence with Wittgenstein's thought. As we have reconstructed in the preceding sections, Wittgenstein, tracked through all the phases of the development of his thought, has finally been seen as having developed a four-term concept of signs. A sign for him is a relationship between the representation, the represented, the interpreter and the context. The representation is what commonly is referred to as a sign. It is that which stands for something else for someone. It includes the various types of signs in Peircean classification according to which an icon is a sign or representation motivated by a similarity with its object, for instance, a portrait; an index is a sign motivated by a natural or necessary connection with its object, for example, smoke and fire and finally, a symbol is a sign whose relationship with its object is by way of social convention for example, words in a natural language. The represented in its turn is a collection of objects referred to by the various signs and it includes objects that may be either real or abstract and relationships. The interpreters are the emitters and receivers of signs. The context is the specific form of life in which the semiotic process is taking place thus providing the background for meaning creation and conservation.

Indeed, Wittgenstein does not use the term "semiosphere" at all in any of his works, but the notion lends itself as useful in looking at the pragmatic possibilities of Wittgenstein's thought. The contention of the study is that Wittgenstein does provide us

with useful methodology for constructing or better still, identifying semiospheres. De Mauro points out that this is indeed the case with the *Investigations* where Wittgenstein “seeks to transform semantics from the science of meaning or meanings into the science of the signifying activity.”<sup>216</sup> In this regard the *Investigations* rejects the traditional idea of semiotic forms and their meanings as classes of entities that are co-related by either reason of the system or by identity of the human spirit which provides the nexus for the semiotic system and the structure it represents. Instead it propounds a new conception in which a semiotic system has the meaning it does because they are so used by humans and the continued guarantee of its validity is founded only in its use in a specific socio-historical context. Thus, the meaning and value of a sign is therefore embodied in the ethnography of the society in which it is adopted.

In Wittgenstein’s terminology, we can characterize the semiosphere as the cultural form of life and the myriad language-games that can possibly occur in it are the sub-semiospheres. The signs, the objects and the interpreters are the constitutive elements of the semiosphere. Thus, a semiosphere is a system in the sense of a totality with a set of relationships defined on it. It is dynamic, organized and complex. It is this systemic character of a semiosphere that we can develop in order to glean at some of the possible applications of Wittgenstein’s thought in elaborating philosophy of communication. This approach allows us to reconstruct geographic, juridical space and regard it instead as a semiotic space. The semiotic approach is comparable to “a journey to the ‘subterranean’ world which is a world of meanings hidden behind the appearance of

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<sup>216</sup> Tullio De Mauro, *Op. Cit* p 47

things, the world of symbols where everything is meaningful, where everything speaks to those who know how to listen."<sup>217</sup>

As a system a semiosphere is describable as social, open and concerned with communication, that is, exchange of meaning. We can now highlight Wittgenstein's ideas in regards to a semiosphere. A semiosphere for Wittgenstein is a totality, which encloses other semiospheres. A given semiosphere may become a totality in one instance but becomes a sub-semiosphere in another context. The criterion that Wittgenstein employs is that of autonomy of the language-game in relation to other language-games. But as a totality, the semiosphere is certainly more than the sum total of its component semiospheres. This means that a semiosphere may not be reduced to its parts. It is a totality with emergent qualities that are totally different from the qualities of its components. The totality of a semiosphere is therefore a structured totality and not a mere aggregation of components. The organizing principle of a semiosphere for Wittgenstein is the *form of life* that establishes rules to guide conduct in the semiosphere. The rules are of various forms and it can include; values, norms and roles operational within the semiosphere. The *form of life* as an organizing principle establishes relations within and between the sub-semiospheres thus allowing a semiosphere to develop qualities distinct from its components. Organization of a semiosphere implies also the process of creating, conserving and exchanging meaning within the semiosphere. Therefore, the *form of life* as the organizing principle of a

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<sup>217</sup> Amadou Hampaté Bâ quoted in Danielle et Olivier Föllmi, *Origines: 365 Pensées des Sages Africaines*, Editions de la Martinière, 2009, p 34

semiosphere is both structural and functional in so far as it establishes the state and the semiotic process of the semiosphere.

In its structural aspect a semiosphere has four basic elements that we can infer from the *Investigations*. A semiosphere has a frontier that separates it from its environment. But it is a permeable frontier such that a semiosphere interacts and remains open to its environment. The environment of a semiosphere consists of the other semiospheres, which surround it. Secondly it has elements, which are the identifiable semiospheres within its frontiers. Thirdly, it has a network of relationships that facilitate the communication of meanings in all its diverse forms within the semiosphere. Finally, a semiosphere has also a set of depositories where it stores its meanings. It is a form of collective memory for the elements of the semiosphere. For example, when we construct "Africa" as a semiosphere then these elements emerge clearly. Its frontiers cease to be necessarily the geographic borders but rather the semiotic boundaries that separate Africa from non-Africa for an individual or a group of individuals. This means that the geographic boundaries are semiotisable also. Its elements are infinitely varied and may include the nations, the peoples, the interest groups and the resources among others. The networks are equally having an infinite multiplicity and may include among others, socialization structures, juridico-normative structures, economic structures, cultural structures and religious structures. The depositories can include language, myths, songs, literature, art, technology and history among others.

In its functional aspect a semiosphere has three basic components and these are the centre, the periphery and the chain of flow of meanings. The centre is the regulating zone of a semiosphere where autodescription of a semiosphere takes place. The periphery is the point of contact with the environment of a semiosphere, that is, the frontier. It is the dynamic zone of innovation in the semiosphere. As Lotman has observed above, the centre is characterized by rigidity, rigour and organization while the periphery is much more flexible. In relation to Wittgenstein, the continuous reference to the *Tractatus* in the *Investigations* is an indication that he realized that the former was more consistent with the nature of the center while the latter recognizes the fundamental role of the periphery as well which was discarded in the *Tractatus*. Finally there is the chain of flow of meanings between the depositories and the networks of communication within the semiosphere. Once again, taking the case of Africa, the centre can be seen as the various sites of power within it. Power in its broader sense from the analyses of Michel Foucault exceeds the institutions of state government to include any form of relationship in which certain individuals or groups of individuals exercise a mode of influence and action on others. This analysis opens us up to perceive power in diverse and subtle domains, which includes but transcends the study of power only within state institutions.<sup>218</sup> In this regard the periphery simply becomes what the center considers irregular, subversive, countercultural, revolutionary, dangerous and dissenting.

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<sup>218</sup>Michel Foucault, *Discipline and Punish*, trans. A. Sheridan, New York: Pantheon, 1975

### 6.3.3 Towards a systemic philosophy of communication

The essence of philosophy of communication is to specify its conditions and consequences. Communication in its turn is a complex process, which articulates six main factors namely; object, referent, message, sender, medium, receiver and code. Thus we consequently have the following six main functions of communication identified by Roman Jakobson.<sup>219</sup>

- i) *Referential function*: it is the basis of all communication and it defines the relation between the message and the object referred to.
- ii) *The emotive function*, which defines relations between the message and the sender.
- iii) *The injunctive/conative function*, which defines the relations between the message and the receiver.
- iv) *The poetic/ aesthetic function* defines the relation between the message and itself e.g. in poetry where the referent is the message.
- v) *The metalinguistic function* which defines the message and the code from which the sign takes its meaning. This function basically clarifies the meaning of the code and its signs. E.g. use of inverted commas in writing.
- vi) *The phatic function* affirms or halts an act of communication. Therefore it relates the message to the medium e.g. "Hallo, can you hear me?" in a telephone communication.

In the context of our study where we are relating Wittgenstein's thought to communication in a globalized era, such an endeavour would consist in the specification of the conditions and consequences of communication in the age of globalization. The

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<sup>219</sup> Roman Jakobson, *Selected Writings* Vols I-VI, ed. Stephen Rudy, The Hague, Paris, Mouton: 1985 p 423

conception of a semiosphere as a system of meaning provides the foundation of such a philosophy wherein globalization is interpreted as creative of a semiotic system rather than just forming a loose aggregation of semiospheres. A systemic approach is useful in avoiding the extremes of holism and analytic atomism which might blur the characteristics emergent in the global system. Holism views systems as integrated wholes at the expense of their components and their mutual actions on each other. Viewed in this way globalization can easily get the negative reaction as an ideological instrument employed to suppress the rights of individuals, minority groups and weaker nations. Analytic atomism instead reduces systems to their components such that the properties of the whole are unwarrantedly presumed to be identical to the properties of its parts. This runs the risk of blinding us to the emergent properties of the whole system that may be totally different from the properties of its components. Therefore, a systemic approach is the one that can enable to grasp the emergent characteristics in a globalised context by integrating the insights of both holism and atomism.

#### **6.3.3.1 Conditions for systemic theory of communication**

Mario Bunge defines a system as “a complex object the components of which are interrelated rather than loose”<sup>220</sup>. The system may either be conceptual or physical depending on the nature of its components, for example, a theory is a conceptual system while the predator-prey system may be seen as a physical system. A semiosphere as the realm of meanings should fall then in the category of conceptual systems. But whatever its type a system has a definite composition which is analyzable into<sup>221</sup>:

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<sup>220</sup> Mario Bunge, *Treatise on Basic Philosophy*, Vol. 4, Dordrecht/Boston: D. Reidel Publishing Company, 1979, p 4

<sup>221</sup> Mario Bunge, *Social Science under Debate*, Toronto: Toronto University Press Inc., 1998, p 61

- a. its components or members
- b. its environment or context
- c. its structure which is a union of the set of internal relations among its members and external relations between its members and their environment
- d. its mechanism or processes that make the system operate, (occasionally, these are represented as set of laws of the system)

A simple example would be that of a theory which can be interpreted as a set of propositions about a given universe of discourse. The propositions themselves constitute the elements of the system; its environment would be the relevant body of knowledge to which they belong such as metaphysics; its structure would be relation of entailment between the propositions such that some are premises for the theorems established as conclusions and finally, the mechanism would be provided by the operational logical laws that justify the entailment relation.

The above conditions are the ones that are necessary for any system to emerge. But it is in the third condition involving structure of a system that we can discern a distinguishing characteristic of a semiotic system or a semiosphere. The structuring relations in a system may be permanent or temporary. In case it is the former, the system may be describes as static while in the latter case, the system would be described as dynamic. Semiotic systems are generally dynamic as it has emerged from our presentation of Wittgenstein. The defining characteristic however, is that in semiotic

systems the dynamism of its structure involves flows of information. As such they are referred to as communication or information systems.

In the light of this it is possible to sketch the broad outlines of Wittgenstein's thought that can provide the framework for elaborating a systemic philosophy of communication. A semiotic system can be seen as the fundamental unit for communication systems. They are systems in their own right composed of symbols which are employed for the purposes of thinking and communication. Then in turn the semiotic systems become embedded as components of communication systems. Such a system as we have seen must be composed of the four elements namely; members whom we may take as the users, environment, which is the context of use, the structure, which would include the connections created from the semiotic systems and the mechanism which would include the media such as audio, visual, chemical, among others. In this regard, the technology serves merely to create the relations and mechanisms of the system which in itself is a conceptual system. A detailed specification of these systemic components in regards to a semiosphere or a communication system would therefore provide the foundations for such a philosophy of communication. It is suggested that reading Wittgenstein with this in mind might shed some light in this direction.

### **6.3.3.2 Consequences**

The following conclusions can be gleaned from the foregoing discussion and can therefore pave the way for further research into the effort of applying Wittgenstein's semiotic theory to philosophy of communication:

- a. Physical components such as users and the physical media they employ might generate a conceptual system. This can form a basis for the elaboration of an emergentist philosophy of communication
- b. Globalization is engendering a multi-level semiosphere composed of sub-systems of other semiospheres
- c. There is a possibility of a precise formulation of a systemic theory of communication based on the identification and elaboration of the composition, environment, structure and processes of a system. The insights from such a formulation might be helpful in designing systems of communication in ways that will maximize their integrity and cohesion
- d. It reveals communication as a genuine and fertile area of philosophical investigation since it presents communication system as coherent and patterned while nevertheless preserving its dynamism and variability. Both aspects integration and breakdown in communication systems are amenable to investigation

## 6.4 CONCLUSION

This chapter had the main objective of indicating the possible areas of application of Wittgenstein's semiotic theory. It has done this in the light of the semiotic goals of developing an effective theory of representation and of communication. The first of these goals has directed our study to a double task, the first of which was to indicate the possibility of employing Wittgenstein's thought to unify the traditions of structural social semiotics of Saussure and logical semiotics of Pierce. The second task was to reflect on the possibility of extending Wittgenstein's thought towards the elaboration of a methodology in the socio-cultural domain so as to complement the semantic approaches that have been developed philosophically to handle mathematical and natural science theories. The need for this approach is considered much more relevant in the age of digital information documentation which is increasingly forming the basis of systematic investigations with unique characteristics that call for new methodological approaches capable of giving a proximate representation of the socio-cultural reality.

The second goal of the study was to attempt to indicate how to apply Wittgenstein's theory to the elaboration of philosophy of communication. This has mainly attempted to employ the systemic view in order to account for the complex and fast-changing context of communication engendered by globalization. Specifically, it has highlighted the core conditions that are necessary for effective communication to take place. From the systemic perspective this has consisted in indicating the very necessary and sufficient conditions for any system including communication systems. Besides it has also highlighted the consequences of such an approach and it has been suggested that these

two components namely; conditions and consequences that may be gleaned from Wittgenstein's thought could form a basis for a detailed and rigorous formulation of Wittgenstein's philosophy of communication.

## GENERAL CONCLUSION

The aim of this study was to pursue the scientific relevance of Wittgenstein's philosophy by incorporating a comprehensive interpretation to its nature, scope, analysis, implications and impact on human behaviour. The study of Wittgenstein's philosophy is a philosophical journey that leads to the discovery of the limits of human language and the possibility of a new way of thinking. The study of Wittgenstein's philosophy is a journey that leads to the discovery of the limits of human language and the possibility of a new way of thinking. The study of Wittgenstein's philosophy is a journey that leads to the discovery of the limits of human language and the possibility of a new way of thinking.

This study has the purpose of giving a critical appraisal of the study. The study was undertaken to find out the nature and scope of Wittgenstein's philosophy and its impact on human behaviour. The study was undertaken to find out the nature and scope of Wittgenstein's philosophy and its impact on human behaviour. The study was undertaken to find out the nature and scope of Wittgenstein's philosophy and its impact on human behaviour. The study was undertaken to find out the nature and scope of Wittgenstein's philosophy and its impact on human behaviour. The study was undertaken to find out the nature and scope of Wittgenstein's philosophy and its impact on human behaviour.

## CHAPTER SEVEN

### GENERAL CONCLUSION

The aim of this study was to pursue the semiotic relevance of Wittgenstein's philosophy by incorporating a communicative interpretation to its purely formal analysis. Specifically, it involved an attempt to unravel his theory of representation and communication as can be gleaned from the *Tractatus* and the *Philosophical Investigation*. Model-theory as expounded by Alfred Tarski provided the theoretical framework for the study. In this approach a sign system is studied in relation to its structure, that is, what the sign system is about. Such structures can include real, social and aesthetic structures.

This chapter has the purpose of giving a general appraisal of the study. The study was undertaken by first spelling out the problem under investigation in the study as the problem of representation and communication as its corollary. The thesis put forward was that Wittgenstein's philosophical insights include a semiotic theory with relevant applications to other fields of research. This has involved a critical evaluation of Wittgenstein's formal-logical theory of language which focuses on his views on the relationship between logic and language. It was therein argued that logic consists in a systematic investigation and description of the rules and principles of correct reasoning. It seeks to systematize the rules that enable us to draw all and only the proper consequences of a given set of propositions. It, therefore, focuses on the truth-relations between propositions so that its focus indeed is to discover rules that ensure truth-

preservation between propositions. Language in its turn is a system of signs by means of which an infinite number of sentences, not necessarily truth-valued, are generated from a finite set of rules operating over a vocabulary. The minimum conditions for a language are therefore a vocabulary and a set of generative rules that will ensure that the speakers generate all and only well-formed sentences. The infinity of the sentences generated in a language is due to the recursive nature of the generative rules which allows the speakers of a language to reapply the same rules endlessly to their own output to yield a limitless number of sentences. This is what accounts for the unbounded creativity of languages evidenced by the ability of speakers and hearers to produce and understand infinitely many novel sentences of their languages. From this close formal relationship, the 'early' Wittgenstein concluded that logic is the very essence of language. It is the reason for its ability to represent reality meaningfully.

But immediately he recognized the excesses of this view and modified it in the later philosophy by claiming that it is only a part of the general functions that a language can be put into. Indeed given that logic, especially in its symbolic form, is a system with a vocabulary and rules of formation, it turns out that it can be interpreted just as another language and really not the essence of language. The formal interpretation that identifies language with logic has also been criticized for being blind to the socio-historical contexts in which language develop and continues to serve.

The study also gave a detailed reconstruction of Wittgenstein's semiotic theories in the *Tractatus* and the *Philosophical Investigations*. In the *Tractatus* it was argued that language is a human phenomenon by means of which we picture our world. The structure of language is representative of the structure of reality and given that reality is

objective to every observer, the *Tractatus* contended that the differences between the natural languages were attributable to accidental facts of vocabulary. Otherwise, all language was fundamentally the same. This universal character of all human natural language is expressible in the form of the logical calculus. Such a logical form is supposedly universal in all natural languages and at the same time, it is what is shared between language and reality which makes it possible for language to depict reality. Consequently, Meaning was also conceived by the *Tractatus* to be consisting of the depicting character of language. Our language is only meaningful when it represents reality. Anything short of this picturing function is not language at all. It is simply meaningless.

Consistent with the above conceptions of language and meaning, the *Tractatus* held that signification by any sign system is based on the equivalence of the logical form of all the sign systems which are isomorphic with the ontological form of reality. So the essence of a semiotic system is the symmetry between its logical form and the logical structure of reality. Going hand in hand with this is the perception that the communicative import of a semiotic system lies only on its descriptive potential. Only when we use a sign system to assert or deny anything about the world can we be said to be communicating. Otherwise, we are just entertaining meaningless non-semiotic systems, with pretensions to be authentic sign systems.

But contrary to the view of the *Tractatus*, it was contended in the *Investigations* that language is an indefinable reality. Wittgenstein introduced the analogy of the concept of

“game” to show that just as it is impossible to give a defining characteristic of all that we call games, we cannot give a single defining feature of all that we call language. The merit of this insight is that it offers an account for the natural fecundity of human language. It can be used to express novel experiences, imaginary, past motives as well as factual experiences.

On meaning the *Investigations* held that it is not something established a priori, that is, the isomorphic form of language and reality. Instead it is the ordinary usage of words and expressions in accordance with the rules set by the cultural context that determines the meaning of language. Hence, the assertion that *meaning is use*.

Semiotically, the *Investigations* expanded the *Tractatus*' view by enriching the concept of a sign to be four-term relation incorporating context of usage as integral to the sign. This enabled him to expound a semiotic theory that is all-inclusive of any meaningful activity thereby transcending the constraining perception of the *Tractatus* which limits meaning to the descriptive realm only. It includes other non-informative functions like, joking, lying, poetry, wishing, commanding among others. The *Investigations* contends further that it is the context that allows us to respond adequately to the fundamental problems of representation which then make it possible for communication to take place at all. His analyses have revealed the conditions under which we may say that an entity is a representation of something else and guarantee that our representations correspond to external objects. This explains how rules of the language-game are fixed thus ensuring effective communication between individuals in a community. The rules of

usage form the common social-historical background which must be minimally present if ever there is to be any possibility of communication and semiotic interaction of any form.

Consequent to the analysis of the semiotic theories in the two chief works of Wittgenstein, the study attempted to synthesise the two works thereby pursuing a rigorous formulation of a unified semiotic theory of Wittgenstein. In doing this the study was informed by the theoretical framework of model-theory as proposed by Tarski but extended by Hiz. This approach ensured the objectivity of semiotics and the accessibility of semiotic process. It demonstrated the complementarity of the two works of Wittgenstein by showing that *The Tractatus* provides a syntactic and semantic analysis of the logico-epistemological discourse that can take the values of true or false, but the *Investigations*, extends the analysis to include non-assertive values. Besides, the latter introduced the concept of context that enables Wittgenstein to introduce the pragmatic dimension to his semiotic theory. Together, therefore, the two works of Wittgenstein have been demonstrated to constitute a complete semiotic theory with syntactic, semantic and pragmatic dimensions.

We also exploited Stalnaker's rigorous formalization of the concept of context thus rendering it adequate for formulating a model-theoretic framework for general semiotics. This has aided us in perceiving the formal structure of Wittgenstein's four-term conception of signs. The fourth term which is the context provided the

interpretation domain that brings the other three domains of objects, interpreters and signs together.

Finally, the study was an attempt to identify possible areas in which we can apply Wittgenstein's semiotic theory contemporarily. It identified two main areas. The first area is to provide a basis for reconciling the competing semiotic approaches. This is done in the light of the demonstration that Wittgenstein's works which might singly represent the competing approaches together form a unified and richer semiotic theory. His thought might then be used to develop a new methodological approach especially in the socio-cultural domains of study. This would make a contribution towards the efforts of developing an effective theory of representation in the disciplines that investigate this domain. The need for this approach is considered much more relevant in the age of digital information documentation which is increasingly forming the basis of systematic investigations with unique characteristics that call for new methodological approaches capable of giving a proximate representation of the socio-cultural reality.

Second area of application is on the plane of communication. The concept of a semiosphere has been borrowed and applied to systematise Wittgenstein's systemic approach in his 'late' philosophy. While the *Tractatus* was highly analytic and attempted to give a phenomenological definition of philosophy, whose character is universal, the *Investigations* instead, adopted a systemic approach to signification and philosophy. This latter approach puts emphasis on the existential foundations of philosophy in all the aspects that Wittgenstein called the 'form of life'. Besides, it

recognises and emphasises the organic nature of meaning. In effect, the study has emphasized the construction of the concept of a semiosphere as a space of meaning. It has suggested that the systemic view is the most appropriate for developing a philosophy of communication by showing that a semiosphere in itself is a conceptual system whose analysis can aid in determining the conditions and consequences of a communication system.

The first parameter which we can use to appraise the study is one based on the assumptions which provided the research premises for the study by way of indicating the extent to which the study confirmed or rejected the assumptions. The first assumption of the study was that Wittgenstein's philosophical insights include a semiotic theory. In line with this assumption, chapters three and four of the study, attempted to reconstruct the semiotic imports of the *Tractatus* and the *Philosophical Investigations* respectively. Despite the inherent flaws of the arguments of the *Tractatus* regarding these concepts as revealed by critical remarks in chapter three, some arguments emerge as the strong points of the *Tractatus*.

The *Tractatus* recognises that language is a rule-guided system of words by means of which we picture the world. This means that language is a formal system of rules which can be rewritten in logical language. This forms the basis of his analysis of propositional representation which he later stretches to include any sign system that can be used to represent states of affairs in reality. It limits its analysis nevertheless to only logico-scientific semiotic codes which range over the values of true and false. Within

the sphere of logico-scientific semiotics inherent in the *Tractatus* the sign systems are valid and flexible within the limits of the extremities of tautologies and contradictions. Tautologies and contradictions separate what is semiotically significant from what is semiotically insignificant. The main purpose of Wittgenstein at this moment of his philosophical development was to eliminate vagueness and ambiguity in natural language thereby making it well-equipped for philosophical discourse. This conditioned his semiotic thought to be restricted to well-defined or constrained structures which leave little room for vagueness and confusion as has been pointed out in chapter four. The other semiotic relevance of the *Tractatus* is that in as much as its focus was narrowed down to only the well-defined fields of a logico-scientific character, it did put emphasis on the syntactic and semantic aspects, which are key components of any semiotic system.

In this regard, The *Tractatus* broadens the view that meaning of a sign is its reference by noting that sign systems have the dual character of possessing a pictorial relationship and pictorial form. Pictorial relationship describes the connection between signs and their objects. This is the dimension of meaning upon which the *Tractatus* grounds its semantic findings. Pictorial form on the other hand describes the relationship between signs with each other in a sign system. The internal relations between signs in a system are what make it possible for signs to picture facts in the world. This is the dimension of meaning upon which he builds the syntactic theory. Therefore, according to *Tractatus*, meaning has both material and formal aspects that require a semantic and a syntactic investigation. But by focusing only on the assertive mode of signification, the *Tractatus*

contends that semiotic systems have got only an informative role in communication. They are limited to only the description of states of affairs. The various restrictions in the *Tractatus* were reviewed by Wittgenstein in the phase of his *Philosophical Investigations*.

The *Investigations* principally corrects the flaws of the *Tractatus*. Wittgenstein employs the concept of a language-game in order to underline the fact that language has a fecundity which is revealed in its having a multifarious and open-textured character. This makes it possible for language to express all experiences easily and effectively. Extended to include the entire semiotic range, the *Investigations* recognizes the multiplicity of the functions of sign systems that transcend the genre of mere description or of stating states of affairs. It is therefore, plausible to have a meaningful representation in all fields that are not necessary of assertive nature such as, questions, commands, wishes, art, ethics, religion and politics among others.

In this manner, the *Investigations* opens its regard to fuzzy structures that are not well-defined. Equivocation is accepted in the *Investigations* not as problem of a sign system but rather its strength which injects flexibility into the system. Philosophy's aim should not be the elimination of equivocation but rather the elucidation of the multiple meanings of a given sign in function of the contexts of usage. The *Investigations* thus introduces context of usage as an integral element of a sign system. This facilitates the elaboration of a pragmatic dimension of semiotics which was wholly neglected by the *Tractatus*. The concept of context has also enriched the conception of a sign which is

basic to any semiotic theory to be construed as a four-term relation thereby enabling Wittgenstein to adequately respond to the fundamental philosophical problems of representation.

The second assumption of the study was that all semiotic systems are inherently generative hence amenable to general formalization. This has specifically been pursued in chapter five where the model-theory was applied to unify Wittgenstein's semiotic theory. A generative system is any that presumes that from a limited resource of elements and specific rules of formation and transformation it is possible to generate infinitely many well-formed strings of the elements. For example, in a language, from the basic vocabulary and the rules of formation it is possible to generate infinitely many sentences of a language. But such systems without an interpretation function remain purely formal and devoid of any content. Model-theory is thus an approach that gives procedures of constructing such interpretation functions so as to give content to such formal systems. In its original formulation, it is restricted to the interpretation of formal deductive systems of sentences. But Hiz has adequately extended the original formulation so as to be applicable to any semiotic system. This was complemented by Stalnaker's formalization of the concept of context. Context as an integral part of a sign is perhaps one of the major insights of Wittgenstein's later philosophy. These formalizations of semiotics and context establish semiotics as an objective and rigorous field which is not contingent on the whims of the sign users. They provided a framework to unify and elaborate the insights of Wittgenstein as constituting one complete system of thought on semiotics.

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The third assumption of the study was that communication constitutes the pragmatic aspect of Wittgenstein's theory of language. This assumption has been approached indirectly by attempting to establish the semiotic relevance of Wittgenstein's philosophy. Semiotics being the general theory of signs as used for communication must therefore underlie any attempt to construct a theory of communication. Communication is presumed to be a fundamental function of language and so Wittgenstein in explicitly addressing linguistic issues in his works must have implicitly intended the communicative import of his ideas to become apparent. So, in explicitly establishing the semiotic relevance of his philosophical works, the study has established communication as the pragmatic dimension of Wittgenstein's philosophy which has received predominantly a formal logical interpretation at the expense of a pragmatic interpretation.

The other parameter of appraisal is in terms of the objectives of the study which gives indication of what has been accomplished in the study. The first objective of the study was to describe the semiotic theories in the *Tractatus* and the *Philosophical Investigations*. In order to achieve this objective, the descriptive method was predominantly used to reconstruct these theories in chapters three and four. This was preceded by a critical evaluation of the logico-formal interpretation of Wittgenstein's philosophy which revealed that its pragmatic, communicative element has been neglected. Therefore, the study has achieved its first objective of giving a descriptive reconstruction of Wittgenstein's semiotic theories in the two works.

The second objective of the study was to interpret the communicative theory of Wittgenstein. This objective involved an attempt to unify the semiotic theories unfolded from the two works

into one complete and consistent system of thought on semiotics. The synthetic method was used, particularly in chapter four, to synthesise the semiotic ideas of Wittgenstein. It was informed by the theoretical framework of model-theory which enabled us to establish that the *Tractatus* and the *Investigations* complement each other. The semiotic inadequacies of the *Tractatus* are corrected and completed by the *Investigations*. Model-theory showed that the philosophical insights of both works could be brought into a union which provides syntactic, semantic and pragmatic components of a semiotic system. Therefore the study achieved the second objective.

The third objective of the study was to indicate the relevant areas where Wittgenstein's ideas can be applied. The study identified two areas in which Wittgenstein's theory of semiotic systems can be put. The first one is the theoretical import which can contribute to offering a framework for reconciling the dominant semiotic movements. The one being the highly logical approach founded on the ideas of Pierce and the other being sociological and structuralist approach founded on the ideas of Saussure. By demonstrating that Wittgenstein's ideas which respectively fall in the two categories are unifiable we have in principle established that the movements are reconcilable thereby forming a richer theory of representation. The second area is emerging from the fact that Wittgenstein's theory, in having a semiotic import, can form the basis or part of the literature at the foundations of a philosophy of communication, which might be elaborated as a discipline in its own right within general philosophy. This has exploited the richer concept of a semiosphere proposed by Lotman which is quite consistent with Wittgenstein's later philosophy whose approach is systemic rather than analytical as was the case in the early philosophy. This objective was, therefore, achieved.

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Based on the foregoing remarks the following recommendations are proposed for further research pursuant to this study:

- 1) In light of the much developed formal semantics for the logico-mathematical disciplines and empirical semantics for the natural sciences, there is need to develop a supplementary rigorous semantic theory for the humanities and the socio-cultural disciplines, too. Wittgenstein's semiotic theory might be contributory to this end.
- 2) Elaborate a systemic philosophy of communication based on the identification and elaboration of the composition, environment, structure and processes of a communication system. Wittgenstein's semiotic theory can provide a foundation for such an undertaking
- 3) Apply the philosophy of Wittgenstein to reconcile the analytical semiotics with systemic semiotics. Such an integrated approach to semiotics might be used to develop methods of designing communication systems in ways that maximize their integrity and cohesion
- 4) Develop a formal theory of pragmatics that includes context as a basic concept
- 5) Construct an axiomatic theory of general semiotics

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