INFORMATION TO USERS

This was produced from a copy of a document sent to us for microfilming. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help you understand markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure you of complete continuity.

2. When an image on the film is obliterated with a round black mark it is an indication that the film inspector noticed either blurred copy because of movement during exposure, or duplicate copy. Unless we meant to delete copyrighted materials that should not have been filmed, you will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed the photographer has followed a definite method in "sectioning" the material. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For any illustrations that cannot be reproduced satisfactorily by xerography, photographic prints can be purchased at additional cost and tipped into your xerographic copy. Requests can be made to our Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases we have filmed the best available copy.

University
Microfilms
International

300 N. ZEEB ROAD, ANN ARBOR, MI 48106
18 BEDFORD ROW, LONDON WC1R 4EJ, ENGLAND

FORM, SIGNIFICATION, AND SPECULATIVE GRAMMAR

by

JAMES A. KELLY

A dissertation submitted to the Graduate Faculty in Philosophy in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1979

This manuscript has been read and accepted for the Graduate Faculty in Philosophy in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

May 23, 1979
date

Professor David Rosenthal
Chairman of the Examining Committee

May 24, 1979
date

Professor Marshall Cohen
Executive Officer

Professor Jason L. Saunders

Professor David Weissman

Professor H. S. Thayer
Supervisory Committee

The City University of New York

Abstract

Form, Significance, and Speculative Grammar

by

James Kelly

Contemporary philosophers continue to try to resolve problems concerning the relations between language and reality and between language and the mind. In the fourteenth century, a group of grammarians known as the Modistae tried to write universal or speculative grammars. Ockham and his successors pushed these works into oblivion, but there is some merit in their effort to develop a unified theory of signification. John Poinsot, a seventeenth century commentator on Aquinas, interprets signification within the metaphysical category of relation. In this way, he tried to eliminate confusion introduced by the Modistae, while he continues their effort to interpret language in the light of the scholastic understanding of matter and form.

Scholastic philosophers interpret knowledge as a correspondence between mind and thing. The truth of a proposition (spoken or written) depends also on correspondence. Some logicians have attempted to describe an element-by-element correspondence between language and the world. For the Modistae, substances are the individual subsisting realities populating the universe. The Modist grammarians uphold the doctrine that the universal, while itself an

individual, represents many individuals. They treat grammatical categories as dependent on metaphysical categories; the distinctions among the parts of speech enable the different parts of speech to express different aspects of substances. The parts of speech most closely related to substance have the most significance. In fact, the Modistae speak of words as if the words were themselves substances, and as if grammatical features (tense, case, number) were accidents inhering in these substances. To interpret words as substances is an extreme step, but it should be pointed out that this step resembles proposals in more recent works (e.g., Wittgenstein's logical simples in his Tractatus). The notion of form is crucial to this effort. The Modistae distinguish between the mode of being, the mode of knowing, and the mode of understanding. The form (that is, the intelligible component to be contrasted with matter) can exist in the thing, in the mind, and in the word signifying the thing.

These grammarians argue, then, that the correspondence between a proposition and a state of affairs results from the correspondence between the parts of the propositions and substances or aspects of substances. Each noun or adjective corresponds to a substance, and the other parts of speech somehow describe or modify substance. Ockham and others treat the proposition as an artifice and a complex which may or may not correspond to a real situation. However, they contend that the parts of the proposition have a strictly conventional relation to real things. In fact,

Ockam warns of the danger of attributing to signs properties which belong to what is signified. That is, he criticizes the tendency to treat words as if they were substance.

John Poinsot more successfully carries on the work begun by the Modistae. He takes Ockham's critical objections into account, but he tries to show the proper place of signs and signification within the metaphysical categories. He argues that the concept has a real relation to the thing known, while the spoken or written word has only a relation of reason to the thing signified. Finally, his treatment of analogy indicates that the notion of form cannot by itself be the basis for a full theory of signification.

Not surprisingly, disputes about signification roughly paralleldifferences regarding the universal. The Modistae, the Ockhamists, and John Poinsot develop a grammatical realism, nominalism, and conceptualism. John Poinsot settles some of the problems found in the earlier writers by providing further inquiry into the nature of logic and into the validity of Ockhamist positions regarding the universal.

Acknowledgments

I would like to thank all the members of the supervisory committee. I would like particularly to take note of the consistent encouragement of Jason Saunders from the beginning of this project, the efforts of David Weissman to lend clarity to what at one point seemed rather murky, and the insistence of Elmer Sprague that the work be properly finished.

I would also like to thank the library staff of City University and Harvard University, who were of great help during my research. Finally, I would like to thank Professor James Murphy of the University of California at Davis, who provided bibliographical advice at a time when it was much needed.

TABLE OF CONTENTS

INTRODUCTION

Questions regarding language have puzzled and intrigued many philosophers. First, what does the nature of language indicate about the mental capacities of man - did men gradually develop language, or have men always spoken? Do the limitations of language set bounds for the capacity to understand real things, or do they merely reflect this limited capacity? Second, philosophers have sought to clarify the relations between language and the world. Do basic, unanalyzable elements appear in extramental reality as well as in language? Does grammatical structure parallel the real structure of the world? Do language and the world relate to one another through the agency of the mind? How does language differ from, how does it resemble other forms of human behavior? Third, philosophers have compared and contrasted language with other kinds of representation. Recent writings have discredited a description of language called the "picture theory". Many writers have distinguished between sign and symbol. In the last century, some logicians and mathematicians developed artificial languages and tried to relate new notation and the entire new logic to mathematics. I would like to describe and analyze a medieval effort to answer systematically some of the

questions mentioned above; this introduction simply sets forth several alternative response to these questions and sketches briefly the structure of my argument.

In discussing medieval thought, historians often emphasize Porphyry's three questions regarding the universal: 1) Are universals subsistent realities or do they exist only in the mind? 2) If they exist, are they corporeal or incorpeal? and 3) If they are incorporeal, do they ever exist by themselves, or do they only exist in conjunction with material things? 'Realism', in this context, refers to the attribution of reality to the universals. Extreme realists attribute to universals an independent existence, apart from distinct individuals;[2] moderate realists affirm that they exist in the mind and have a foundation in reality. Nominalists, finally, deny any reality to the universals. Augustine was an extreme realist; Abelard and Aquinas were moderate realists; Nicholas of Autrecourt was a nominalist. Whether William of Ockham was a moderate realist or a nominalist is disputed.

Questions concerning language relate closely to the problem of universals, and three distinct perspectives on language roughly parallel the three positions on the universals. The Modists, grammarians and logicians of the late thirteenth century, developed a grammatical realism, holding that intelligible form appears under different modes--the mode of being, the mode of understanding, and the mode of signifying--in a real thing, in a concept of

that thing, and in a word referring to that thing. The Modists (as realists) take the intelligible form to exist in the spoken or written word. This links language closely to the mind and to the world, thus opening up the possibility of a universal grammar holding for all languages. The Modists defend this possibility on the basis of 1) the metaphysical structure of the world which puts restraints on any possible grammar, and 2) the process of knowledge and signification common to all men. This universal and necessary grammar would satisfy the Aristotelian definition of science. The metaphysical structure of reality does not completely determine language, say the Modists, but language must conform rather closely to this in order to fulfill its purpose of expressing that structure. The Modists apply Aristotle's metaphysics to Priscian's grammar, but the very effort suggests neo-Platonic influence. Many Aristotelians, Thomas Aquinas and Ockham among them, would not treat words as substances; that is, they would not attribute a distinct form to each word as they would to a substance. The Modists, having discovered the possibility of an Aristotelian explanation of signification, neglect puzzles or paradoxes resulting from language. The Modists come closest of these three alternatives to a picture theory of language, though they never explicitly affirm one. In their view, the mind connects the material sign with the concept, which is an image of the thing. In doing so, the mind makes the spoken word likewise an image of the thing, since the spoken or

written word attaches to the same form abstracted by the mind from the thing.

William of Ockham, the controversial and influential fourteenth century logician, reacted strongly against extreme realism. Ockham's grammatical nominalism begins from the common distinction between natural and conventional signs and concedes that the concept is a natural sign for a substance. The mind knows an entity in its judgment, but the universal itself is not an entity, nor is the form an entity. Ockham rejects traces of neo-Platonism he finds in other late scholastic philosophers. The form cannot be a subsistent Idea. Since it is not a separate entity, the form cannot appear under different modes, as a substance might appear with different qualities. Duns Scotus and others, says Ockham, confuse properties of signs with properties of things. Science concerns real things, while logic studies the intentions of the mind. Hence, logic is not a science; a fortiori, grammar is not a science. Its object of study is non-substantial and hence lacks permanent qualities. Conventions can change. An inner language uses signs to represent real things, but spoken or written language cannot represent this adequately. The immaterial concept naturally signifies the object of science (that is, the object of true and certain knowledge), but the spoken or written word does so only conventionally. Language expresses metaphysical truths but can easily mislead men about these truths. Later Ockhamists take up these difficulties and carry them to a tortuous extreme. Ockham

thus agrees that the word is an effect of the mind but does not agree that the mind can attach the material sign to a true form, since the universal is neither an entity nor an accident outside the mind. He denies, in fact, that the metaphysical categories other than substance and accident are important; they can be reduced to the first two.

John Poinsot, a late sixteenth century philosopher, renews the effort begun by the Modists to study the character of signification. Poinsot offers a defense of some of the Modist positions, presenting what could be called a moderate grammatical realism. Grammar as such cannot be science, says John, but the science of logic considers the nature of signification, and he incorporates part of the modist discussion of signs into logic, affirming (against Ockham) that logic is a true science. True, it concerns second-order realities (concepts, judgments, reasoning) and not substance, but it is nevertheless a body of certain knowledge, and that knowledge reaches not only the facts but the causes of the facts as well.

The Modists correctly seek, says John, to use the metaphysical notion of form in explaining signification. But the Modists deal loosely and inaccurately with the metaphysical issues. The concept, or natural sign, has a real relation to what it signifies. The spoken or written word, a conventional sign, has only a relation of reason to what it signifies. The real relation of the concept to the thing cannot establish another real relation between its material counterpart (spoken or written) and the thing. Conclusions

about the concept and its existence provide the basis for a theory of signification. A word spoken in a particular language, signifying as it does by human institution, cannot provide the foundation for a true science.

John takes a position intermediate between the Modists and Ockham. The concept naturally signifies a real thing, because it is an (immaterial) image of the thing. The spoken or written word, being material, cannot do this. By convention, it can call to mind a concept, but this power belongs to it by human institution and not by nature. The same form does not appear in the concept and in the material sign (differing, the Modists suggest, only in mode); rather, the conventional sign simply refers to that form. Smoke calls to mind fire, but it does not represent fire; there is a kind of opaque signification here. A bust of Rodin represents Rodin; The Thinker may remind one of him, but it does not represent him as his own image does.

When does one commit the fallacy of figure of speech? That is, when does one attribute features of the representative to the thing represented? The Modists deal very little with this question. They recognize that a grammatical form may have a misleading appearance (for example, 'Athens' seems plural). However, their theory suggests that all existing things participate to a greater or lesser extent in intelligible forms and that dependent beings (such as words) participate also. This implies further that knowledge of the forms illuminates all other beings and reveals a

multitude of connections between them. In fact, the modists' neo-Platonic approach to language involves attributing causality first and foremost to the forms themselves. These beings will necessarily shape both conception and signification. A contemporary version of this view might affirm that the state of affairs (rather than the mind) principally causes both knowledge and expression. A logical formula is thus an entity which may be realized in understanding and expression.

Ockham obviously disagrees. The mind truly knows things, but it apprehends them part by part. Men understand in a limited fashion, certainly not penetrating things with an intuitive intelligence (as, for example, the separate substances do). In the Platonic or realist view, men would directly apprehend immaterial forms. Knowledge of forms with wider extension, for such Platonists, illuminates the narrower concepts. For Ockham, the act of judgment bears on existing individuals, not on forms. Men know species (that is, individuals of the same kind) by examination of individual members of that species and abstraction from them. Forms or concepts are signs through which men know real things. The logician distinguishes features of the signs from features of the things. The metaphysician realizes that the world consists of substances (which have their existence in themselves) and accidents (which exist in the substances). All other categories reduce to these two. In Ockham's view, the neo-Platonist often

errs by "figure of speech." An example of this is precisely the effort to found a science of signs (e.g., logic and, a fortiori, speculative grammar).

For Poinsot, the natural sign (or concept) leads to knowledge of its object. It represents the object as a true image, though having only intelligible existence (or existence in the mind), not real existence. As an immaterial representative, it has no misleading particularities to beguile the mind. A man primarily grasps the thing through the concept and only secondarily reflects on the means by which he knows. Of course, the instrumental sign--the meaningful material sign--lacks this real relation to its object. Its characteristics can mislead the mind, if the mind attributes them to the things known. An affirmative judgment unites what the mind has found united and then has analyzed into parts. The mind breaks down the unity (or form of a real substance, then affirms that unity in judgment. Language expresses the judgment by joining a term which stands for a substance with some other term or terms which say something of the substance. The individual terms do not necessarily represent individual beings, nor do their grammatical relations necessarily parallel real relations.

These three perspectives differ, then, on the degree of reality to be attributed to the form (particularly as form might be expressed in a mental or vocal word) and on the resemblance of the word to what it represents. The Modists contend that the same form appears in the verbal

expression that appears in the entity. The outer word thus depends on the concept (or inner word), but enjoys the same relation with the things as the concept. For Ockham, the outer word has only a relation of reason to the thing, while the mental word has a real relation. However, the form is not an entity, and so it cannot support accidents, among which would be the various modes. John Poinsot concedes that the difference between mental and vocal word is crucial, but he holds that the mental word is a natural sign of the real thing and expresses the abstracted form of the real thing. Of course, the two points relate to one another; the use of 'form' suggests that the inner or outer word is (or expresses) an image of the real entity.

The Modist grammarians and John Poinsot take for granted many points which contemporary writers might dispute. They do not, for example, try to prove the existence of mind or its radical distinction from matter. Nevertheless, this group attempts to structure grammar in agreement with the metaphysical constitution of things. The structure of our discussion of beings, they say, must somehow parallel the existing order of beings. The distinct parts of speech must capture distinct aspects of reality. Mind (or reason, <u>ratio</u>) uses language to express truths about an independent, intelligible order. This instrument may mislead the mind, but it serves well when one takes the proper precautions. Language is at the same time natural and conventional; the laws of logic determine all valid

reasoning, but particular rules of grammar differ from language to language. Mind naturally conforms itself to what it knows,then expresses this knowledge. Its conception (what the scholastic philosophers call the inner word) then may find material expression. Verbal representation relies more than pictorial representation on convention. For the Modists, the notion of form illuminates the relationship between the world, mind, and language.

This introduction opens up a broad range of questions regarding language, but my interest focuses on the Modists' strategy. Questions arise concerning their epistemological views - why must mental existence parallel real existence? Do Aristotle's metaphysical categories reflect real divisions and distinctions in things? Why should the concept and the spoken or written word be considered parallel as the distinction between inner and outer word suggests? What makes it possible to write theoretical or speculative grammar; that is, from what principles can someone deduce a particular grammar? The Modists do not question the scholastic hierarchical order of being. They accept uncritically Aristotle's view that the same principle of intelligibility (that is, form) appears in physical beings and in explanations of physical beings. They seek a speculative grammar because Priscian's grammar does not carry the analysis of language to underlying causes. By supplying this deficiency from Aristotelian theory, they attempt a truly scientific (that is, explanatory) theory of language.

The Modists specifically address certain of these questions; they omit others directly related to their theory. Ockham raises objections to their approach, and Poinsot attempts to refute some of Ockham's positions concerning knowledge. What motivates the crucial distinction between the three modes - the modes of being, the mode of understanding, and the mode of signifying? Why should form in the spoken or written word exactly parallel form in the concept? The spoken or written word joins form to matter, while the act of knowledge separates (abstracts) the form from matter. Since Aristotle builds his metaphysics around substance, his theory seems incompatible with applying "matter" and 'form' to words, which are not Aristotelian substances. And is it not confusing to speak of the matter and form of the sentence, as well as the matter and form of the individual word? If the Modists can deduce the first principles of grammar from metaphysics, why do particular languages differ so greatly from one another? Ockham (in Moody's interpretation, a true Aristotelian) asks this - science begins with the universal, which is not itself a substance, but rather than through which substances are known. The study of the universal and its properties is logic, an introduction to science but not itself a science. How then can the study of words (conventional signs standing for universals or aspects of universals) be a science? This is a first question which the modists must answer - how can form appear under so many guises?

Ockham's objections and criticisms point out much that is mistaken in Modist grammar. If logic falls before his criticism to the level of an introduction to science, the other sciences of discourse will also fall. These difficulties lead into John Poinsot's discussion. He addresses himself to "nominalist" objections, contending that logic itself is both an introduction to science and a distinct science. John Poinsot addresses some questions neglected by the Modists, questions concerning the soundness of their enterprise. Given Ockham's criticism, can there be a science of signs? In what metaphysical category (substance, accident, relation) do signs belong? Many concepts are fictions (that is, products of reason not directly derived from real beings). Can words, then, relate closely to real things, since their own existence is parasitical on the existence of concepts? John Poinsot attempts to answer these questions concerning the philosophic foundations of Modist grammar. The sober, balanced work of a patient Thomist, his logic methodically examines questions of language and knowledge. His discussion of the categories, of signs, and particularly of relations, provides philosophic support for a theory of signs such as the Modists had begun to develop.

Critics of the Modists directed unsparing attacks toward them. The Ockhamists and Renaissance grammarians found evident weaknesses in these views, though they differ radically in their approach to these questions. Ockhamists attacked the unnecessary multiplication of entities.

Philosophers can analyze understanding and communication, they argue, without any appeal to mysterious "modes". Such effort to convert conventional rules into a science simply engenders confusion. Renaissance writers group the Modists with hair-splitting dialecticians; these writers, they say, expand the introductory disciplines of grammar and logic into full-scale speculative science. Preoccupation with possible error and ambiguity obstructs introduction to the classics. The dull, unimaginative writing of the Modists reflects, these writers contend, the narrowness of their education.

Historians of linguistics often accept one or the other of these negative perspectives. However, John Poinsot's logical work supports the possibility of a theory of signs, distinct from grammar and appearing within logic. His work--unique in combining an appreciation for scholastic thought, a deep concern for questions of language, and a familiarity with Ockhamist criticism--confronts the three issues of major concern: 1) the basis for language in the world, 2) the basis for language in mind, and 3) the nature of the linguistic representation.

This study developed from the observation that the Modist grammarians made the principal effort to apply thoroughly and methodically the Aristotelian notion of form to language. Some contend that history awarded the Modists a well-deserved oblivion, but the difficulties and implausibities of mechanical behaviorist explanations of language

(so much undermined by contemporary linguistics) encourage re-examination of older theories, especially theories developed by men with a certain philosophical competence. Seen together with John Poinsot's revisions and corrections, the Modist theory seems not sterile, but rather a long-neglected predecessor of later efforts to establish a theory of signs.

The present study first examines the Scholastic background of Modist thought, emphasizing the close connection between thought and language. The second chapter summarizes the Modist grammars - definition of theoretical terms, discussion of word classes, and syntax. Chapter III considers various critics of Modist grammer, particularly Ockhamists and Renaissance men of letters.

These initial chapters put forward Modist grammar in its philosophical context. Renaissance thinkers paid little heed to the speculative grammarians, regarding their views as discredited. John Poinsot's logic, though appearing much later, revives a number of questions which the Modists had considered. His writing suggests the need for a separate theory of signs; he treats this theory as part of logic. This presentation provides a philosophic justification for speculative grammar, provided we understand speculative grammar as a theory of signs and not as deduced grammar of a particular language. The student of language need not reify the grammatical categories, nor must he usurp the grammarian's role. Its deliberate rejec-

tion of these errors and its effort to take into account Ockhamist criticism makes John's work relevant to my present study, though he wrote long after the era of speculative grammars.

The concluding chapter re-evaluates the Modist grammars and considers the interaction of various disciplines in the late Middle Ages. Though historical parallels are difficult, a review of the efforts and difficulties of the Modistae suggests possible objections to contemporary efforts to identify linguistic universals. Efforts at rigorously scientific linguistics may impoverish language. Such efforts, others insist, will smuggle in again the "mentalism" which linguists banished decades ago. My own view is that John Poinsot's success suggests that the study of signs properly belongs to logic and that preliminary discussion of knowledge clarifies the nature of signification.

Wittgenstein's Tractatus and Philosophical Investigations address such questions - can a conventional system of signs express the structure of the world? If not, what purpose do such systems serve? Does the word or the sentence naturally represent (respectively) some thing or some state of affairs? If not, what connection makes it possible to evaluate real situations using information communicated in language? The Modists, unquestioningly accepting the realism of their era, take Latin as an example of a system of signs expressing the structure of the

world. The world consists of substances, each of which has a characteristic form. A man can separate that form from its sensible appearance--its time, location, physical dimensions--then clothe that form once again in matter as he speaks or writes. Many contemporary thinkers recoil from this notion of a pre-established harmony - an intelligible content in material things and a limited intelligence nevertheless capable of grasping that content and expressing it. The repeated appearance of an immaterial principle in nature marks the Modist understanding of language. At times, it leads them to a linguistic Platonism or extreme realism. They include within the real order of things concepts and aspects of real things which Ockham and many others regarded as fictions.

The first chapter seeks to establish that there was some reason for the Modists to believe that they could develop a speculative Aristotelian grammar. Knowledge itself depended on the capacity of the mind to confer an intelligible to-be (that is, a new act of being) on a form. Why not a signified to-be? The verbal sign depends on the concept or inner word, which in fact is a natural sign for a real being. Moreover, Roger Bacon and other theologians had given extensive consideration to the <u>modi significandi</u>. Finally, the terminist logicians had focused on one aspect of language, what they called supposition. Why not study methodically another aspect of language, related to supposition but not identical with it - signification?

On the other hand, many scholastics ruled out the possibility of such a science. Aristotle had identified three kinds of science (physics, mathematics, and metaphysics), and Boethius in his De Trinitate had commented on this division. Aquinas and Ockham would have no part of this proposed science. It evidently reflected a strong neo-Platonic influence.

The next chapter summarizes Modist views on language. Form appears under three modes - the mode of being, the modes of understanding, and the mode of signifying. Analysis of language properly proceeds from metaphysical principles - matter and form, substance and accident, being and becoming, the four causes. Language does not precisely mirror the metaphysical structure of the world, but abundant parallels exist.

Critics quickly buried Modist grammar. In my view, the Renaissance critics are of less interest; they propose a new educational and cultural ideal. Formal logic and (in the early years of the Renaissance) natural science also suffer from this shift of interest. Ockham, though, recognized some points relevant to this study. The Modist interpretation of Aristotle is neo-Platonic. From a realism regarding the universals, this interpretation develops a grammatical realism. The Modiste propose a new science which can only develop from an exteme realism regarding knowledge and signification.

John Poinsot salvages the medieval effort to study signification methodically and carefully. He discusses

the difference between natural and conventional signs, he clarifies the place of signification within the metaphysical categories, he notes that grammar cannot be a true science, and he examines the role of fictions (what he calls "beings of reason") in the growth of knowledge.

What all this implies with respect to current issues in philosophy of language could be long disputed. However, there is more than a trace of resemblance between the grammatical realism of the Modists and the Cartesian linguistics of those who are seeking for universals of language, just as there is more than a trace of similarity between the older nominalism and new skepticism regarding meaning.

Most of the texts introducing the scholastic background of the Modists concern knowledge. We will see that Thomas Aquinas affirms a close link between intellection and diction, that is, between understanding and interior speech. He distinguishes between an active and a passive intellect. The mind receives an image or similitude of the thing, then conceives and expresses a concept. The mind depends on the thing known, and that thing is the standard for determining whether or not the conception is accurate. But the mind does not only receive; it acts on this impressed image, separating the form from the material conditions in which it exists

outside the mind. In considering the various points of view found here, we find that over-emphasizing the passive aspect of knowledge fosters the tendency to confuse aspects of the sign with aspects of the thing signified. On the other hand, stressing the mind's actions can obscure the principle that knowledge involves a certain correspondence or identity between the mind and the thing known.

NOTES

Introduction

[1]Quoted in Gilson, History of Christian Philosophy in the Middle Ages, p. 155

[2]Ibid., pp. 153-54

CHAPTER I

THE MODISTS AND THE SCHOLASTIC TRADITION

The relations between language and the world, between language and mind, and between language and other forms of representation provide the framework for the discussion of the Modists and the scholastic doctrine from which they drew. Before directly examining their speculative grammar, I will consider the basic points in scholastic philosophy from which the Modistae took their inspiration. The present chapter briefly identifies the Modistae, then notes Aristotle's brief remarks on language. Though brief, they provide the basic orientation of scholastic thought in this area. Roger Bacon and Robert Kilwardby called for grammars to be written with the structure and intention of the grammars produced by the Modists.

Several philosophic points are crucial for this speculative effort. First, how did Aristotelians employ the notions of matter and form in their discussion of real beings? Second, what is the role of form in the scholastic treatment of knowledge? Third, how do the scholastics relate knowledge and speech? Fourth, are there basic scholastic perspectives on language neglected by the Modistae? Fifth, since the Modists want to derive a

scientific grammar, what do the other scholastics say regarding science?

After sketching these points, discussion turns to the contemporaries of the Modists. The terminist logicians developed the notion of supposition. In some ways, their work parallels remarkably that of the Modists. Like the Modists, they avoid raising metaphysical questions. William of Ockham, very familiar with terminist logic, makes use of that logic to develop a powerful new theory of knowledge. His work attacks several important presuppositions without whose support the speculative grammars will fall. Others turned some elements of Ockham's thought to the support of a radical skepticism in the fourteenth century. These so-called Ockhamists (along with the Renaissance grammarians) are of less interest for the examination of the Modist doctrine. Ockham's criticism more effectively points up the weaknesses of this doctrine, since he begins from a perspective on knowledge and speech closer to their own starting point.

Part 1: A brief Sketch of the Modist Grammarians

Some late thirteenth-century grammarians, drawing inspiration from Roger Bacon's writings, wrote so-called speculative grammars, discussing properties they held to be common to all languages. The Modistae derived their name from the use they made of a distinction between the mode of being, the mode of understanding, and the mode of

signifying (modus significandi) Grabmann[1] mentions the following as Modist grammarians: Siger of Courtrai, Thomas of Erfurt, Michel de Marbais, Jean Josse de Maravilla, Martin of Dacia, John of Dacia, Simon of Dacia, Boethius of Dacia, Johannes Aurifaber, John Avicula of Lotharingia, Matthew of Bononia, Radulfus Brito, and Erhardus Knab von Zwiefalten. None of the writers is an important figure in the development of scholastic philosophy, though for a time Siger's work was attributed to the more well-known Siger of Brabant, and Thomas of Erfurt's Grammatica Speculativa appeared until this century among the collected works of Duns Scotus. Since the Modists agree on basic points, I have chosen the works of three of the principal writers--Siger of Courtrai, Thomas of Erfurt, and Boethius of Dacia--as representative. The writers are near contemporaries of one another; the predecessor of the Modistae, Roger Bacon, wrote his Summa Grammaticae in 1245, while Thomas of Erfurt (one of the last of the modists) studied in Paris about 1300 and probably wrote his Grammatica Speculativa between 1300 and 1310.

Boethius of Dacia's writings fell under the 1277 condemnation at Paris against Averroism. This suggests that he believed that the various sciences should follow their own course without attending to theology. One tenet of the Averroists was that revealed truths play no part in the development of the natural sciences, including metaphysics. Boethius criticizes Priscian, the sixth-century Latin

grammarian whose lengthy Institutionum grammaticarum served as a text for both the Modists and the terminist logicians, for his lack of philosophic spirit:

> Since Priscian did not cover every aspect of grammar, the value of his work is greatly diminished. He offers many conclusions, but does not offer any causes to explain these facts; he rests his presentation on the authority of the ancient grammars.[2]

Boethius apparently died in a crossing of the Alps some time after the condemnation; we know that he was no longer living in 1284. He wrote several commentaries on Aristotle's works and also wrote a commentary on Priscian. Siger of Courtrai, born around 1283, died between 1330 and 1340. He published no theological works but did write Ars priorum, a Summa modorum significandi (many of the speculative grammars bear this title), a Sophismata, and several other works of logic.[3] Thomas of Erfurt, one of the later Modistae, wrote his Grammatica Speculativa between 1300 and 1310.

Thomas of Erfurt's speculative grammar is probably the most complete of these grammars available, and some regard it as the most important of the Modist works.[4] Moreover, its philosophic implications have interested several philosophers.[5] The grammar has three parts: proemium, etymologia, and diasynthetica. The proemium, since it explains the basic distinctions on which the work depends, roughly corresponds to what contemporary work would refer to as metalanguage. Etymologia and diasynthetica provide word-class description and syntax, respectively.

The Modist grammars borrow heavily from the terminology

of the logic and metaphysics of their era. In differentiating between the terms, they seek to relate the terms to basic distinctions - for instance, being and becoming, matter and form, substance and accident. The Modists analyze language in terms of formal, material, efficient, and final causes. Given this heavy dependence on scholastic metaphysics, understanding the Modists requires some familiarity with scholastic thought.

Part 2: Philosophic Background of Modist Grammar

Aristotle's writings on logic and language provide the basis for the arguments of the Modists and of their critics as well. He offers the following considerations on the relation between words and things:

> Spoken words are the symbols of mental experience and written words are the symbols of spoken words. Just as all men have not the same writing, so all men have not the same speech sounds, but the mental experiences, which these directly symbolize, are the same for all, as also are those things of which our experiences are the images.[6]

Aristotle thus briefly expresses a simple relation between words, thoughts, and things.

Roger Bacon and Robert Kilwardby presented the ideal of a unified science of language, developing what has been called a "neo-Platonic Aristotelianism." Gilson sums up these views in his History:

> The grammarians of the thirteenth century noticed that each language raised two sorts of problems, some proper to the language in question (Hebrew, Greek, or Latin grammar), others common to all languages (what is a noun, a verb, an adverb, etc.)[7]

The Modists develop this line of thought. They will point out that grammar concerns the signs of things. Their interest

is in question which all languages have in common, though they may or may not have successfully distinguished these questions from those pertaining specifically to Latin. If they succeeded in doing this, as Gilson notes, the modists believed they could convert grammar into a true science.

> The first sort of problems could not become an object of science; the second sort of problems, on the contrary, could be taught in a scientific way on account of their generality. Hence the progressive constitution of what was to be called later on 'speculative grammar' (grammatica speculativa), whose object it was to teach the general rules followed by the human intellect in expressing itself, namely, its various 'ways of signifying' what it thinks (modi significandi).[8]

These writers sought to develop another science of language which would parallel logic. Roger Bacon and Robert Kilwardby were outstanding proponents of this view.

> Thus conceived, grammar could become a science and be taught as a true learning because its object was universal and its conclusions deducible from principles. As Roger Bacon vigourously puts it: 'Grammar is substantially the same in all languages, even though it may undergo in them accidental variations.' He himself was keenly aware of the irreducible nature of particular languages and of the importance of their study; no language, he said, can be translated into another one without losing its proper qualities. Bacon did not want to suppress particular grammars; he merely conceived the possibility of a general one: the universal grammar of human language, taken precisely qua human.[9]

Paetow outlines well this dissatisfaction with Priscian's merely descriptive grammar;[10] this work does not reduce the grammatical structures to their causes.

A certain strand within medieval thought thus lends itself to the Modist interpretation of Aristotle. Scholastic interpretations of Aristotelian notions such as matter and form, the identity of the intellect and the thing known,

demonstrative science, and analogy provide the vocabulary and the theoretical foundation for Modist grammar.

In explaining the multiplicity and variety of material things, Aristotle had distinguished in things a material cause (for Aristotle, matter is power) and a formal cause (the determinant of the nature of a thing). Thomas Aquinas and the other scholastics follow Aristotle in this, affirming that all material beings are composites of indeterminate matter and form (that which determines the matter). The material thing involves further composition; matter and form make up the essence of the thing, but this essence must receive an act of being in order to be a real thing. This last distinction could roughly be compared to the difference between the idea of something and the thing itself.

Matter without form, or primary matter, provides a substratum for all material things. It is sheer potentiality for form; "the potentiality of matter is its very essence."[11] In union with substantial form, prime matter becomes a real thing. It underlies all changes in material things. How can being and becoming be coordinated, resolving the puzzles set by Parmenides? Aristotle develops the notion of an underlying capacity to take on qualities which remain present even as substances change. Form determines this primary matter. An individual thing has the characteristics of a particular substance because of its form.

The matter-form composition of real things also provides the key to understanding human knowledge. "All

knowledge is by form or act."[12] Matter and form provide the explanatory principles for psychic change as well as for physical change. Thomas Aquinas gives the following brief account:

> Now change is of two kinds: one natural, the other spiritual. Natural change is change in which the form of the agent (mover) is received into the patient (the moved object) according to a natural existence, as heat is received in that which is heated. Whereas spiritual change is change in which the form of the agent (mover) is received in the patient according to a spiritual existence, as the form of color is received in the pupil which thereby does not become colored.[13]

The knower, then, receives the form of the thing he knows. His mind confers on the form of the thing a new existence. The natural form can thus be separated or abstracted from the matter together with which it exists; the mind then confers a different kind of existence on the form. The following briefly describes the Thomist position, which differs from that of Ockham:

> The intelligible species is a similitude of the very essence of the thing, and it is in some way the very quiddity and nature of the thing according to intelligible to-be, and not according to natural to-be, as it is in things.[14]

'Intelligible species' here refers to the abstracted form. This species is that which communicates form to the intellect. Thomas Aquinas traces the act of knowledge from this intelligible species given to the mind to an interior expression of the act of knowledge.

> The conception of the intellect is properly called a word: for this is what is signified by an exterior word.
>
> In us to speak means not only to understand, but to understand and to express from oneself a certain concept. Consequently, for us to understand is, properly, to speak.[15]

These views provide the basis for the effort of the Modists to distinguish the form in the real thing, the concept, and the material expression of the concept simply by three different modes (the mode of being, the mode of understanding, and the mode of signifying).

Ockham agrees that the mind's conception is closely tied to its expression. He agrees that the concept naturally signifies what it represents.

> It must, however, be understood that there are two sorts of universal. There is one sort which is naturally universal; in other words, is a sign naturally predicable of many things, in much the same way as smoke naturally signifies fire, or a groan the pain of a sick man, or laughter an inner joy. Such a universal is nothing other than the content of the mind; and therefore no substance outside the mind and no accident outside the mind is such a universal. It is only of such a universal that I shall speak in the chapters that follow.[16]

However, the material sign expressing the natural universal does not have the same close bond to what it represents.

> The other sort of universal is so by convention. In this way, an uttered word, which is really a single quality, is universal; for it is a conventional sign meant to signify many things. Therefore, just as the word is said to be common, so it can be said to be universal. But it is not so by nature, but only by convention.[17]

In fact, Aquinas and Ockham differ little on the question of the universal. Both recognize the danger of neo-Platonic influence in some scholastic writers. Referring to Augustine's works, Ockham speaks of a mental language underlying what is uttered.

> These conceptual terms and the propositions formed by them are those mental words which St. Augustine says in the fifteenth book of De Trinitate do not belong to any language; they remain only in the mind and cannot be

> uttered exteriorly. Nevertheless vocal words which are signs subordinated to these can be exteriorly uttered.[18]

Ockham and Aquinas thus agree on basic points regarding the composition of material beings, the knowledge of those beings through form, and on the distinction between natural and conventional signs. They differ slightly concerning the place of the form in knowledge. Aquinas speaks of the intelligible species as a "similitude of the very essence of the thing"; Ockham would distrust the use of 'similitude'.

These two writers differ also on two questions regarding language. First, Aquinas holds that logic is a true science, while Ockham denies that this is so. Second, the two disagree regarding the use of analogy in metaphysics and theology. Aristotle introduces the notion of analogy to defend the unity of metaphysics. He treats metaphysics as a single science studying being as such. 'Being' as used in metaphysics--though it can refer either to things existing in themselves (substances) or things existing in another (accidents)--is not equivocal, but analogous. Ockham gives more emphasis to the basic distinction between equivocal and univocal terms,[19] though Moody points out that he does treat the transcendental metaphysical terms as analogous.[20] Thomas Aquinas further develops Aristotle's notion for use in theology. How can 'wisdom' or 'truth' or 'being' apply unequivocally to an unlimited and perfect first cause as well as applying to limited creatures? Thomas employs Aristotle's example of analogy to good advantage. 'Being'

refers principally to the substance, but (by reference to this principal use) it may refer also to accidents. Similarly, 'being' (and a number of other analogous terms) refers principally to God, who is being and who causes the being of all other things, and secondarily to creatures. " . . . . The names said of God and creatures are predicated neither univocally or equivocally but analogically, that is, according to an order or reference to something one.[21] Thomas first notes that terms may refer to things which exceed the measure of human concepts. In this type of discourse, the matter-form distinction which facilitated understanding of signification is no longer sufficient. Thomas Aquinas explains briefly the source of unity in an analogous term.

> This can take place in two ways. In one way, according as many things have reference to something one. Thus, with reference to one health we say that an animal is healthy as the subject of health, medicine is healty as its cause, food as its preserver, urine as its sign.
>
> In another way, the analogy can obtain according as the order or reference of two things is not to something else but to one of them. Thus, being is said of substance and accident according as an accident has reference to a substance, and not according as substance and accident are referred to a third thing.[22]

A term can thus have one primary referent upon which a number of related uses depend, or there can be two referents, one of which is directly dependent on the other. Accidents inhere in substances, and creatures receive their being from God.

> Now the names said of God and things are not said analogically according to the first mode of analogy, since we should then have to posit something prior to God, but according to the second mode.
>
> . . . .Because we come to a knowledge of God from other things, the reality in the names said of God and other things belongs by priority in God according to His

> modes of being, but the meaning of the name belongs to God by posteriority. And so He is said to be named from His effects.[23]

Discussion of analogy thus indicates the limitations of language in the discussion of certain questions. Imperfect human understanding, Thomas points out, results in the need to have many names for the simplest and most unified being.

> . . . . We see the necessity of giving to God many names. For, since we cannot know Him naturally except by arriving at Him from His effects, the names by which we signify His perfection must be diverse, just as the perfections belonging to things are found to be diverse. Were we able to understand the divine essence itself as it is and give to it the name that belongs to it, we would express it by only one name. This is promised to those who will see God through His essence: 'In that day there shall be one Lord, and His name shall be one.' (Zach. 14:9)[24]

The human mind naturally abstracts forms from individual material things, but God's essence exceeds its capacity. The mind attempts to understand this essence (what corresponds to the form in material individuals - in speaking of God, 'form' would be improper, since there is no matter present) in its natural, discursive manner, part-by-part. God's perfect simplicity and unity escape it.

Thomas's treatment of analogy indicates the boundaries for application of the notion of form. The form-matter dichotomy breaks down in discussion of immaterial beings. It will be seen later that the Modist application and re-application of form to different levels of being implicitly rests on the principle that the same term can refer to different levels of being without equivocation. In their grammar, 'form' refers to the unifying factor of the word

and the proposition as well as referring to that which gives definite characteristics to primary matter in a material being.

The Modists build from these basic positions of scholastic philosophy. First, material beings are composites of matter and form. Second, the presence of form within the material thing makes knowledge of the nature of that thing possible. Third, the concept, or mental word, expresses the form of the material thing. Knowledge gives a new intelligible being to the form. Fourth, while the concept naturally represents its object, the material sign (spoken or written) does so conventionally. The Modists give a somewhat Platonic interpretation to Aristotelianism, and in doing so they part company with William of Ockham. First, they contend that logic and grammar are true sciences. Second, they make extensive use of analogy within their grammatical science. (However, it will be argued later that they have a poor grasp of this concept.)

Some contemporaries of the Modists took different approaches to the study of language. The terminist logicians study carefully another aspect of meaning; they refer to this aspect as "supposition". Like the Modists, they recognize the importance of the "contextual approach to grammatical matters."[25] The following definitions appear in William of Sherwood's Introduction to Logic, which is a representative work of terminist logic:

> Signification, then, is a presentation of the form of something to the understanding. Supposition, however,

> is an ordering of the understanding of something under something else.[26]

The signification of the term relates to the form; the term signifies by presenting a form to the intellect. A term takes the place of composites of matter and form (real things) in discourse; this is supposition. A term signifies prior to its use in a proposition, but only within a proposition does it stand for a particular extra-mental thing. Supposition, then, can only be determined for a given context. Thomas Aquinas, Duns Scotus, and William of Ockham accept the treatment of supposition found in William of Sherwood and Peter of Spain.

The terminist logicians, like the modists, rely heavily on Priscian's grammar.[27] In their works, they leave aside questions regarding the universals so that their logic will be acceptable to realists, conceptualists, and nominalists.[28] Like the Modist grammarians, they sometimes apply metaphysical terms to the interpretation of language. Moody remarks:

> In the fourteenth century it became customary to call the categorematic terms the <u>matter</u> of propositions, and the syncategorematic signs (as well as the order and arrangement of the constituents of the sentence) the <u>form</u> of the propositions.[29]

Since the terminists deal with propositions in ordinary language, their analysis of the proposition into its terms resembles the grammatical analysis of the complete statement into the words which make it up. Grammatical features (for example, the tense of the verb) influence the supposition of a term. Terminist logicians made use of many of the

same terms and concepts as the Modists, but reached a slightly different framework for the study of language. They concentrate on supposition rather than signification, and they apply metaphysical terms differently to terms and propositions. Like the Modists, though, they prefer to leave controversial metaphysical issues to the side and concentrate on methodical examination of particular questions of language and logic which can be resolved to the satisfaction of all parties.

William of Ockham takes up several of the more difficult philosophical questions neglected by the Modists and the terminists. He develops the theory of supposition, then employs this doctrine in his treatment of truth. Scholars differ over the implications of Ockham's theory of supposition. Moody treats it as syntactical. "Supposition is a syntactical relation of term to term, and not a semantical relation of the term to an extra-linguistic 'object' or 'designatum'."[30] Moody suggests that supposition concerns the relations between terms and not those between linguistic and non-linguistic "things". However, others disagree. Boehner remarks

> . . . . Ockham himself seems to have abstained from a definition of supposition. He merely remarks that supposition is a property of terms, but only when they are actually used in propositions, and that supposition is quasi pro alio positio.[31]

And his later treatment of Ockham's theory of truth suggests that supposition involves the representation by the term of an extra-mental designatum.

> When does a proposition signify or not signify a state of affairs as it is or as it it not? The answer constantly given by Ockham is: If subject and predicate supposit for the same or do not supposit for the same.[32]

The second view (Boehner's) is more plausible. A theory of supposition will be of little help to Ockham's theory of truth unless it has to do with a relation between linguistic phenomena and real things, since truth involves such a relation. For Ockham, the signification of the proposition depends on the supposition of the subject and the predicate. Ockham treats subject and predicate as if they were both names.[33] Both the subject and the predicate stand in place of things; if they stand in place of the same existing substance, they represent an existing state of affairs. Ockham is not saying that there is no grammatical distinction between subject and predicate, but rather that in a true sentence, the subject and predicate stand in place of the same real thing.

Ockham, then, indicates how the understanding of supposition can aid the development of a theory of truth. Though he differs from the Modists on several basic issues, the work of Ockham and the terminists in some ways complements that of the Modist grammarians. Ockham's concern for supposition leads him to make some important observations regarding signification.

> Categorematic terms have a definite and fixed signification, as for instance the word 'man' . . . Syncategorematic terms, on the other hand, as 'every', 'none', 'some', 'whole', 'besides', 'only', 'in so far as', and the like, do not have a fixed and definite meaning, nor do they signify things distinct from the things signified by the categorematic terms.[34]

The syncategorematic terms do not supposit for things, but they affect the supposition of other terms. Though Ockham might accept in principle the distinction mentioned above in William of Sherwood's logic, he naturally tends to interpret signification in terms of supposition. The syncategorematic term "makes it signify something or makes it stand for something or things in a definite manner . . ."

> Rather, just as, in the system of numbers, zero standing alone does not signify anything, but when added to another number gives it a new signification; so likewise a syncategorematic term does not signify anything, properly speaking; but when added to another term, it makes it signify something or makes it stand for some thing or things in a definite manner, or has some other function with regard to a cateroremátic term.[35]

Ockham's distinction between the signification of categorematic and syncategorematic terms resembles the Modist distinction between signification and con-signification.

Terminist logic analyses supposition in such a way that their treatment could be compatible with the Modist examination of signification. The Modists seek to explain what enables some words to stand for things and what enables other words to affect the extension of this reference. Like the terminists, the Modists work from Priscian's grammar and Aristotle's logic. However, the terminists successfully avoid raising metaphysical questions. The Modists, on the other hand, build their theory on an extreme realism which many scholastic writers rejected. Ockham's position differs more sharply from that of the Modists. He seeks to explain all signification in terms of

supposition. Since he rejects the notion of an intelligible species, he rejects as well the notion that the same form found in the existing individual can be expressed verbally.

Ockham keeps, though, the principle that the true proposition has a certain unity. The scientific judgment involves the recognition of a universal, and in a true statement of that judgment, both the subject and the predicate will supposit for the same thing. The verbal statement, though complex, achieves a certain unity in its reference to one thing. The Modists recognize a unity in the verbal statement, as we will see. What gives unity to the verbal statement is the very principle of intelligibility, that is, form. Ockham's successors depart radically from this view, some going so far as to say that the object of knowledge is not a real thing, but rather a"signifiable complex"; in other words, men know verbal constructs and not real things. The views of Ockham's successors, as those of the Renaissance men of letters, will prove to be of secondary interest for my study. However, Aquinas and Ockham worked from the same Aristotelian principles as the Modists, so slight differences in their treatment of language help to illuminate Modist theory. John Poinsot, though he wrote later, defends some of the Modist positions, amending them in the light of Ockham's critique.

This first chapter has briefly identified the Modists, then considered earlier writings--those of Aristotle

and Roger Bacon--which greatly influenced them. These grammarians begin from scholastic views regarding the matter-form dichtomy and a number of related points. They connect mental and vocal language in a way that separates them from Ockham and Aquinas, and their notion that grammar can be a true science seems to cover neo-Platonism with Aristotelian garb. Modist views regarding language complement those of the better-known terminist logicians, although they are incompatible with Ockham's own treatment of supposition. In the next chapter, I will consider the use the Modists make of these fundamental principles.

NOTES

Chapter I

[1]Grabmann, quoted in Bursill-Hall, Speculative Grammars, p. 32 note.

[2]Quoted in Bursill-Hall, Speculative Grammars, p. 224.

[3]Biographical information taken from Dictionnaire de Theologie Catholique, ed. Vacant.

[4]Bursill-Hall, Speculative Grammars, p. 32.

[5]William Barrett's unpublished master's thesis is quoted extensively in Chapter V. Martin Heidegger wrote his thesis on the work of Thomas of Erfurt, at that time considered the work of Duns Scotus.

[6]Aristotle, De Interpretations 16a 4ff.

[7]For this and the succeeding quotations, cf. Gilson, History, p. 314. Roger Bacon (1214-1294) was an eclectic philosopher and theologian, sharply critical of many of the other scholastics. Robert Kilwardby (d. 1279) was a Dominican theologian who eventually became Archbishop of Canterbury.

[8]Ibid.

[9]Ibid.

[10]Cf. Paetow, Arts Course at the Medieval Universities.

[11]Summa Theologiae I, q. 78 art. 1, ad 2 .

[12]S. Th. III, q. 10 art. 3.

[13]S. Th. I, q. 78, art. 3.

[14]Aquinas, Quodlibetum VIII, q. 2 art. 2.

[15]Aquinas, De Potentia, q. 8, art. 1.

[16]Ockham, Summa totius logicae I, ch. 1.

[17]Ibid.

[18]Ockham, S.t.l. I, ch. iv.

[19]Ockham, S.t.l. I, ch. xiii.

[20]Moody, Logic of William of Ockham.

[21]Aquinas, S.C.G. I, ch. 34.

[22]Ibid.

[23]Ibid.

[24]Aquinas, S.C.G. I, ch. 31.

[25]L. M. de Rijk, Logica Modernorum, Vol. II, part 1, p. 115.

[26]Sherwood, translated by N. Kretzmann, p. 105.

[27]Moody, Truth and Consequence in Medieval Logic, p. 5. The terminist logicians--Peter of Spain and William of Sherwood were two of the most important figures--attempted to develop a logic which could be used without making an implicit commitment to realism or nominalism.

[28]Ibid., p. 6.

[29]Ibid., pp. 16-17.

[30]Ibid., p. 22.

[31]Boehner, Collected Articles on Ockham, p. 234.

[32]Ibid., p. 261.

[33]cf. Geach, Reference and Generality, p. 35 note.

[34]Ockham, S.t.l., I, ch. xiii.

[35]Ibid.

CHAPTER II

OUTLINE OF MODIST GRAMMAR

The last chapter sketched what the Modists borrowed from the scholastic philosophers. They adopt without change many basic positions, among them the matter-form composition of all material beings, the dependence of knowledge on the presence of form in real things, and the link between knowledge and expression. However, their conviction that they could develop a grammatical science and their neglect of the distinction between natural and conventional signs indicates their sympathy for neo-Platonism.

My interest is principally in the element of Modist grammar relevant to philosophy of language. The present chapter quotes from important speculative grammars only where their treatment of a particular grammatical question suggests an underlying philosophic position. The Modists rely heavily on the notion of form, applying it to the word and to the completed statement as Aristotle had applied it to substances. Other metaphysical terms--'potency,' 'act,' 'essence,' '_esse_,'--appear occasionally. The Modiste analyze language in terms of the four causes Aristotle had identified-- material, formal, final, and efficient. It is

the notion of form, though, that aids most in understanding the relations between the mode of being, the mode of understanding, and the mode of signifying.

The Modists are attempting something unlike Priscian's straightforward Latin grammar. They define their discipline as the study of the sign of things, indicating that they hope to derive principles of general application. Grammar begins, they point out, not with sound, but with meaningful sound. Grammar differs clearly from logic, though both are sciences having to do with words. In discussing the various parts of speech, the Modists relate them closely to the metaphysical structure of the world. They give far less importance to the indeclinable parts, since they relate more distantly to substance. Treatment of syntax is relatively brief; it is important, though, since it indicates how the entire statement can be a unity. The presence of form in individual words is insufficient to explain this, since the statement comprises words related to some extent to substance. The Modists rest the unity of this composition chiefly on the verb; this part of speech, they say, gives form to the sentence. Working from a causal analysis of language, the Modists distinguish various degrees of completion (or perfection) in the completed statement.

After examining actual Modist treatment of these questions, this chapter will consider some related points

found in contemporaries of the Modists. I will then consider briefly the success of these grammarians in reaching the objectives outlined above.

Part 1: The Proemium

This introductory section of the Modist grammars offers various general considerations regarding language. Boethius of Dacia, Siger of Courtrai, and Thomas of Erfurt agree in basic terminology and in fundamental definitions, so quotation from the three works is selective.[1]

Siger gives slightly more attention to the analysis of the modes than do the other two writers. The introductory section of his work includes the following definitions:

> modus essendi: the property of things or of beings
> modus intelligendi activus: the very mode of being as apprehended by the intellect; the mode of understanding as relative to the mode of being.[2]

He distinguishes between the modi signandi, the ways a word stands for a thing, and the modi significandi, the ways a word indicates the manner of being of the thing. A part of speech enters into relations with other parts of speech as part of a composite by means of its modi significandi. The modi signandi enable a word to stand in place of a thing. All existing realities have the first property mentioned, the modus essendi. Beings or things which are known acquire the second mode. Siger here refers to the active mode of understanding; he is not referring to the capacity of an existing thing or being to be understood, but rather to the

new mode it acquires when some mind actually apprehends it. All beings are knowable, while some remain unknown in fact. The mode of acting as a sign (modus signandi) belongs to the word as such, without considering its use in a particular statement. The mode of signifying (modus significandi)belongs to the word as used in a particular statement. For instance, 'man' has the capacity to stand for real things, but it acquires the modes of signifying as it is used in a statement--'he fired the gun repeatedly at each of three tall men.' An existing man, whether or not someone apprehended his existence, would have the mode of being (modus essendi). If this mode of being were apprehended by an intellect, he would have the active mode of understanding.

Thomas of Erfurt's treatment resembles Siger's, but he offers several interesting further observations. The mode of being is a property of the thing absolutely, he says, while the mode of understanding is the same property insofar as it is apprehended by the intellect. The passive mode of signifying is the same property of the thing insofar as it is signified by the word. "The mode of being, the passive mode of understanding, and the passive mode of signifying are materially the same, but they differ formally."[3] Thomas contends that the active mode of signifying, which is a property of the word, differs from the passive mode of signifying (perhaps better said, the mode of being signified), which is a property of the thing. "The active

mode of signifying gives the property of the word, which is meaning (ratio)."[4]

Thomas, then, identifies a single property which can appear under three different modes. The existing thing has a capacity to be understood and a further capacity to be signified, both of which depend on the mode of being present in every thing. Thomas' use of 'materially' and 'formally' suggests that a single property underlies different appearances. The word clearly differs from the thing, but it may express the mode of being existing in the thing absolutely. An active mode of understanding belongs to the concept and a passive mode to the thing understood; likewise, the word itself has an active mode of signifying, while that which it signifies has a corresponding passive mode.

The notion of form appears in various contexts. At times, the use of 'modus' suggests that it differs only slightly in meaning from 'forma'. Thomas of Erfurt, commenting on the meanings of names, makes an observation suggesting this similarity of meaning.

> The common or appellative name signifies through a mode communicable to many referents, such as 'city,' 'river,' etc. The proper name signifies the thing through a mode not divisible among several referents, for example, 'now,' 'Rome,' 'Bologna.'[5]

Each of the words mentioned here represents a particular intelligible aspect of a thing or of a group of things and therefore could be called either a form or a mode. In a different context, form explains the intelligibility of the statement. "Every composite is understood through the form,

and the matter is understood by analogy through the form."[6] A similar mark defines the form of such a composite. "The union of the constructible elements is the form of the construction."[7] Siger affirms that the verb gives form to the expression. Elsewhere, he compares the pronoun to prime matter, since its reference is indeterminate.[8]

In the first instance, Thomas uses 'mode' to refer alternatively to a communicable or incommunicable aspect of a sign. The common name can signify any of several things; these things resemble one another in one aspect, which Thomas here refers to as a mode. A thing may have identifiable characteristics which are not divisible, and Thomas also uses 'mode' to refer to such an aspect. This use resembles the customary use of 'form' in many of the scholastic philosophers.

In principle, the Modists distinguish clearly between grammar and logic. Siger of Courtrai notes three differences.[9] The purpose of logic is to discern the true from the false; grammar, on the other hand, seeks a fitting way to express concepts. Second, logic concerns beings of reason (for example, the syllogism), while grammar considers how to express concepts effectively and appropriately. Third, logic concerns second intentions (for example, genus and species), while grammar concerns the modes or manners of signifying. Siger points out, though, that grammar is one of the sciences of discourse (<u>scientia</u>

sermocinalis).[10] Thomas affirms, " . . . Grammar concerns the signs of things."[11] He then goes on to offer some observations and distinctions regarding signs.

> To signify is to represent something to the intellect; therefore, what is signified is conceived by the intellect.
>
> According to Augustine in De Doctrina Christiana, a sign is something which brings into cognition something beyond its own sensible qualities.[12]

Grammar, then, concerns things which have this ability to bring to the mind something beyond their own sensible appearance. 'Apple' may bring to mind an image or a definition; at any rate, it conveys something beyond its physical appearance or its sound when pronounced. Thomas goes on to distinguish the natural from the conventional sign.

> With respect to the relation which the sign has, the natural sign, which signifies naturally and has a real relation to what is signified, is distinct from the conventional sign (signum ad placitum), which does not signify naturally and which has a relation of reason to what is signified, such as words . . . [13]

Smoke naturally represents fire; a bust of Socrates naturally represents Socrates. On the other hand, 'smoke' has only a relation of reason to what it represents. Thomas further distinguishes between those signs which are always present together with what they signify from those which may appear apart from what they stand for.

> Another division is between the sign which always has the signified thing together with it, inasmuch as it is a part of the thing signified; and such a sign is true and effective, as an eclipse is the effective sign of the interposition of the earth between the Sun and the Moon, and such is also the case with similar natural signs.--The other type of sign does not have the signified thing with it, and such a sign is the proposition, which

> we proffer because it is not in our power that such a sign as the proposition have with it the thing signified; and such a sign is not always true, but sometimes false.[14]

The eclipse leads infallibly to knowledge of the event which caused it, but the proposition leads only to a fallible knowledge of what it represents. The active modes of signifying properly belong to grammar, but the passive modes only belong to grammar accidentally (per accidens).[15] In other words, grammar considers the modes of signifying of words, principally; it is less concerned with the capacity of things to be represented or signified.

The speculative grammars distinguish between vox, dictio, and pars orationis. Siger makes the distinction briefly.

> 'Vox' refers to the movement of air to the vocal passage from other parts with the purpose of signifying. 'Dictio' is what it is because it can act as a sign. "Pars' has also the mode of signifying.[16]

Grammar, then, distinguishes between the mere physical sound, the sound which can act as a sign, and the potential sign which has also the mode of signifying. The word as a physical disturbance properly belongs to natural science, while grammar considers only meaningful sound. Thomas of Erfurt distinguishes similarly:

> Something is called a sign because of its ability to represent something else (per rationem signandi); but 'dictio' refers formally to a sound by reason of its having this ability to represent, so the word (dictio) is a meaningful sound (vox). But the part of speech (pars orationis) formally is such by reason of the active mode of signifying added to the word, so the part of speech is a word which has an active mode of signifying (modum significandi activum).[17]

Thomas thus first distinguishes the meaningful sound from other signs. He then notes that a logician analyses the proposition into its component terms.

> The word 'term' is used because it concludes (rationem terminandi) the resolution of the syllogism into propositions, and of the proposition into subject and predicate, which are called terms in logic.[18]

Thomas of Erfurt then distinguishes again between those things which signify naturally and those which do so conventionally.

> From the above, it is clear that things and concepts (passiones) are signs naturally, because they have the same meaning for everyone; and what is natural is the same for everyone. Letters and sounds are not natural signs because they are not the same for all . . . [19]

Natural signs signify or represent the same thing (or aspect of a thing) for any person anywhere. The sounds and letters used by men to signify differ from place to place. Thomas elaborates further on the difference.

> If this were true (that words were natural signs), then the meaningful sound could cause the hearer to know by the very fact of its having signification; and then the Latin word would cause the Greek hearer to know, which is false. From this it can be seen that no quality is impressed on the word itself, nor does it contain the concept within itself.
>
> Hence it follows that the meaningful sound is only a conventional sign.[20]

This initial section of the speculative grammars thus explains the three modes, distinguishes grammar from associated studies, and differentiates the part of speech from the sound and from the word as such. Thomas also introduces the idea that the form of a statement is its principle of unity and intelligibility.

Part 2: The Various Parts of Speech

The speculative grammars attend more to those parts of speech--nomen, pronomen, verbum, participium--more directly related to substance. The selections taken from Siger and Thomas for the most part concern these classes of words.

Siger of Courtrai remarks concerning the nomen (this term refers either to a noun, nomen substantivum, or an adjective, nomen adjectivum) that "the essental general mode of signifying of the nomen is the mode of signifying substance, permanent habit, or being."[21] The nomen adjectivum takes its case, gender, and number from the nomen substantivum.

Thomas elaborates somewhat further. He first explains what he means in speaking of the essential mode of signifying.

> The essential mode of signifying is that through which the part of speech simply has its being, either according to genus or according to species. The accidental mode of signifying is what comes to the part of speech after its complete being, so it does not give being to the part of speech either with respect to genus or species.[22]

Taking the case mentioned above, the essential mode of signifying would cause a word to be a nomen or would add the further distinction making it a nomen substantivum or a nomen adjectivum. So the essential mode of signifying would make a word a noun or adjective. Further differentiation would be an accidental mode of signifying. In Latin, this would mean, for example, number, case, and gender. In English (or Latin), this further differentiation results from context. For example, 'man' has its essential mode of signifying, but it acquires different accidental modes of

signifying in the phrases 'two men', 'in man', 'to a man.'

Thomas then discusses the essential and accidental modes of signifying of the nomen.

> The most general essential mode of signifying of the nomen (noun or adjective) is the mode of signifying in the manner of a being (per modum entis) and of a determinate apprehension.
>
> The mode of a being is the mode of a stable and permanent thing, inhering in a thing, from which that thing has being (habet esse). The mode esse (literally, "to be") is the mode of flux and succession, also inhering in a thing, from which that thing has becoming (fieri).[23]

Thomas seems to contrast being and becoming in this passage. The nomen has the grammatical role of signifying that which is more stable and permanent. This stable aspect may be something peculiar to a single place or time, or it may be a feature of several things.

> Therefore the common or appellative name (nomen . . . commune vel appellativum) signifies through a mode communicable to several individuals, for example, 'city', 'river', and so forth.
>
> The proper noun signifies a thing through a mode that cannot be divided among several individuals; it may already have the individuating properties of being in a determinate place of time; examples of proper nouns would be 'here', 'now', 'Rome', 'Bologna'.[24]

Thomas is saying that a certain mode attributes to a thing its membership in a class or type of things, while another mode attributes to it individuating characteristics.

Thomas goes on to explain the derivation of these modes of signifying from properties of a real thing.

> The mode of signifying in the manner of something standing on its own (modum per se stantis) is taken from the property of the thing which is the property of a determinate essence.

> Therefore the substantive (nomen substantivum) signifies in the manner of something determinate according to essence, such as 'whiteness', 'stone', etc.
>
> The mode of signifying in the manner of something leaning on another (per modum adiacentis) is taken from the property of a thing, which is the property of adhering to another thing in the very act of being (adhaerentis secundum esse).[25]

The mode of being of the substantive and of the adjective are thus derived from the mode of being of something determinate according to essence and of something depending on another thing for being. The nomen adjectivum bears a relation to a substantive parallel to the relation between an accident and the substance in which it inheres. He later repeats: "Therefore the nomen adjectivum signifies according to the manner of having being in another, for example, 'white', 'rocky', etc."[26]

Siger next considers the pronoun (pronomen).[27] This can be imagined as similar to primary matter. Thomas of Erfurt similarly remarks:

> From this property of primary matter, which is of itself indeterminate, and at the same time determinable through a form, is taken the essential and most general mode of signifying of the pronoun.[28]

The pronoun, like the primary matter which underlies any substantial change, has no form of its own. It is indeterminate but determinable. Thomas therefore points out that the pronoun, simply because it is indeterminate, need not be considered a privation (blindness or nothing, for example, are privations and not real beings).

> It ought to be said that whatever is indeterminate and excludes form (and the determination of form) is a privation; nevertheless, that which is indeterminate but which neither includes nor excludes form (and the deter-

> mination of form) is not a privation. And thus there is a mode of signifying which belongs to the pronoun, which is a mode indeterminate in itself, but determinable.[29]

The pronoun is not a privation nor does it lack a mode of signifying, since it will signify some as yet indefinite thing. "The pronoun signifies something, though not some determinate thing, and thus it attains its end and is not useless."[30]

Of the elements of the complete statement, Siger affirms, it is the verb first of all which gives form to the whole.[31] He goes on to make a further distinction between the noun or adjective and the verb.

> To be is the proper act of a being; since the nomen signifies a thing through the mode of substance or of a being, and the verb through the mode of becoming or of 'to be', the verb ought to follow the noun immediately . . .
>
> Every verb signifies the thing through the mode of becoming, and becoming itself is dependent, therefore every verb signifies its correspondent thing in a dependent mode of signification; consequently, no verb, as such, can support another verb, that is, every verb requires something as a suppositum (subject) which will support this dependence.[32]

Siger thus points out that the verb expresses either the very being of the subject or its activity and therefore should follow closely upon the subject. This dependence on the subject means that one verb cannot support another to form a complete sentence. He argues this not from the viewpoint of grammar itself. He sees this as a logical consequence of the dependence of becoming on a stable subject - "every verb signifies the thing through the mode of becoming, and becoming itself is dependent."

Thomas couches similar considerations in his own terms. "The most general essential mode of signifying of the verb is the mode of signifying a thing in the manner of 'to be' and of distance from substance."[33] The verb is distinguished from the substantive because it signifies according to the act of being and does not signify in a way that would be appropriate to represent a substance. One role of the verb Thomas calls "composition."

> This verb, 'is' (est), signifies a certain composition and cannot be understood without the extremes . . .
> Composition therefore is the accidental mode of signifying of the verb, by means of which the verb con-signifies inhering according to being, and by means of which the verb (distant from the subject) is first and principally inclined toward the subject.[34]

Apart from its own intrinsic meaning, the verb helps join the other elements of the sentence to the subject. In the case of one verb, this role of composition becomes the chief role.

In discussing the verb, Thomas makes reference to Peter Helias' definition of 'mode':

> Peter Helias, defining 'mode' said: The mode is the various inclinations of the soul (inclinatio animi) indicating its various thoughts (varios eius affectus demonstrans).[35]

This clarifies somewhat Thomas' repeated use of the term; the mode of signifying is a being in the soul.

In discussing the accidental modes of signifying of the verb, Thomas says the following concerning time:

> Tense, therefore, is an accident of the verb; it is the accidental mode of signifying by which the verb, in addition to the thing, con-signifies the mode of time.[36]

He goes on to make a point regarding the limitations placed on the use of the verb by this con-signification of time.

> The being and the understanding of God do not fall under any difference of time; therefore the verb does not always require the mode and difference of time.[37]

Thomas explains the verb in such a way that the mode of time is con-signified rather than signified; tensed verbs in discourse about God need not imply limitations on his being or understanding.

Siger continues his examination of the parts of speech, remarking that the participle can be imagined as a mixture of act and potency.[38] He and Thomas agree that the verb and the participle have the same matter (that is, the mode of becoming), but a different form. The verb is separate or distinct from the subject, while the participle is not. Priscian had given a similar definition of the participle, though without offering the comparison to act and potency.

These remarks of the Modists regarding the parts of speech give evidence of the application of metaphysics to the resolution of grammatical issues. They reveal a heavy reliance on the distinction between being and becoming, between substance and act of being (<u>esse</u>) and between matter and form.

Part 3: <u>Diasynthetica</u>

Siger's work lacks any part corresponding exactly to the <u>diasynthetica</u> in Thomas of Erfurt's speculative grammar.

He may have written such a section, later lost, or Siger may simply have left the work incomplete, intending to write another section; this has been disputed.[39] He does note that in the science of grammar, the mind orders words to express appropriately the mind's concepts.[40] He also points out, "every construction is grammatically correct if the modes of signifying are proportioned to one another."[41] His use of '*constructio*' and '*congruo*' is similar to Thomas'.

In his treatment of syntax, Thomas of Erfurt analyses grammatical construction in terms of formal and final principles.

> The formal principle of the construction is the union of its elements; for the form of the thing is that through which it has its being (*esse*); but a construction has its being through the union of its elements, so the union of the elements is the form of the construction.[42]

The form--the intelligible principle of any real thing--can receive an act of being. Form and matter compose a single material substance. Thomas here indicates that the complete statement can be understood in an analogous way. Thomas also notes briefly that the final principle is the expression of the composite mental concept.[43]

Given that the composite expression has this purpose, Thomas can evaluate the success of a given statement in fulfilling its purpose. If there is an appropriate combination of parts, then the construction attains "congruity."

> It ought to be noted first that just as construction requires absolutely the union of the elements, congruity

> (congruitas) requires not any union whatever of the elements, but only a suitable combination (unionem . . . . debitam).[44]

Thomas goes on to define this term. "Congruity is nothing other than the suitable union of parts of speech, forming some type of construction through conformity of the modes of signifying."[45]

A particular construction in which the modes of signifying of the various elements are coordinated becomes a recognizable and understandable type of construction.

Thomas points out a further purpose for the construction. "The remote end of construction is to generate perfect understanding in the mind of the hearer by means of the suitable union of elements."[46] Once the suitable combination of elements is reached, it is possible to see whether the construction reaches this further goal. Later, Thomas distinguishes three levels of perfection or completion.

> In one way, a thing is perfect when it lacks nothing that is required in its species.--In a second way, something is perfect when it reaches the appropriate end to which it is ordered. In a third way, something is perfect when it can generate something similar to itself (of the same species).[47]

Naturally, Thomas goes on to apply this order of completeness to the construction.

> A construction therefore having subject (suppositum) and predicate (appositum) and among its modes of signifying having nothing dependent and not terminated nor anything keeping it from attaining its end is perfect in the first way, because nothing is lacking which is required for its species.[48]

The basic required elements in the composition are thus

subject and predicate. If the modes of signifying conform to one another, a construction with these elements has all that is necessary.

> --It is also perfect in the second respect, because it reaches the suitable end to which it is ordered (which is to express the composite concept, as was said above).[49]

Since the end of the construction is to express a composite concept, the construction must be composite. It must contain two different parts of speech. Two subjects or two phrases used as predicates would not attain this end. "--It is perfect also in the third way, because it can make something similar to itself, that is, perfect understanding in the mind of the hearer." The construction can attain this end because it was noted that it had the suitable combination of parts. The modes of signifying within the composition are coordinated to one another, and therefore it can be understood.

After this examination of the various levels of perfection, Thomas summarizes the view that he has expressed.

> Perfection, then, is nothing other than the third and last passion (passio) of speech (sermonis), from the suitable union of the elements of the construction, when effectively expressing the concept of the mind (composite by reason of distance), and generating a perfect sentence in the mind of the hearer.[51]

Perfection, then, is an accidental quality of discourse resulting from certain characteristics of a given combination of words. The combination must be suitable - the modes of signifying must be coordinated with one another; it must effectively express the concept; and it must generate a likeness of itself in the hearer's mind. Thomas, in

summarizing, points out the relation between perfection and the two inferior stages of construction and congruity.

> And thus it is clear that perfection adds to congruity, and similarly congruity adds something to construction, and hence perfection presupposes congruity, and congruity construction.[52]

A union of parts is necessary before there can be appropriate union, and appropriateness (or grammaticality) is necessary in order to achieve effective communication.

Thomas' analysis thus develops much more fully the thought briefly expressed in Siger's observation. Consideration of the formal and final causes as they operate in language provide the means for determining the success of a given statement in attaining the end to which it is ordered.

Part 4: Brief Observations

Thomas of Erfurt, in the course of discussing privations and negations, remarks in passing, "Every part of speech is a being in the soul. Every privation and negation is something positive in the soul."[53] The parts of speech and their modes of signifying are thus beings in the soul; in scholastic terminology, they would more likely be called beings of reason. Terminist logicians supported a number of positions which can be of help in understanding the Modist grammarians. For example, William of Sherwood argues in the following way:

> Since there are two sources (principia) of things, namely nature and the soul, there will be two kinds of things. Some are the things whose source is nature, and they are the concern of what is generally called natural science. The others, whose source is the soul, are of two sorts. For since the soul is created without virtues or knowledge, it performs certain operations by means of which it attains to the virtues, and these are the concern of ethics; it also performs other operations by means of which it attains to knowledge, and these are the concern of the sciences discourse (scientia sermocinalis).[54]

William thus agrees with the Modists in the affirmation that the soul is the source of the being of some things. His reference to a science of discourse at the end of the passage seems to lend support to the suggestion that there can be a scientific grammar. Elsewhere, William notes,

> (The science of discourse) has three parts: grammar, which teaches one how to speak correctly; rhetoric, which teaches one how to speak elegantly; and logic, which teaches one how to speak truly.[55]

The above simply suggests that the Modists developed their grammar in a fashion similar to the terminist development of logic. It is clear that in the three parts of their speculative grammars, the Modists relied heavily on metaphysical terminology. First, 'mode' itself appears frequently in the writings of scholastic philosophers. Second, in speaking of modes of being, understanding, and signifying, the Modists add another level to the close relation affirmed by medieval realists between being and understanding. The key to the very elaborate structure of Modist grammar is the Aristotelian notion of form, given a neo-Platonic interpretation. Third, the Modists build

from the scholastic distinction between natural and conventional signs. Their discussion of vox, dictio, and pars orantis suggests that the mind gives to the sound additional modes--the modi signandi and the modi significandi--thus enabling the sound to represent something. Fourth, the Modists look for formal and final causes of the verbal construction; within this analysis, they distinguish various levels of success which a particular construction may attain.

Historically, the effort has considerable interest. These speculative grammars represent a distinct effort, quite separate from strictly theological or metaphysical considerations, to develop a scholastic philosophy of language. The works are so thoroughly imbued with scholastic Aristotelianism that Siger of Courtrai's work was at one time thought to be the work of the better-known Siger of Brabant who disputed with Aquinas, and Thomas of Erfurt's speculative grammar was included among the collected works of Duns Scotus until this century. In fact, they take some steps toward the development of a theory of signs. The criticism of Ockham and of the Renaissance grammarians obscured what was of lasting value in these theoretical grammars, but John Poinsot incorporated some of these points within his logic, defending the basic realism of the Modists against what he calls "nominalist" criticism. In the nineteenth and twentieth centuries, logicians and semanticists have revived the study of signs and signification, and many writers have praised the re-discovered works of the terminist

logicians. Parts of the Modist grammars--chiefly those which John Poinsot takes up and defends--also deserve new attention. However, both the Modists and John Poinsot build from a presupposition foreign to much contemporary writing. They agree that the study of signification depends on a sound understanding of knowledge, and that this study of knowledge depends on metaphysics.

This, then, is the general perspective--the Modists develop a theory of language which rests on metaphysics. I would like to give some attention to each of the points mentioned above which indicate this reliance of the Modists on the concepts and terminology of scholastic metaphysics.

First, this view relies heavily on discussion of the various modes which can be derived from real things. The real being has a particular mode which makes it capable of being signified. I would like to refer here to a rather long passage from Thomas Aquinas; it is of interest because of its related use of 'mode' and because of its discussion of the relation between a real thing and human knowledge of that thing.

> A thing is called the object of the soul because of some relation that it has to the soul . . . Now a thing may have two kinds of relations to the soul: first, a thing may be in the soul according to the mode of the soul and not according to the thing's own mode; second, the soul may be brought into relation with the thing in its own existing being (esse). And thus a thing is an object of the soul in two ways: in one way, as it is naturally adapted to be in the soul, not according the thing's esse but according to the mode of the soul, which is spiritually--and this is the formal character of the knowable thing as knowable; in a second way, a thing may be the object of the soul as the soul

> is inclined and ordered to it, in accord with the mode of the thing as it exists in itself--and this is the formal notion of the thing as an object of appetition, as desirable.[56]

Aquinas here points out that a real thing has its own mode of being, but that it can exist in the soul in the mode of the soul (spiritually) when it is known. Aquinas thus sees the real thing having a second existence, under a different mode, in the soul. A scholastic interested in developing a theory of language might naturally think that a thing might attain existence with a third mode as signified. Note, too, that Thomas uses 'formal' somewhat as the Modists will use it. The real thing as known differs not at all from its existence prior to being known. The formality of a new mode of existence is all that distinguishes its existence in the mind from its real existence.

The scholastics regard form as the explanation of the intelligibility of real beings. In fact, the Modist suggestion that any verbal construction is understood through its form, which is the union of the constructible elements, derives from the generally held view that any composite is understood through its form. The passage above from Thomas Aquinas would thus be interpreted to mean that it is the form of the thing which enters into the soul; obviously, the real material being cannot enter the soul. Understanding is only metaphorically like digestion. But the form can exist under a new mode. So the extension of this theory to language could rely on this capacity of

form. In fact, as Thomas of Erfurt pointed out in a passage quoted earlier, the three modes are materially the same, but formally different. (Here, he is using 'formally' as Aquinas did in the passage quoted, simply using it to refer to whatever distinguishing characteristic). This can be interpreted to mean that the form, in addition to its existence together with matter in the real being and its existence in a different mode in the mind, exists in yet a third mode as signified.

Several minor points support this interpretation. Thomas of Erfurt pointed out in a selection quote above, "concepts are signs naturally." The concept--also referred to by many scholastics as the mental word--is the means by which the mind grasps the form of what is understood. The form existing in the mind naturally represents the real thing which is known. A sound can refer to the concept, though it cannot naturally represent the concept. The implication of speculative grammar is that the mode of representing (modus signandi) and the various modes of signifying enable the word, spoken or written, to represent the thing understood.

Other minor points suggesting the place of the matter and form analysis in these works appear in consideration of the mode of signifying of the noun, pronoun, and participle and in the analysis of the construction. The noun, Thomas suggests, signifies in the manner of a "determinate apprehension" or a "determinate essence." These

phrases suggest that the noun particularly signifies the form of a given substance. 'Apprehension' and 'essence' both suggest that the word communicates what the mind has grasped. In discussing the pronoun, Siger and Thomas both refer to it as comparable to primary matter - indeterminate, yet capable of determination. Thomas speaks of the participle as having the same matter as the verb but differing in form. Here once again 'form' refers simply to a distinguishing characteristic. In considering the formal principle of construction, Thomas first notes that "the form of the thing is that through which it has its being." He then goes on to say that the union of the constructible elements provides the form of the verbal construction.

The Modists interpret language within a philosophical or, more properly, a metaphysical context. They place words within a metaphysical category; words are beings of reason. They are instruments of the mind and have a relation of reason (rather than a natural relation) to what they represent. They derive many fundamental ideas from scholastic philosophy. Ockhamist criticism of their perspective is telling, because the Modists are philosophically uncritical. They approach language accepting that it is ordinarily effective in attaining its end. Their initial development of the notion of sign is of great interest, but they fail to consider that frequently, error results from having understood a word which signifies in the manner of a substance as in every case signifying a substance. Their

clear distinction between logic and grammar obscures from them the question whether an untrue statement also has a form. Finally, they move from the consideration of the sign as such and from the consideration of the word as a particular type of sign to examination of parts of speech in Latin. This excursion into questions concerning a particular language diverts the reader from the merit of their correct observations regarding signification.

This chapter does not seek to offer a thorough study of Modist grammar. I have not examined the particulars, for example, of Modist treatment of adverb or interjection or any of the parts of speech which they consider less important. I hope, though, that the selected material sufficiently indicates that the Modists had the core of what could have developed into a full philosophy of language. It is a philosophy of language which links signification closely to knowledge and to the metaphysical structure of extra-mental reality.

Ockham restricts the usefulness of form for the understanding of language. He insists that the universal (that is, the concept or word referring to many) is neither a substance nor an accident outside the soul. This formulation differs little from Aquinas' perspective. However, his principle encourages an effort to purge scientific discourse of terms which the mind might interpret as referring to entities but which actually refer only to intelligible aspects of things which could not really appear separately.

Modist grammar appears to treat words as entities - they have matter and form; they are substances supporting accidents. His perspective leads Ockham to deny that logic is truly a science. It deals with the instruments of the mind, not with real substances. There can be no science of such fictions (concepts and reasoning are ficta, things made by the mind). Much less can there be a scientific grammar.

John Poinsot renews the effort to incorporate an examination of signification within philosophy. He defends the proposition that logic is a true science. John discusses and tries to refute several Ockhamist objections regarding the status of the natural and conventional universal. His treatment again gives considerable importance to the notion of form.

Between Ockham and John Poinsot appear the skeptical (so-called) Ockhamists of the fourteenth century and the Renaissance grammarians. The first group lost the Aristotelian sense of Ockham's thought. He himself regarded the natural universal as giving unit to the scientific judgment. Attribution of properties to a nature (for instance, 'man can reason') expresses a judgment about a complex (that is, about a proposition), but through this complex, real things are known. The parts of the complex are individual words which have the capacity to signify many things. This differs in important respects from the Modist use of form; it is more careful and restricted. Nevertheless, it gives the judgment a principle of unity.

The Ockhamists regard a complex as the object of belief or knowledge. Brief references to their work in the next chapter will suggest their important departure from the views of their supposed mentor.[57]

The second group mentioned above--the Renaissance grammarians--regard the Modists, the terminists, Ockham, and the Ockhamists as narrow dialecticians. Of course, they develop the study of language along important lines, rediscovering the classics and promoting the use of Greek and of classical Latin. However, they failed to appreciate this incipient treatment of signification outlines above, just as they ignored medieval progress in other aspects of logic.

NOTES

Chapter II

[1]cf. Bursill-Hall, Speculative Grammars.

[2]Wallerand, ed. Les Philosophes Belges, Vol. VIII, p. 97.

[3]Duns Scotus, Grammatica Speculativa, p. 15 Hereafter, this work will be referred to simply as "Erfurt", since it was actually written by Thomas of Erfurt.

[4]Erfurt, p. 18.

[5]Erfurt, p. 31.

[6]Erfurt, p. 82.

[7]Erfurt, p. 145.

[8]Wallerand, p. 125.

[9]Wallerand, p. 130.

[10]Wallerand, p. 93.

[11]Erfurt, p. 21.

[12]Erfurt, p. 8 note

[13]Erfurt, p. 9 note.

[14]Erfurt, p. 9 note.

[15]Erfurt, p. 13.

[16]Wallerand, p. 144.

[17]Erfurt, p. 20.

[18]Ibid.

[19]Erfurt, p. 22 note.

[20]Ibid.

[21]Wallerand, p. 95.

[22]Erfurt, p. 24.

[23]Erfurt, p. 27.

[24]Erfurt, p. 31.

[25]Erfurt, p. 32.

[26]Erfurt, p. 33.

[27]Wallerand, p. 125.

[28]Erfurt, p. 72.

[29]Erfurt, p. 72.

[30]Erfurt, p. 82.

[31]Wallerand, pp. 140-141.

[32]Wallerand, p. 144.

[33]Erfurt, p. 84.

[34]Erfurt, p. 95.

[35]Erfurt, p. 98.

[36] Erfurt, p. 111.

[37] **Ibid.**

[38] Wallerand, p. 123.

[39] cf. Bursill Hall, Speculative Grammars, p. 32.

[40] Wallerand, p. 140.

[41] Wallerand, p. 154.

[42] Erfurt, pp. 145-146.

[43] Erfurt, p. 146.

[44] Erfurt, p. 174.

[45] Erfurt, p. 178.

[46] Erfurt, p. 180.

[47] Erfurt, p. 182.

[48] Erfurt, p. 182.

[49] Ibid.

[50] Ibid.

[51] Erfurt, p. 183.

[52] Ibid.

[53] Ibid., p. 73.

[54] William of Sherwood, Introduction to Logic, p. 21.

[55] Ibid., p. 23.

[56] Aquinas, De Veritate, XXII, 10.

[57] For example, in an extensive article, Ernest Moody contrasts Ockham with some of his successors (cf. Moody, "Ockham, Buridan, and Nicholas of Autrecourt").

CHAPTER III

PHILOSOPHICAL AND GRAMMATICAL ATTACKS ON THE MODISTS

Two kinds of objections generated attacks on the Modist doctrines. William of Ockham warned insistently of the danger of attributing properties actually belonging to the sign or to constructions of signs to the extra-mental thing known. Ockhamists discerned in the Modist grammar the tendency to attribute a certain real status to parts of speech and to constructions. Later, Renaissance writers suggested that grammar could dispense with attention to the modes. Streamlining the introductory disciplines of grammar and logic would permit attention to questions more relevant to the life of man. This chapter considers both kinds of objection, but the criticism of Ockham and the Ockhamists relates more closely to the notion of form as a unifying principle in the study of language.

The Modists built the beginnings of a philosophic treatment of language starting from the notion of form. Form appears in this treatment as the intelligible principle of the word and of the construction. The contrast between matter (as a common underlying principle) and form (as a

underlying principle) and form (as a distinguishing characteristic) aids often in the analysis of the modes and of the parts of speech. Thomas of Erfurt concludes his treatment of language with an inquiry into its formal principles. This entire treatment depends on the realistic position on the question of universals described in the introduction. Since Ockham took exception to this position, his views on language contradict those of the Modists on many points.

Part I: Philosophical Objections

Ockham

How does language relate to the mind, to the world, and to other forms of representation? This section of the present chapter considers two nearly contemporary alternatives to the Modist approach. Ockham understands language as a material system of representation and therefore potentially deceptive. There can be no universal thing, he points out. The Platonic form is just that - though it seems paradoxical, such a form is a universal individual. The spoke or written word can only be conventionally associated with the universal. The mind can know things, but the object of its knowledge is a proposition (complexum) not a form.

Ockham gave considerable attention to the question of the universal. In examining this question at some length in his Summa totius logicae, Ockham first distinguishes between the singular and the universal.

> In one sense the name 'singular' signifies whatever is one thing and not several. If it is so understood, then those who hold that a universal is a certain quality of the mind predicable of many things (but standing for these many things, not for itself) have to say that every universal is truly and really a singular. For just as every word, no matter how common it may be by convention, is truly and really singular and numerically one, since it is one thing and not many, so likewise the mental content that signifies several things outside is truly and really singular and numerically one, since it is one thing and not many things, though it signifies several things.[1]

The sign as sign is an individual. It is universal in its capacity to signify many. Ockham makes it clear that universality relates to predication. Substances are individual. A universal substance is a fiction.

Ockham repeats this point, quoting a relevant passage from Avicenna.

> . . . .Nothing is universal except by signification, by being a sign of several things. This is what Avicenna says in the fifth book of the Metaphysics: 'One form in the intellect has reference to a multitude, and in this sense it is a universal, since the universal is a content in the intellect which is equally related to anything you take.'[2]

This passage is of interest in part because Avicenna uses 'form' in the manner that is appropriate for the efforts of the Modists. The form is universal, and it is equally related to anything of which it can be predicated. Ockham again briefly quotes Avicenna:

> 'The form, though universal in reference to individuals, is nevertheless individual in reference to the particular mind in which it is impressed, for it is one of the forms in the intellect.' He wishes to say here that the universal is one particular content of the mind itself, of such a nature as to be predicated of several things . . . [3]

This form, then, is individual as the content of the mind, but universal in its capacity to signify many.

Ockham's distinction between the natural and conventional universal was noted earlier. Some signs are naturally predicable of many things, "as smoke naturally signifies fire, or a groan the pain of a sick man, or laughter an inner joy." Such a sign is the concept of the mind. On the other hand, an uttered word is universal, but it signifies many things according to convention.

Ockham insists again in a later passage that the universal cannot be a substance of any kind.

> . . . . It is clear that the universal is a mental content of such nature as to be predicated of many things . . . All agree that every universal is predicable of things. But only a mental content of conventional sign, not a substance, is of such nature as to be predicated.[4]

This differs little from what Ockham pointed out above. He goes on to note an obvious difference that is of importance in the discussion of objects of belief and knowledge.

> Consequently, only a mental content or a conventional sign is universal. However, at present I am not using 'universal' for a conventional sign, but for that which is naturally a universal. Moreover, it is clear that no substance is of such a nature as to be predicated; for if that were true, it would follow that a proposition would be composed of particular substances, and consequently that the subject could be in Rome and the predicate in England. That is absurd.[5]

The universal can appear in a judgment; the conventional universal can appear in a spoken or written sentence. Aristotle had pointed out that words stand proxy for the things about which men are speaking, and Ockham repeats the point here.

This becomes problematical when the later Ockhamists treat the proposition as that which is known, though Ockham himself contended that we know things outside the mind by way of the proposition.

Ockham treats the proposition as something mental or written; it does not correspond to what might be called a state of affairs in recent works on semantics. Again, he points out that such things are not substances.

> . . . .A proposition is either in the mind or in spoken or written words. Consequently, its parts are either in the mind or in speech or in writing. Such things, however, are not particular substances. Therefore, it is established that no proposition can be composed of universals; hence universals are in no way substances.[6]

Earlier writers had tried at times to indicate how real substances can in some sense enter into propositions. The Modist grammar offers the notion that words and propositions, like real substances, are composed of matter and form. Ockham rejects this approach, while continuing to maintain that the mind understands real things by means of this complex. The later Ockhamists, as will be seen below, focus on the complex itself as the object of knowledge or belief.

Scholars long thought that the Grammatica Speculativae came from the pen of Duns Scotus. His realism in treating the universal and the understood form provides both justification and vocabulary for the speculative grammars. Ockham's criticism of Scotus' view on the universals thus

undermines as well these grammatical efforts.

> Although it is clear to many that a universal is not a substance existing outside the mind in individuals and really distinct from them, still some are of that opinion that a universal does in some manner exist outside the mind in individuals, although not really but only formally distinct from them. Hence they say that in Socrates there is human nature, which is 'contracted to' Socrates by an individual difference which is not really but only formally distinct from this nature.[7]

Scotus, then, would not argue that the universal is itself an individual substance. He merely says that the form exists within individuals in such a way that the mind can separate the form from the individuating difference. The universal, then, is "formally distinct" from individuals. The separability of the form from individuating differences supports the possibility of intentional existence for the form. Without this intentional existence, the effort of the Modists to connect the word with what it signifies seems futile.

Ockham offers the following as part of his refutation:

> In creatures, no extra-mental distinction of any kind is possible except where distinct things exist. If, therefore, some kind of distinction exists between this nature and this difference, it is necessary that they be really distinct things.[8]

Ockham here denies that there can be a formal distinction without a real distinction. If there is a distinction within a creature, it cannot be "extra-mental"; it must, in this case, be a distinction of reason. There is a real difference only between separate individuals. Ockham further explains this point.

> . . . .I take this individual difference and the nature that it 'contracts' and ask 'Is the distinction greater or less than between two individuals?' It is not greater, since they do not differ really; whereas individuals do differ really. Nor is it less, for then the two things said to be distinct would fall under the same concept, just as two individuals fall under the same concept. Consequently, if the one is numerically one on its own account, the other will also be so on its own account.[9]

Ockham contends that it is impossible to maintain such a formal distinction without contending that the universal can be a distinct substance. This suggests that if the form is to appear under different modes in the extra-mental thing, in the mind, and in the sign, each of these will be a distinct substance.

Ockham briefly gives his own view of the universal.

> I maintain that a universal is not something real that exists in a subject (of inherence), either inside or outside the mind, but that it has being only as a thought-object in the mind. It is a kind of mental picture which as a thought-object has a being similar to that which the thing outside the mind has in real existence. What I mean is this: The intellect, seeing a thing outside the mind, forms in the mind a picture resembling it, in such a way that if the mind had the power to produce as it has the power to picture, it would produce by this act a real outside thing which would be only numerically distinct from the former real thing . . . A universal is not the result of generation, but of abstraction, which is only a kind of mental picturing.[10]

The universal is not a real thing, but rather an object of thought. However, the metaphysical basis for Ockham's defense of scientific knowing can be seen in this passage. The mind has an ability to picture things outside the mind, and these mental images are so like the extra-mental thing that if the mind had the power to produce them, they would

differ only numerically from the thing known. Ockham compares this abstraction with the mental picturing of an artist.

> The case would be similar, analogously speaking, to the activity of an artist. For just as the artist who sees a house or building outside the mind first pictures in the mind a similar house and later produces a similar house in reality which is only numerically distinct from the first, so in our case the picture in the mind that we get from seeing something outside would act as a pattern.[11]

The Modists might regard signification as exactly this kind of artistic activity. The mind fashions materials signs in such a way as to conform to the mental picture it has of external things. No individual word "differs only numerically" from the mental picture, since the spoken or written word is not an image of what it represents. But to argue that a complete statement has a proper form suggests that the complete statement does convey a mental picture. The Modists emphasize the unity of the proposition, while Ockham underlines that it is a complex of universals and (in the case of written or spoken propositions) other terms.

Ockham later enumerates some instruments and products of the mind.

> . . . Fictions have being in the mind, but they do not exist independently, because in that case they would be real things and so a chimera and a goat-stag and so on would be real things. So some things exist only as thought-objects.
>
> Likewise, propositions, syllogisms, and other similar objects of logic do not exist independently; therefore they exist only as thought-objects, so that their being consists in being known. Consequently, there are beings which exist only as thought-objects.

> Again, works of art do not seem to inhere in the mind of the craftsman as independent subjects any more than the creatures did in the divine mind before creation.[12]

One consequence of this, as Ockham points out elsewhere, is that logic is not a science. Its objects of study are not substances and therefore do not have independent existence. The universal in a truly scientific study refers to many extra-mental things, not to many things whose being consists exactly in their being known.

A later passage expresses clearly Ockham's position on a point that his supposed successors treat differently.

> . . . . Just as the spoken word 'Socrates' stands by convention for the thing it signifies, so that one who hears this utterance, 'Socrates is running,' does not conceive that this word, 'Socrates,' which he hears, is running, but rather that the thing signified by this word is running; so likewise one who knew or understood that something was affirmatively predicated of this cognition of a singular thing would not think that the cognition was such and such, but would conceive that the thing to which the cognition refers is such and such. Hence, just as the spoken word stands by convention for a thing, so the act of the intellect, by its very nature, and without any convention, stands for the thing to which it refers.[13]

The above passage indicates the relation of Ockham's treatment of the universal to questions of signification. The concept (or "thought-object") can naturally represent many, while the spoken or written word conventionally does so. Ockham also indicates here that real extra-mental things are known by means of the propositions we utter or write about them. Cognition does not terminate in the word as such but in the complex as representatives of a judgment.

Ockham's treatment of supposition also deals, at least tangentially, with questions of language. He begins with the following definition:

> 'Suppositio' means taking the position, as it were, of something else. Thus, if a term stands in a proposition instead of something, in such a way (a) that we use the term for the thing, and (b) that the term (or its nominative case, if it occurs in an oblique case) is true of the thing (or of a demonstrative pronoun which points to the thing), then we say that the term has suppositio for the thing.[14]

The definition suggests that words refer to things. Supposition concerns the way a term takes the place of a thing. In personal supposition, the term stands for that which it fundamentally signifies. Simple supposition means that a term supposites or stands for an intention of the mind, while in material supposition, a term stands for a spoken or written sign only. In the three sentences 'man is an animal,' 'man is a species,' and 'man is a noun,' 'man' has first personal, then simple, then material supposition.

Ockham emphasized above that the universal exists only as a thought-object; individual substances exist. In considering supposition, he also gives most importance to that supposition in which the term stands "for what it fundamentally signifies." This is the ordinary and natural use of a term. "In whatever proposition a term is placed, it may have personal suppositio, if it is not arbitrarily limited to another suppositio by those who use it."[15] Knowledge begins from perception of an individual thing, but even in the initial act of perception the rudimentary

universal is present. As Moody summarizes this point,

> . . . . We acquire from sense experience a starting point for inquiry, experiment, and the dialectical process which elicit (though they do not produce) the intellectual intuition of determinate essential nature . . . [16]

Aristotle and Averroes had contended that things or concepts are necessary, imperishable, and incorruptible. Ockham argues that it is rather a truth (a complex or proposition expressing a scientific judgment) which can be necessary.

The supposition of a term influences the truth of a statement.

> As the three sorts of <u>suppositio</u> apply to a spoken sign, so also they can be applied to a written sign. Hence, if the following four propositions are written, 'Man is an animal,' 'Man is a species,' 'Man is a monosyllabic word,' 'Man is a written word,' each one of these could be true, but each for a different object. For that which is an animal is by no means a species, nor a monosyllabic word, nor a written word. Likewise, that which is a species is not an animal nor a monosyllabic sign. And so with the others.[17]

In more complex propositions, what holds true of man in one supposition will not hold true of him in others. These principles are helpful in the interpretation of texts.

Ockham observes that it is important not to ignore the author's sense by interpreting the text too literally.

> One must carefully consider whether a term and a proposition are taken in virtue of expression, and whether they are taken according to the usage of those who are speaking and the authors' intention, because there is hardly any word which is not equivocally taken in some mode of equivocation in the various books of the Philosophers and the Saints and the Authors. Those, therefore, who are decided always to take a word univocally and in one mode, frequently err about the intention of the author and concerning the inquiry of truth, since almost all words are taken equivocally.[18]

The Modists had pointed out that the modes of signifying could vary according to context; the same noun might appear in different cases, and its meaning would thus be somewhat changed. However, the essential modes of signification would belong to the word as a word, without considering its context. Ockham interprets signification as more heavily dependent on context. For example, the Modists content that the mode of signifying of 'man' would always be in the manner of a being or of a permanent disposition, since it is a nomen. However, this substantive term could represent a man, or many men indifferently, or a concept, or a part of speech. The very effort to have a scientific grammar suggests that words can be understood somewhat as substances, i.e., that their meanings are fixed. Ockham might well include the Modists among "those . . . who are decided always to take a word univocally and in one mode."

Ockham's distinction between logic and the real sciences implies that grammar cannot be a real science.

> Logic is distinguished from the real sciences in the following manner. The real sciences are about mental contents, since they are about contents which stand for things; for even though they are mental contents, they still stand for things. Logic, on the other hand, is about mental contents that stand for mental contents . . . We deny it to be a real science because it is not about mental contents that stand for real things.[19]

The same criticism Ockham addresses here to logic applies a fortiori to grammar. However, in some looser sense logic is a science. Grammar and logic are kinds of knowledge which provide an introduction to the real sciences. Ockham some-

times speaks of logic as a science, even in contexts in which the logic he speaks of seems closely related to grammar.

> Another use of logic is the ease which it gives in perceiving the virtue of expression and the proper manner of speaking. For by this science one may easily know what is uttered by an author in virtue of expression and what is not uttered by virtue of expression but according to the usual manner of speaking or according to the intention of a teacher--what is said in a proper way and what is said metaphorically. This is highly necessary for all who study the texts of authors. For he who always takes the words of an author in their proper sense and in virtue of expression falls into error and inexplicable difficulties.[20]

Here, Ockham refers to logic as a science, though in fact he speaks about the proper interpretation of statements in ordinary language. The logician must know how to distinguish what is said properly from what is said metaphorically. 'Virtue of expression' seems to refer to what we would call the literal meaning of a passage.

Ockham considers several questions related to the work of the Modists. He agrees that words do signify real things outside the mind. He, like the Modists, accepts the truth of scientific judgments. Ockham gave considerable attention to semantic questions also treated in the speculative grammars. However, he displaces form from its central role in their theory of signification. First, from the perspective of his own metaphysics, he points out that only individuals exist; no existing being can be universal. Second, knowledge involves an individual person using a sign to express his knowledge, which begins from examination of individual substances. Third, in signification, the ordinary use of a

substantive term is to refer to individuals. A proposition is true when the subject and predicate stand for the same thing. The Modists attribute chiefly to words themselves a capacity for signification. Particular parts of speech have the necessary attributes to perform their grammatical function. Ockham emphasizes rather the role of convention in signification. The Modist attribution of modes of signification to a particular word suggest that its manner of reference is fixed; it is like a substance, being composed of matter and form. Ockham, though, points out that the substance-like qualities of the nomen do not prevent it from standing in place of a spoken word or a part of speech.

Some elements, though, suggest still the possibility of fuller development of a treatment of signification. First, the universal is like a mental picture. This differs considerably from the Modist use of 'form', since it does not suggest that people with the same concept (i.e., those who agree in accepting a particular definition) have the same mental picture. The mental picture exists in an individual mind. Nevertheless, this mental picture is a natural sign. Second, if the mind had the power to produce, says Ockham, it would produce a second real thing differing only numerically from its object of knowledge. Ockham tries to work out how the conventional sign can signify. The spoken or written proposition is what the mind can produce. The problem of signification concerns how and to what extent the proposition can produce something similar to what the

mind knows. John Poinsot takes up this problem, which the Renaissance grammarians set aside.

Ockhamist Skeptics

The later Ockhamists deny their mentor's main point - that scientific knowledge concerns substances. In Ockham's view, knowledge of the nature of a thing gives rise to the scientific judgment. In later works, some writers question the certainty of natural knowledge. Others contend that what is known is only the complex of words, not what is signified. In fact, some later writers often called Ockhamists play on verbal paradoxes to show the weakness of Aristotelian logic, though Ockham had wanted to defend Aristotelian logic from the influence of neo-Platonism. The subtleties of the later writers add little to Ockham's observations regarding knowledge and language. These departures undermine the unity of the proposition. The Modists considered the proposition to be a unity; it has a form of its own. Ockham's supposition theory argued that in the true proposition, the subject and predicate stand for the same thing. Again, this implies unity. The later writers understand the proposition only as a complex. This represents a definite break with the view of knowledge which provides the support for Modist treatment of signification.

The later medieval logicians applied the theory of supposition in a critique of the possibility of natural knowledge. In the present section of this chapter, I outline

only a doctrine prohibited at the University of Paris in 1340 concerning the literal interpretation of the works of famous authors and the dispute carried on in the work of Robert Holkot concerning the object of belief or knowledge. In the first point, the later writers clearly depart from one of the strictures regarding interpretation of texts mentioned above. Ockham's position on the second point is somewhat disputed.

In 1340, the University of Paris prohibited certain doctrines, some of which concern particular views of language. One concerns the danger of understanding and evaluating statements of philosophic authors according to their purely literal or grammatical sense, and without construing them in the sense intended by their author. A second admonition is the following:

> Further, that no one should assert, without a distinction or exposition, that Socrates and Plato, or God and a creature, are nothing; because those words sound very badly if taken at face value, and because such a proposition has one sense that is false, namely if the negation implicit in this word 'nothing' is understood to apply not only to being, in its singular sense, but also to beings taken plurally.[21]

The prohibited proposition seems to be a clever turn of Ockham's contention that only individuals exist. Any pair of things will not be any one thing. The pairs are not reducible to anything simpler. Socrates and Plato are men, but this only means that 'man' can be predicated of each. There is no substance or quality which Plato and Socrates share. Likewise, a creature has a relation of dependency

on God, but the two beings have nothing in common.

Condemned at the same time is the notion that no proposition is true if it is not true when construed with suppositio personalis.[22] Ockham had given the principal place within supposition theory to personal supposition, but had not denied that propositions using other kinds of supposition could be true.

Some writers disputed whether the object of judgment or belief is properly speaking the proposition (the complex) or what is signified by the propositinn. The fifth item prohibited is the following:

> . . . .No one shall say that there is no knowledge of things which are not signs, that is, which are not terms or statements; because in the sciences we use terms for things, which we cannot carry with us to the disputations. Hence, we have knowledge concerning things, even though it is by means of terms or statements.[23]

Ockham himself may or may not have held this view; some of his statements seem to indicate so. On the other hand, the passage quoted earlier concerning the difference between logic and the real sciences affirms that "the parts, i.e., the terms, of the propositions known by real science, stand for things . . ."[24] In one of his works, Holkot interprets Ockham as arguing that the things represented by a proposition are the objects of knowledge, and he disagrees with him.[25]

In another work, though, Holkot contends that Ockham held that the object of knowledge or belief is the complex, or proposition. In a certain sense, this is simply a reflection of Aristotle's thought. He denied that the

concept by itself could be true or false. Only the proposition which joins together two concepts which are joined in reality or which separates two concepts which do not exist together can be true or false. 'Man' as such is neither true nor false; the proposition 'A man runs' may be true or false. Since this complex may be true or false, it may or may not be the object of knowledge.

Holkot is not saying this. He argues rather that each spoken or written proposition is different from all others, whether or not they have been expressed before. First, Holkot points out that it must be the complex and not the things represented which are true.

> Similarly, only that can be the object of knowing which is known to be true; therefore the thing outside the mind (res extra) is not the object of knowing. Further, many true propositions do not precisely signify any thing. For example, 'Man is not a chimera,' or 'Man is not white' could be true propositions, and 'chimera' or 'white' could just as well be taken to be the object of these negatives as 'man.'26

Here, Holkot is pointing out that neither part of the complex has more claim to being the object of the act of judgment. The complex, whether affirmative or negative, involves more than one element.

Proceeding from this first point, Holkot goes on to argue that God could know more than he does. Again, the object of knowledge is the proposition. Propositions are contingent beings which come into being and cease to be. If there were no rational creatures, there would be no propositions, and in this case we could even say that God

knows nothing. The following is an excerpt from Holkot's argument on this point:

> I will prove that according to the above (Ockham's principles), all ought to concede that God could know more than he does; second, that he could know less than he does; and third, that this proposition is possible: 'Nothing is known by God.'[27]

From this, we can proceed to the argument on one of these points.

> Let it be conceded that propositions and creatures are finite. Hence, it is clear that this sentence is possible, 'God knows nothing', because it is possible that nothing is true; and it is certain if only a proposition can be true and if only creatures and what is of creatures are complex (propositional), then it is just as possible that nothing be true as that no creature exist.[28]

And Holkot goes on to say that the number of words spoken and books written adds to the number of propositions. " . . . after many books have been written and many men speaking and listening, there are many more propositions than before."[29] Holkot is chiding Ockham for what he regards as a lack of faithfulness to his own principles regarding propositions. Moody notes that less than a generation after his years at Oxford, Ockham's doctrine seemed conservative in comparison with the teachings of Bradwardine, Holkot, and John of Mirecourt.

These speculations take us far from the considerations regarding language found in the Modists and in Ockham. For the later writers, the spoken or written complex, given more subtle interpretation, appears as a barrier to knowledge.

Ockham had centered science on the complex, and he had explained the complex as a composition of universals and other terms. The universal, either natural or conventional, has the capacity to signify many things. The later Ockhamists develop the notion that the complex itself does not express knowledge, but is rather the very object known. The later writers, then, represent a decisive step away from the Modist treatment of signification.

Part 2: Grammatical Objections

The present section appears more for the sake of historical balance than for any precise contribution to the questions raised earlier regarding signification. The Renaissance writers decry the "logic-choppers" of the late medieval period in a way reminiscent of John of Salisbury's complaints against the Cornificians. Some reject scholasticism entirely because they seek a return to a simpler understanding of Christianity; Erasmus exemplifies this attitude. Others regard the scholastic educational establishment as an impediment to the development of a classical Latin style and the dissemination of the Greek classics. A number of objections to scholastic logic and grammar appear in these pages, though none of them touch precisely on the role of form in a scientific treatment of signification. Renaissance writers simply had different interests and preoccupations than the late scholastics.

Paetow points out that logic and dialectic became so influential during a certain period in the Middle Ages that they obscured all the other arts.

> A much more important change was effected by the influence of scholasticism which gradually transformed grammar into a speculative study. Instead of referring to examples from the best Latin literature to explain a doubtful point, the grammarians now preferred to solve the matter by the rules of logic.[30]

A popular work of the time, "The Battle of the Seven Arts," presents Paris (and dialectic) gaining a temporary advantage over Orleans (and the study of the classics).[31] The Renaissance represents not a direct rediscovery of the classics by some isolated individuals, but rather a re-assertion of the point of view represented by Orleans, a point of view which had been unpopular during an era taken up with dialectic. Paul Oskar Kristeller warns how difficult it is to separate the cross currents found in comparing the doctrines of the Middle Ages (an extremely long period, usually taken to extend from 500 to 1300 or 1350) with those of the Renaissance.[32]

Many Renaissance writers interpret grammar as preparation for rhetoric. Petrarch exalts the study of Cicero and the ideal of eloquence. Valla, in fact, places rhetoric above philosophy: "Philosophy is like a soldier or a tribune, under the command of oratory, the queen, as a great tragedian calls it."[33] He re-interprets Jerome's dream; perhaps Jerome feared Cicero's philosophy rather than his eloquence.

> Why should we not think that it was Cicero's philosophy which harmed Jerome, rather than his art of speaking? I do not want to make a comparison here between philosophy and eloquence, or say which can do more harm; many have spoken of this, and they have shown that philosophy can scarcely be consistent with the Christian religion, since all heresies have derived from philosophical sources. Rhetoric, on the other hand, has been shown to have nothing which is not praiseworthy in it.[34]

This passage bears out Kristeller's observation that the Renaissance marks a shift in attention. Valla does not try to offer a point-by-point refutation of late scholastic philosophy or theology. He simply aligns himself with a tradition suspicious of philosophy and praises others who have belonged to that tradition.

Valla's appreciation for gracious expression prevents him from praising Thomas Aquinas above any of the Fathers of the Church in his accomplishment.[35] First, he cannot praise him highly for his use of philosophy in theology; "this is, to my mind, a slippery, uncertain argument." He remarks ironically on Thomas' supposed affirmation that he had never read a book which he had not clearly understood.[36] Valla does take the opportunity, though, to praise Augustine and Jerome.

Erasmus evaluates scholasticism similarly. Thomas Aquinas receives faint praise for having avoided some of the excesses of other scholastics.

> The nature of Thomas does not render him of no use for speaking, though he ought to have applied himself there as he did in philosophy. Scotus and others like him are useful for knowledge, but rhetorically useless.[37]

In Erasmus' view, all these writers conceded too much to authority to Aristotle. He dreams of a truly Christian philosophy, unencumbered with scholastic complexities. In his exegesis of the New Testament, Erasmus repeatedly corrects Thomas, often remarking consescendingly that the general ignorance of the era in which Thomas lived must be taken into account.[38] The medieval foolhardiness of writing Scriptural commentaries without knowing Greek shocks Valla and Erasmus.

The authoritative manner of scholastic teaching offends the humanists.

> There are some who call their works Summae and Summarum Summae . . . in their teachings they never hesitate, they doubt nothing, they are sure of everything, they command everything. One would think that they are lawgivers, not teachers.[39]

Vives criticizes the logicians' treatment of language, referring to " . . . certain individuals (who) are espousing a hideous form of barbarism and monstrous parodies of the university curriculum, which they prefer to call 'sophisms' . . ."[40]

Vives' criticism of the pseudo-logicians resembles John of Salisbury's exasperated characterization of the Cornificians. Pedants so complicate the vocabulary and technique of logic that it can consume years of unproductive study. The "pretentious vocabulary"[41] to which he refers is particularly that of the terminist logicians, who have developed such a complicated terminology that it is intel-

ligible only to the initiated.

> What language does this logic of yours belong to? French, Spanish, Gothic, or Vandal perhaps? It certainly is not Latin. The teaching of logic should use words and statements which will be intelligible to anyone who knows the language in which he is speaking.42

Vives articulates more fairly than Valla or Erasmus Renaissance objections to the style and content of the terminist logic. Peter of Spain, William of Sherwood, and William of Ockham, like most of the scholastics, use a special terminology. They seek to make philosophy true scientific discourse, and one aspect of that effort is work toward a common vocabulary in which words are given the same precise meaning by all disputants. His criticism above could be directed at contemporary symbolic logic, which has developed for many of the same reasons which led to the growth of terminist logic. Though directed to the terminists, Vives' criticism applies also to the Modists.

Vives briefly examines the departure of the new logicians from the proper understanding of the trivium.

> These three arts that deal with language came from the people and not from teachers, for at first there were the Latin and Greek languages, and afterwards grammatical, rhetorical, and logical formulas were discovered in them. Language was not twisted to suit the rules, but rather the rules followed the pattern of the language. We do not speak Latin in a certain way because Latin grammar bids us so to speak; on the contrary grammar recommends us to speak in a certain way because that is the way Latin is spoken.43

Vives here proposes that grammar should be descriptive, not prescriptive. His criticism calls attention to the tendency in the terminist works to impose limitations on the uses of

terms and to offer careful rules for the interpretation of a particular use of a word. Grammarians, Vives suggests, should respect the reality of development in language. He does not directly address the issue of the relationship between metaphysics or logic and grammar, though he does suggest generally that the teachers ought not to impose authoritative rules unnecessarily regarding usage.

The new logicians, too, lack all common sense in their interpretation of phrases de rigore. Vives singles out Peter of Spain in his protest against this abuse, though it seems that this complaint applies even more to the later Ockhamists.[44] Like Erasmus, Vives exalts the Fathers of the Church for their orthodoxy and clarity; the dialecticians, on the other hand, have introduced absurdities.[45] Logic prepares one to study the other sciences; it is folly to devote time to it which could be better spent in a subject matter of more intrinsic interest or usefulness.

Vives, like the other Renaissance figures mentioned above, finds the same errors in all the scholastic writers. Since he does not distinguish among them according to their use of form or according to their positions regarding the universal, his writing does not contribute much to our understanding of the point at issue above. It does suggest, though, that the Modists and terminists might have fared better had it been more clearly understood that their work in semantics related more to logic than to grammar. Both

the speculative grammarians and the terminist logicians sought to develop a scholastic philosophy of language; questions of ordinary usage were of less interest for them.

In his discussion of Ramus, Ong evaluates more dispassionately the medieval writers; they are, he points out, extremely concerned with formal logic, but unable to develop a simpler symbolism than the Latin language in order to make further progress. He offers a brief explanation for the barbarisms of the terminists.

> These apparently anti-grammatical positions caused trouble because they looked more like the product of illiteracy than attempts to control language in a special way for special technical purposes. Indeed they were not very happy ventures in language control. Caught in the difficulties inherent in a "natural" language, the scholastic logicians hardly knew what to to; they bogged down further in the linguistic actuality and in the development of elaborate and refined rules.[46]

One of the passages quoted earlier from the Modists or terminists fits together well with the above description. What Ong does not specifyhere is that one of the purposes for which a special technical language was developed was in order to have a more purely formal logic. Use of ordinary language leads to many questions concerning the ontological commitments implicit in the language. The terminists carried out lengthy analyses of terms; Ockham, for instance, contended that all other accidents could be reduced to substance and quality. He reforms language in

the light of his interpretation of the principle that only individual substances exist.

The Modists become involved in a complex hierarchy of forms. To the matter and form analysis of the material substance, they added a similar analysis of the word, of the various parts of speech, and of the complete construction ('construction' in Modist grammar corresponds to 'written or spoken proposition' in terminist logic). The inability of the Modists to apply distinct names to generic and specific properties at each level of analysis could easily cause confusion, and in this respect Ong's remarks concern their works. Renaissance writers left aside these questions of formal logic and made no further advances in this area.

The humanists rejoiced in the re-discovery of literary masterpieces. Baldwin quotes a brief passage from Guillaume Budé:

> The best part, I think,we now have in our hands, saved from the deluge of more than a thousand years; for a deluge indeed, calamitous to life, had so drained and absorbed literature itself and the kindred arts worthy of the name, and kept them so dismantled and buried in barbarism mud that it was a wonder they could still exist.[47]

For Bude, enamored of Greek literary classics, the Middle Ages were barbarous. During the fourteenth century, the literary triumph of the vernacular languages and the beginning of the revival of Greek mark the transition from the Middle Ages to the Renaissance.[48] Bude's

exaggerated criticism blinds him to the fact that his era continues work begun in the Middle Ages. Ockham, Aquinas, Anselm, and even Augustine incorporated elements of Greek thought in the development of Christian theology. During the Renaissance, attention shift from philosophical classics to literary classics.

Renaissance writers derided the medievals' Latin; they reject the changes that had come about in medieval Latin, as could only be expected in a living language. They clamored for a return to Augustan style. In an introduction to Latin grammar, Valla questions whether any medieval writer (remembering that this includes John of Salisbury, Thomas Aquinas, and Dante) had a proper mastery of Latin.

> Present conditions are such that every true friend of (classic) literature can scarcely restrain his tears. The Latin language is now in no better plight than the city of Rome after the capture by the Goths. For centuries, the philosophers, jurists, and orators have been using a language which does not show any longer a trace of pure Latin and with which they can barely make themselves understood.[49]

Valla complains of the specialized language of philosophers and jurists; in fact, such special uses of terms are a natural part of language. However, he also echoes Vives' contention that the grammarians and others have misused their positions, attempting to prescribe fixed rules for language.

Renewed interest in the study of particular languages

decreased attention to building a theory of universal grammar around the principles of Latin grammar. Some Renaissance figures questioned whether the increasing study of languages helped or hindered the development of philosophy.

> Peretto (p. 121) used to say that the time spent on learning Latin and Greek actually hinders learning and developing philosophy. No language (p. 123) has in itself any peculiar value. Aristotle, therefore, not only may be studied in Latin, but might be studied in Italian. In fact, (p. 126) language studies may be illusory, as we see around us. 'I grieve at the wretched condition of modern times, in which study is spent not in being, but in seeming wise . . . We think we know something well enough when, without comprehending its nature, we are able to give it the name given by Cicero, Pliny, Lucretius, Vergil, or Plato, Aristotle, Demosthenes, Aeschylus.[50]

Here the advantage of the apparently awkward Latin of the Modists and terminists appears. Giving technical terms a fixed and precise meaning ensures the effectiveness of communication. It is easier to distinguish clearly between Ockham's and Holkot's views on signification than, for instance, it would be to distinguish Wittgenstein's from Heidegger's.

Leading Renaissance figures offer a few remarks concerning the Modist grammarians. Erasmus scorns the recommendation to read the "insipid Michael Modista."[51] Vall refers to the uselessness of many of the studies fostered by the schools of his era.

> But as for these things which are called metaphysics and modes of signification and other things of that sort, which the new theologians marvel at as if

> they were a new sphere lately discovered, or the epicycles of the planets. I for my part do not find them so wonderful at all, and I do not think it matters so much whether one knows about them or not--things that perhaps are better not known because they are obstacles in the way of better kinds of knowledge.[52]

Such a detachment from abstract speculation can seem refreshing after the labored reasonings of Holkot and other late medieval writers.

Renaissance figures appreciate graceful literary devices, not the abstract considerations of language of the Modist grammars. They admire eloquence, and many imitate Cicero's elevated style. Many criticize Aristotle's work for its difficulty and lack of grace. Platonists in the Renaissance attack Aristotle's rhetoric,[53] while many attempt to write in dialogue form. All this represents a further step away from the fixed technical vocabulary of the scholastic writers, since they had taken many basic terms (substance and accident, act and potency, matter and form) from Aristotle's works. The later Ockhamists had applied his criteria of certainty and evidence to Aristotelian metaphysics; Nicholas of Autrecourt went so far in his critique as to deny the existence of substances. This rejection of Aristotle caused confusion on some basic points of metaphysics, but it freed natural scientists to develop a new approach to mechanics. In a somewhat similar fashion, Renaissance writers rejected Aristotle's authority on other questions.

However, the Renaissance gradually understood and interpreted Aristotle's distinctive contribution to poetic theory, though they relied also on Horace's Ars poetica.[54] At times, nevertheless, the writers congratulate themselves about their improvements over the Greeks.

> Thus far Aristotle; but a more accurate account is as follows.
>
> For us, with more penetration than Aristotle's . . . No one before us has reduced figures to definite classification.
>
> So much for inventio. With greatest toil amid many difficulties we have elaborated these precepts, which before us either were not explained at all, or scattered without art or order, were merely implied, or were in substance or expression inept.
>
> The Greeks are mistaken if they think we have taken anything from them except to improve it.
>
> As if we were servants of the Greeklings, and not correctors.[55]

In short, Renaissance grammarians often emphasized their originality and freedom from the influence of any tradition in grammer or rhetoric.

In short, I have found very little continuity between Renaissance grammar and the highly speculative works of the Modists. The foregoing passages have indicated some reasons for this considerable departure. This discussion has taken us little further in the examination of the role of form in a theory of signification, but it has indicated that the inquiry begun by the Modists, partly rejected in principle by Ockham, was left aside in favor of other studies during the Renaissance.

Kristeller defends this perspective concerning the transition from the Middle Ages to the Renaissance. This re-orientation involved a strong impulse toward classical

studies; the great revival of Greek has been mentioned above.

> The humanists were not classical scholars who for personal reasons had a craving for eloquence, but, vice versa, they were professional rhetoricians, heirs and successors of the medieval rhetoricians, who developed the belief, then new and modern, that the best way to achieve eloquence was to imitate classical models.[56]

Medieval grammar, considered as a speculative study, had aided the development of theology. Criticism of the realism underlying that grammar also often arose from theological considerations. But the new grammer and rhetoric were to serve non-theological purposes, and the classical authors were more apt teachers for these purposes than were the Modists.

Many humanists were rhetoricians and grammarians, only very secondarily concerned with philosophy. Some went so far as to contend, as was noted above, that rhetoric was a higher study than philosophy. The Modists, on the contrary, had sought a speculative or philosophical grammar. Kristeller notes the humanist attitude toward logic.

> (The humanists) were themselves professionals in a number of other fields. Their domains were the fields of grammar, rhetoric, poetry, history, and the study of the Greek and Latin authors. They also expanded into the field of moral philosophy, and they made some attempts to invade the field of logic, which were chiefly attempts to reduce logic to rhetoric.[57]

In their educational theory, the humanists sought to simplify the fields of study which they regarded as introductory--logic and grammar--in order to introduce students more quickly to more valuable works of literature.

Kristeller notes, too, that the humanists did not

have the same degree of interest in strictly philosophical questions that the medieval writers had had.

> In passing from Aristotelianism to the humanism of the Italian Renaissance, we find ourselves in a completely different intellectual climate. In my opinion, it is not so much a question of a group of different philosophical or theological doctrines, as has often been thought, as it is of a group of various studies and preoccupations that touch on philosophical and theological thought in an important but indirect manner and that have other centers of diffusion.[58]

Interest in signification has greatly diminished in this new intellectual climate. Ockham and the late medieval writers--principally Ockham himself--have indicated difficulties in the Modist treatment of signification. They uphold the view that the form can exist in the real thing, enjoy a new mode of existence in the mind, and appear in a third mode in a verbal expression. Ockham insists that the universal cannot be formally distinct from the individual. Having included here a long section with little to do with the notion of form, I will next examine the thought of a philosopher who wrote some two hundred years after the Modists - John Poinsot. Other writers returned to these questions before he did, but he offers a lengthy examination of questions regarding the sign, and he attempts to answer some of Ockham's objections regarding the universal.

NOTES

Chapter III

[1]Ockham, S.t.l. I, ch. xiv.

[2]Ockham (quoting Avicenna) S.t.l. I, ch. xiv.

[3]Ockham, S.t.l., I ch. xiv.

[4]Ibid.

[5]Ibid.

[6]Ibid., ch. xv.

[7]Ibid.

[8]Ibid.

[9]Ibid.

[10]Ibid.

[11]Ibid.

[12]Ibid.

[13]Ibid., cb. xii.

[14]Ibid., ch. lxii.

[15]Ibid., ch. lxiv.

[16]Moody, Logic of William of Ockham, p. 31.

[17] Ockham, S.t.l. I, ch. lxiv.

[18] Quoted in Boehner, "Ockham's Theory of Supposition," p. 278.

[19] Ockham, trans. in Boehner, Philosophical Writings, pp. 12-13.

[20] Boehner,"Ockham's Theory of Supposition," p. 279.

[21] Quoted in Moody, "Ockham, Buridan, and Nicholas of Autrecourt," p. 124.

[22] Ibid., p. 130.

[23] Ibid., pp. 129-130.

[24] Quoted in Boehner, Philosophical Writings, pp. 12-13.

[25] Quoted in Moody, Studies in Medieval Philosophy, Science, and Logic, p. 330.

[26] Ibid.

[27] Ibid., p. 332.

[28] Ibid.

[29] Ibid.

[30] Paetow, The Arts Course in the Medieval Universities, p. 35.

[31] Paetow, "The Battle of the Seven Arts"

[32] Kristeller, Renaissance Philosophy and the Medieval Tradition, pp. 5-6.

[33] Cf. Seigel, J. Rhetoric and Philosophy in Renaissance Humanism. Lorenzo Valla (14-7-1457) wrote a very influential work complaining of the decline of Latin style.

[34] Ibid., p. 154.

[35] L. Kennedy, Renaissance Philosophy Trans. of Valla's "In Praise of St. Thomas Aquinas," pp. 22-23.

[36] In fact, the entire encomium seems to have been written tongue-in-cheeck, beginning with Valla's exaltation of Thomas to the same level as the cherubim, and concluding by suggesting that he play the cymbals in paradise.

[37] Quoted in Massaut, "Erasme et St. Thomas," Colloquia Erasmiana Turonensia Vol. II J. Vrin, Paris 1972, p. 585.

[38] Ibid., p. 600.

[39] Quoted in **Albert** Hyma, The Youth of Erasmus, pp. 108-199.

[40] L. Kennedy, p. 77 trans. of Juan Luis Vives, "Against the Pseudo-Logicians" Vives (1492-1540) was a humanist known for his motto, sine querela; this brief work is uncharacteristically polemical.

[41] Ibid., p. 78.

[42] Ibid., p. 79.

[43] Ibid., pp. 80-81.

[44] Ibid., p. 89.

[45] Ibid., pp. 97-98.

[46] **W.J. Ong**, Ramus p. 75. Ramus (1515-1572) was a well-known logician and educational reformer.

[47] C. S. Baldwin. Renaissance Literary Theory and Practice, p. 4.

[48] Ibid., p. 5.

[49]Ibid., p. 8; Hyma, p. 43.

[50]Baldwin, quoting Sperone Speroni, p. 26.

[51]Hyma, pp. 262-263.

[52]Kennedy, p. 23.

[53]Baldwin, p. 60.

[54]Ibid., p. 155.

[55]Ibid., p. 172.

[56]P. O. Kristeller, Renaissance Studies, Vol. I, pp. 98-99.

[57]Kristeller, Medieval Aspects of Renaissance Learning, p. 55.

[58]Ibid.

CHAPTER IV

FORM IN JOHN POINSOT'S THEORY OF SIGNIFICATION

The effort of the Modists to develop a true science dealing with the necessary elements in any system of signs seems to have been forgotten during the Renaissance. It re-appears in some passages of John Poinsot's works on logic. John examines questions concerning the universal, trying to put to rest some of the "nominalist" objections. Form takes on somewhat more importance in his treatment than it had in Ockham's. John discusses signification at some length, pointing out that words and signs have their place in one of the metaphysical categories, that of relation. John restores form to a more prominent place in the treatment of signification, and he incorporates the theory of signs into logic.

Second, John indicates that form is not sufficient as a unifying principle in the discussion of signification. Analogy is a similarity in signification which does not arise from identity of form. John's treatment of analogy differs from Ockham's. On the other hand, both John

Poinsot and William of Ockham depart from the Modist reliance on modi significandi. Ockham points out that whatever intrinsic properties a word may have, it nevertheless can refer to a real substance, to a concept, or to a part of speech. John, on the other hand, notes that a term may refer, without equivocation, to things to which the same universal term could not refer.

Part 1: The Universal and the Sign

Some consideration was given earlier to the scholastic treatment of knowledge and to differences between Ockham and Thomas Aquinas regarding certain details. A brief passage from John Poinsot recapitulates the essential points:

> It is a property of knowing being, as knowing, that a thing or perfection existing in another outside itself, can be in the knower; but this cannot take place by receiving the thing itself which is in another in a material and entitative manner of receiving, but in a more elevated manner, that is, in an immaterial and intentional or representative manner, so that something is existing in one entitatively and in another intentionally or representatively.[1]

Implicit in this passage is the related problem of signification. The knowing power receives in itself another thing (or the perfection of another thing) in "an immaterial and intentional or representative manner." If the extra-mental thing or one of its qualities can exist in a representative manner in the mind, could it not likewise exist in a representative manner in a

proposition? This is one of the questions to which John addresses himself. Both John and Ockham regard the mental concept as in some sense an image of the extra-mental thing. Treatment of signification depends on how and to what extent written or spoken propositions can produce a true image of extra-mental things.

Poinsot's discussion of the nominalists suggests a slight difference between his treatment of the universal and Ockham's. He speaks of the nominalists as denything that "any reality" corresponds to the abstract concept. Ockham denied that the universal was anything outside the mind. He denied that the universal in the individual could even be formally distinct from the individual. John's view differs little from this, but there is a slight change of emphasis.

> (The nominalists) deny that any reality corresponds to a concept abstracting from the individuals. Their argument is that this state of abstraction is not found in the real.[2]

This view thus far differs little from Ockham's position that the universal is only a thought-object. John continues:

> In answer to it, let us say that when the real presents several aspects united in a certain thing, the intellect is not always bound to receive those several aspects together, but can attain one without the other. Something is left out, but that which is grasped is being in a true and proper sense, though in the real it does not exist apart from what is left out, just as, in the example already given, sight attains the true and real color of the fruit, but not its taste.[3]

John points out that the intellect can consider things

apart from the conditions under which they exist in reality. He repeats that what is incomplete is not therefore false.

> . . . .To grasp one and leave the other out is not to form a false concept, but merely an inadequate one. To such a concept something corresponds on the part of the known object, yet this objective term of the concept does not, as such, possess every mode found in the real; and not everything with which it is conjoined is perceived by the intellect.[4]

This abstraction could take several forms; for example, a line or a plane could be abstracted from a surface. Our present topic relates more closely to the abstraction of form from matter. The intellect can abstract from the real thing what it has in common with other things of the same type or species.

This close relationship between the thing and the mental concept of the thing appears in the work of Thomas Aquinas, William of Ockham, and John Poinsot, though they differ slightly in terminology. Intentional being corresponds to real being. The scholastics, as was noted earlier, refer to the concept formed as the interior word. The exterior word signifies the conception of the mind, and thus indirectly signifies the extra-mental thing. Poinsot speaks of the intellect as "a faculty perfectly drawing things to itself and uniting them to itself;"[5] it has this capacity to produce within itself a perfect image of the thing.

Up to this point, there is little difference between Aquinas, Ockham, and Poinsot. All agree on the primacy of the existence of the nature in the individual.

Ockham's insistence on this point was noted earlier.

Aquinas remarks:

> Indeed the nature itself which undergoes the act of being understood, or the act of being abstracted, or the intention of universality, exists only in the individuals; it exists as understood, or abstracted, or with the intention of universality only in the intellect.[6]

Note here that the nature itself exists in the intellect with the intention of universality. All three philosophers uphold that the conventional universal also exists with this "intention of universality." The question remains to what extent the conventional universal can be linked to the natural universal.

The differences among these writers appear more clearly in the discussion of signification, though these differences have important consequences in other parts of their works. John Poinsot affirms that the interior word is a quality of the soul; Ockham denied that this was the case. John does not agree with Ockham's effort to reduce the other metaphysical categories to substance and quality, and he insists on a metaphysical foundation in the real for the category of relation. Both the natural and conventional universal fall within this category.

John Poinsot first distinguishes between the natural and conventional sign. He affirms, though, that the interior word is itself a quality. "That indeed the word itself is also a quality is clear, because it is an expressed image representing the object."[7] Ockham referred to the

concept as a mental picture, but he did not consider it to be a quality in the mind.

John refers to Aquinas' definition of the sign - "that which represents something other than itself to a cognitive power." This definition applies to both the concept, which represents the thing known and the spoken or written word, which immediately represents the concept and mediately represents the extra-mental thing. He repeats Augustine's definition, which refers principally to the spoken or written word - "A sign is that which, over and above the impression that it produces in the sense, causes something to be known."[8] The Modists had sought to explain this phenomenon, treating the expression as a bearer of the form which could be grasped by the intellect. Ockham recognized the phenomenon, but rejected this manner of explanation. To him, it would seem an unnecessary multiplication of causes.

Poinsot points out that a sign consists in a certain relation to another thing, and that it depends on what is signified.

> . . . .What manifests in the capacity of sign implies (a) a relation to something else for, even though a thing can represent itself, nothing is a sign of itself, and (b) dependence upon the thing signified, for the sign is always <u>less</u> than the signified and depends upon the latter as upon a measure.[9]

John points out that the sign both manifests something else and represents something else. This separates the two possible roles for form to play in this process. For a Platonist, the form itself illuminates the mind in addition to representing. John takes a thoroughly Aristotelian

position, arguing that the sign as such must represent the thing. In addition, he points out that the sign is always less than the signified. The mental concept relates to the extra-mental thing as a dependent being; it "depends upon the latter as upon a measure."

A sign may signify a non-existent. John mentions the examples of a hoof-print representing or signifying an animal which has died or the portrait of a man who has since died. "The essence of the sign entirely consists in being genuinely and formally that which leads the power to the signified."[10] The signs mentioned above genuinely lead the cognitive power to what is signified, and they do so through some connection with the form of what is signified. The effectiveness of the sign does not imply the present existence of what is signified. This, of course, could happen even in the case of a universal; 'dinosaur' signifies genuinely and formally, though there are no existing instances.

In view of this explanation of signification, John elaborates on the distinction between the natural and the conventional sign.

> . . . .The conventional sign moves (the cognitive power) in virtue of the meaning imposed upon it. It does not exercise any motion on the basis of its own knowability or in virtue of its own being. As in the case of the other unreal beings, all it does is done mediately and in virtue of something else.[11]

The material sign has meaning by virtue of an imposition. Its own material being does not enable it to be effective as a sign; rather, it signifies "mediately and in virtue

of something else," that is, by virtue of the natural sign or concept. The natural sign or concept signifies immediately and by virtue of its own knowability.

The conventional sign, dealt with at such great length by the Modists, is thus dependent on the natural sign. The concept or cognition is a quality;[12] it is an accident inhering in the intellect. It has a real relation with what it signifies, while the conventional sign has only a relation of reason. The status of relations will be considered more carefully below. With respect to work in universal grammar, John's founding of the conventional sign implies the lack of even a relation of reason between the various syncategorematic terms and anything in the real order. On this point, he differs little from the Modists or from William of Ockham. The Modists gave far less attention to the "less principal" parts of speech, and William's explanation of the contribution of syncategorematic terms to the meaning of a proposition was noted earlier.

Both natural and conventional signs are dependent on the things for which they substitute; the thing represented is the measure of the sign. John distinguishes between what manifests and what represents; light can show color, God can show the existence of created things in himself, but neither the light nor God is a sign for what each manifests. They do not substitute for what is shown. In this discussion, John points out the limitation of language as representative.

> But the idea must have with the object the proportion implied in the notion of substitute and proxy. Thus, if the sign is to play perfectly and adequately the part of vicar for the object, complete commensuration between them in representative being is required. Because of this necessity, a corporeal representation cannot be the idea of a spiritual object, and a created representation cannot be the idea of an uncreated object. If the representation is uncreated, the entity of the idea must be uncreated also.[13]

In order to substitute properly for something, the sign must be proportionate to the thing. This means that a physical image cannot represent an incorporeal extra-mental thing, nor can a created image represent adequately an uncreated thing. A discussion of analogy is the natural consequence of this argument regarding signification. In some cases, ordinary concepts and words cannot adequately signify the extra-mental things to which they correspond.

The sign is a relation, yet it can continue to exercise its function even when the foundation of the relation has ceased to exist. The principal role of the sign is to cause something to be known. The sign can lead the cognitive power to knowledge of an extra-mental thing even if that thing no longer exists.

> Suppose, then, a sign and a signification existing virtually: the cognitive power is led formally to the signified and yet the sign does not exist formally, but in a virtual and fundamental manner. Since it is in the capacity of something representative that the sign effects the motion of the power, it still can act as substitute of the signified after the relation has disappeared. The ability to move the power remains.[14]

Here, John Poinsot uses the term 'formally' in a way similar to the Modist use. He speaks of the sign not existing formally, since one aspect of its "form"--relation to an existing being--is not present. John's attribution of a power to move the cognitive faculty suggests, too, that what the natural or conventional sign communicates is a form or species, since this is what the mind can grasp.

It was noted above that the natural sign has a real relation to the extra-mental thing. John is reluctant to attribute even a relation of reason to the conventional sign.

> The significative sound does not signify by virtue of its intrinsic nature, but by imposition, i.e., as an effect of application. Whereas one and the same sound can lend itself to several applications, it is impossible that several natural representations should belong to one and the same concept.[15]

This notion appears again in the discussion of the distinction between univocity, equivocity, and analogy. The significative sound has a meaning attributed to it by human institution, while the concept has its meaning by nature.

The sign remains a sign even when its relation to an extra-mental thing is not presently perceived.

> How can a sign written in a closed book or voiced but not grasped in its relation signify perfectly and lead the knower to the signified? The word 'man' does not represent less perfectly when it signifies if its relation is not perceived than if it is, for when this relation is not perceived the word retains, nevertheless, its sense and complete signification. Thus, prior to the perception of the relation, a word is a sign perfectly and fully, not inchoatively, for it signifies and is a sign as perfectly as when the relation is actually perceived.[16]

Even if a conventional sign fails to fulfill its function, it remains a sign. John does not mention here the case of someone speaking or writing a language which another person does not know. In this case, a sign may be ineffective, but it would not for that reason cease to be a sign. Of course, the ability to interpret a particular language might be completely lost. In such a case, it would seem that the conventional marks or sounds would remain signs, though their relation to what is signified would not be perceived. That the conventional sign does not necessarily signify indicates that it does not directly show the form. The concept, Ockham said, is like a mental picture. But the material sign is not such a picture, so it is not naturally or necessarily linked to a concept. In judgment (the act of the mind uniting or separating), the mind can attain truth. One question regarding signification is to what extent the verbal complex can conform to the mental proposition, or judgment.

John elaborates the basic point made by Aristotle in De Interpretatione - concepts signify the same for all, though the words substituting for them differ from one language to another. John does not regard this study of signs as strictly separate from logic.

> But among dialecticians, who treat of names and significative sounds, ultimate and nonultimate concepts are distinguished as follows: the ultimate concept concerns the things signified, the nonultimate concept the significative sounds themselves. This remark may be of great help when there is a question of ascertaining the object of logic. Logic

> does not treat of the things themselves considered in their real existence, as the physicist does, but of the instruments by which things are known. Significative sounds, as properly disposed and set in order, make up most of these instruments.[17]

Among the scholastics, this initial distinction appears more often as the distinction between first and second intentions. Like Ockham, John Poinsot points out that logic concerns the instruments used by the mind. Since significative sounds are such instruments, the examination of sounds and signification belongs properly to logic.

John brings the same rigor as Ockham to these discussions, but he favors the treatment of form found in the Modist works. His explanation of signification rests on an understanding of knowledge similar to that implicit in those works. Ockham severely limited the role of form (which he calls "species") in an effort to explain knowledge and signification. Unlike the Modists, though, John recognizes that such a treatment belongs more to logic than to grammar. Finally, he does not attempt to explain the signification of particular parts of speech.

Part 2: Relation; Beings of Reason

Discussion of relation and beings of reason clarifies the differences between John and Ockham. Ockham sought to reduce all the categories to substance and quality. John Poinsot contends that relations, though they have the least being of any of the categories, are

real. It is impossible to assign any absolute being to some things which are nonetheless real. In discussing relation, John elaborates further on the notion that what is signified acts as the measure of the sign. Second, John discusses those beings of reason which are dependent on other beings of reason. Much of the discussion of signification concerns properties or qualities of words or verbal complexes, which are themselves beings of reason. Thus, the properties of words and complexes of words can be systematically studied within logic.

The complexity of John's treatment of relation makes it a forbidding topic for a brief treatment; here the effort will be to take note of features relevant to the discussion of one type of relation, namely that of signification. John's attribution of some measure of reality to the relation will naturally influence his discussion of signification. The power of the conventional sign to represent is derived from that of the natural sign, and the natural sign consists of a real relation between sign and signified.

John refers to "some authors" who deny any reality to relations. He opposes this view, offering Aristotle's definition of relatives, "those whose whole being refers to something else,"[18] and notes Thomas Aquinas' concurrence on this point. He goes on to argue that the reality of some relations is not merely probable; it is an evident truth.

> Apart from consideration by any intellect, there are in the real some things to which it is impossible to assign any absolute being. For example, there is order, as in an ordered army, an ordered universe; there are resemblance, dependence, fatherhood, and other such things, which cannot be understood in terms of any kind of absolute entity and in which the entirety of being is related to something else. When the appropriate term does not exist, there is no resemblance or fatherhood.[19]

John argues that some relations have real being, among them the examples he offers - order, resemblance, dependence, and so forth. None of these belongs to a single substance by itself; a substance may resemble another substance, but this resemblance is a relation rather than a quality belonging to the substance considered in isolation. John offers some further explanation.

> This is a sign of the purely relative nature of certain things. If the being of such things as resemblance or fatherhood were absolute in any way, the mere absence of a term would not bring about their annihilation.[20]

John, like William of Ockham, notes that relations are not like substances; we cannot assign any absolute being to them. Nevertheless, they are real.

> . . . .To deny that these things exist in the real, to say that they do not exist unless they are formed and constructed by an intellect is to deny a truth familiar even to the most illiterate of men.[21]

Though John does not name Ockham here, his description sketches the Ockhamist position regarding relation. John has noted earlier that the essence of the sign is a relation to what is signified; his contention that

relations are real and not mere fictions has importance for his treatment of signification. Among the examples John mentions, several--resemblance, dependence--indicate that signification is an important kind of relation.

Relation requires, he continues, the concurrence of subject, foundation, and term. Aristotle's categories distinguish substance from nine accidents inhering in substance. Like the other metaphysical accidents, relation requires a subject. The subject is that being in which the relation primarily has being. The foundation of a relation is the intelligible principle and cause from which the relation derives its existence, while the term is that towards which the relation tends and in which its movement comes to an end.[22] For example, the relation of fatherhood must have a subject (a man), a foundation (generation), and a term (a child). In the case of signification, the subject is the sign (which, as was pointed out above, might be an accident--the concept is an accident in the soul--or something dependent on the accident - the spoken or written word), the foundation is representation, and the term is the thing signified.

The Modists tried to develop a theory of signification. Working from the basic principles of that theory, they tried to trace logical connections between the word and the proposition and the extra-mental things

signified by the word or the proposition. They were not aware that the particular modes of signifying in the Latin language represented one among many possible systems of linguistic devices. Word position, for example, takes the place of case endings as an indicator of parts of speech in many languages. A particular language need not have the same parts of speech as Latin. The Modist attempt to show natural connections between parts of speech and aspects of extra-mental things obscures the soundness of their approach to signification.

John later indicates what distinguishes relation from the other categories. "To admit of being considered positively without being considered entitatively or really, this is strictly proper to relation."[23] John concurs in the view of Ockham and Aquinas that one relation cannot provide the foundation for another relation; both had pointed out that if this were possible, the series could proceed to infinity. Duns Scotus, on the other hand, contended that a relation can be the foundation of another predicamental relation.[24] (All are using 'relation' here to mean real relation; all agree that some things commonly called relations are mere beings of reason.) John argues against Scotus in the following fashion:

> (Of relation we can say that) its entity is so minute that it does not suffice to ground a real relation. Indeed, every foundation must be more perfect than that which is founded upon it, e.g., an accident cannot, by standing under another

> one, support it in being (see the foregoing, q. 15, art. 2), because one accident does not have a way of being more perfect than another.[25]

John mentioned above that the sign relates to signified as measured to measure; its being is dependent. In the earlier passage he refers to here (q. 15, art. 2), John points out that it only belongs to things in the category of substance to "stand under" accidents;[26] "accidents are themselves inhering realities and cannot give (what they do not have, viz.) a way of being by which other accidents would be born."[27]

Although the comparison may seem far-fetched, the neo-Platonic account of the origin of the universe traced all things to an originating cause which was beyond understanding; all things were to proceed from this initial cause according to necessary laws. Each level of being is slightly more multiple and slightly inferior to that which came before it. A comparable account of signification is possible. The extra-mental thing would then cause the being of concepts (natural signs), then words (conventional signs), and this chain could be extended. Aquinas, Ockham, and John Poinsot forestall this interpretation of signification by indicating that words cannot have the same relation to their modes of signifying that substances have to accidents, since these material signs themselves are mere beings of reason.

From Aristotle and Aquinas, John derives the notion that three foundations divide the entire genus of relation - unity and number, action and passion, and measure and the measurable.[28] Resemblance, fatherhood, and signification would exemplify these three types of relation. The relation of signification is non-mutual; the sign has a relation (either real or of reason) to what is signified, but what is signified has no relation to the sign.

> . . . .Why should the relations of the third type not be mutual? St. Thomas gives the explanation in i.13.7 and On the Power of God 7.10. Here the extremes are not of the same order. One depends upon the other and is subordinated to it, but not vice versa, since one is measure, the other measurable, one perfecting, the other perfectible. Clearly, the perfecting as such does not depend upon the perfectible: it is the other way around. Thus they are not related to each other but only one is related to the other.[29]

This suggests that the extra-mental thing should not have a passive modus intelligendi or a passive modus significandi. The natural and conventional sign have a relation to the thing, but it has no relation to them. John gives three instances of non-mutual relation.

> God is outside the order of creature, the sensible is outside the sense, the intelligible is outside the intellect. All these (viz., God, sensible, intelligible) exercise action or specification without their undergoing any changes; thus, they are outside the order of their correlatives, i.e., beyond the range of the changes undergone by their correlatives, so that they are not dependent or related reciprocally.[30]

Knowledge does not affect what is known, nor does the

sign affect what is signified. The sign exists to represent, and its adequacy is determined with respect to what it purports to signify. Again, this suggests that it is misleading to speak about the aptitude of a thing to be known or signified, since these phrases suggest that the thing enters into a mutual relation when it is in fact known or signified.

John's terminology suggests that he is discussing something that bears on the question of the various modes mentioned in the speculative grammars. For instance, he introduces an article by saying the following:

> . . . .If the distinction (between relation and its foundation) is real, what kind of real distinction is it? the kind that obtains between a thing and a thing, or the kind that obtains between a thing and a mode?[31]

He will go on to point out simply that a relation is not a distinct thing, but rather an accident. 'Mode' is here simply a general term for the specification of a substance by any of the accidents. Later, John concludes that relation is merely a mode.[32] Of all the genera of being, relation has the weakest and most meager being. At this point, John qualifies the use of 'mode'; only the less important accidents can be considered mere modes. Since some of the other categories, he points out, are mere modes (e.g., "where", "position"), so also relation must be a mode. It cannot have a greater reality than even these minor accidents.

All this indicates the impossibility of a true science dealing with particular conventional signs.

John has thus tried to establish that some relations are real, and he has treated some aspects of real relations. He denies that all relations can be considered beings of reason. He does discuss, though, the being of reason, first pointing out that it is generally agreed that there are such things.

> . . . .This notion is itself sufficiently established by experience itself, since we are aware of our imagining and knowing many things that are absolutely impossible; such things are fictitious beings. They are beings, because they are known after the fashion of being; they are fictitious, because no true existence corresponds to them in the real world.[33]

The being of reason, though not real, is grasped after the fashion of a real being. But not every being conceived in a way other than the way it really exists is a being of reason; we know beings which exceed our reason (e.g., God) after the pattern of something within the capacity of our reason. They are real beings, though we cannot grasp them according to their proper mode of being.

The mind conceives many fictions after the fashion of real beings. The intellect conceives negation, an absence of form, after the fashion of being, "after the fashion of a formal effect."[34] A second intention can be the foundation of another second intention,[35] and consequently one being of reason provides

the foundation for another being of reason.

> The proposition gives birth to other second intentions that are properties of the proposition. Some of these are properties of the proposition as a whole, as opposition, conversion, etc.; others are properties of the parts of the proposition, as supposition, ampliation, predicate, subject, etc.[36]

Grammar concerns the properties of propositions and parts of propositions. However, these beings cannot provide the basis for a true science. Though they are conceived after the fashion of real being, "no existence corresponds to them in the real world."

John's discussion of relation and of beings of reason clarifies some aspects of signification. Relations are real, though we do not assign any absolute being to them. Since signification is a relation, the entirety of the being of the sign is related to what is signified . Relation requires subject, foundation, and term; the natural sign exists in the knower and reaches the signified. The foundation in this case would be knowledge or signification. The relation is more than a being of reason, since it can be considered positively; but it is not a real thing. John points out that the relation cannot be "considered entitatively." Even the natural sign has being, though it cannot be considered an entity. The natural sign cannot support the conventional as a substance supports an accident. One relation is not sufficient to ground another real relation. The relation of sign to what

is signified is not a mutual relation, John continues. Finally, the subject matter of grammar (and much of logic) consists of beings of reason, which are not real relations. Each relation has an intelligible aspect, and in this sense could be said to have a form. On the other hand, such a use of 'form' departs from the sense of the term as used in the phrase 'substantial form.' In the discussion of relation, John steers a course between Ockham's views on this topic and the perspective implicit in the Modist grammars. John's discussion of analogy is likewise difficult and differs from the views of Ockham and from those of the Modists as well.

Part 3: Univocity, Equivocity, and Analogy

John's discussion of analogy is of interest for two reasons. First, the topic of analogy concerns a proper and scientific use of terms in which the term does not have a single meaning by reason of a single form. The term 'being', for example, can refer to something fictitious (a unicorn or a proposition), to a relation (resemblance), to an accident (whiteness), to a created substance (a man), or to God. Second, the notion of signification involves analogy. John points out that the natural sign and the conventional sign are analogous.

He begins his discussion referring to Aristotle's introduction to Categoriae: "The first distinction or antepredicament is the division of terms into univocals, equivocals, and denominatives."[37] Aristotle thus indicates the relation of the categories to the predicates above them. Some types of analogy are in fact equivocal.[38] Metaphor, or improper supposition, is an equivocal form of analogy. But the analogous term is not simply equivocal.

> . . . .The analogous concept is not related to its analogates according to absolutely diverse meanings, but according to a meaning that has some sort of unity, at least the unity of a proportion.[39]

The meaning of an analogous term has a certain unity, though it is not the unity given by a single form.

John mentions rules of supposition for analogous terms. "An analogous term taken by itself stands for the better known of the things it signifies."[40] Thus, if someone says simply "The lion runs," 'lion' refers to a true lion and not a metaphorical one. Further, "subjects are such as they are permitted to be by their predicates."[41] The subject or predicate may cause the conjoined term to be understood metaphorically, as in the statement 'The meadow is smiling;' the subject here causes the verb to be understood metaphorically. Since analogous terms are used extensively in philosophy and theology, it is important to distinguish

systematically between proper and improper uses.

Poinsot refers the reader to Cajetan's work for further elaboration of the difficulties concerning analogy, remarking that the common view is the following:

> . . . .Analogy is intermediary between pure equivocity and univocity, inasmuch as the thing signified is neither absolutely the same, as in univocals, nor absolutely diverse, as in equivocals; it is, in itself, marked by diversity, yet it enjoys a unity of proportion and relation.[42]

What is signified by an analogous term enjoys a certain "unity of proportion and relation;" the individual beings to which the term refers do not resemble one another in their substantial form; rather, one substantial form may be somehow proportional to the other, or both forms may be related to a third form.

The distinction between unity of proportion and unity of relation leads John to Aquinas' distinction between analogy of attribution and analogy of proportionality. He first repeats that analogous terms differ from equivocals.

> (The analogues) constitute a species of equivocals inasmuch as they do not have, like the univocals, unqualified unity of signification. On the other hand they are distinct from the fortuitous equivocals, since they do not signify entirely diverse things but diverse things that are proportionally one.[43]

He goes on to point out that this unity does not simply concern the signification; there is a unity on the part of what is signified.

> This (relative unity) does not concern merely the signification or the cause of signification: it concerns also the reality signified. If there were not, on the part of the reality signified, some proportion and some relation of agreement, a signification involving such a relation would imply falsehood, and so would the application of such a signification.[44]

John defends the metaphysical basis for use of analogous terms in scientific discourse. The unity in the reality signified ensures that use of the analogous term is not simply equivocal. The things united under the same term are not equal; that is, they do not have the same nature. They are, however, proportional to one another.

In the analogy of attribution, the principal term is the origin of an attribution or denomination applied to the other terms. Thus urine and medicine may be called healthy, although this term applies principally to an animal. John repeats Aquinas' definition of analogy of attribution:

> Things in the case of which a name is common to several in such a way that the essence signified is the same if one considers the term but diverse if one considers the relation to this term.[45]

Thus 'healthy' refers first to a quality found in an animal, but secondarily to, for example, the urine that would be symptomatic of health or the diet that might contribute to health. The signification of the word thus varies considerably according to the immediate context.

John further distinguishes (within analogy of proportionality) between analogy of proper proportionality and analogy of improper proportionality (i.e., metaphor). In proper proportionality, the essence signified by the terms is found "formally and truly" in each analogate. In the case of metaphor, the essence signified is found formally and truly in one, and "only figuratively, or as an effect of transfer,"[46] in the other.

He then clarifies the distinction between analogy of attribution and analogy of proper proportionality. In the analogy of attribution, Poinsot points out, "the form (signified by the analogous term) pertains intrinsically to the principal analogate, extrinsically and by denomination to the other analogates."[47] 'Healthy' thus pertains intrinsically to the animal, extrinsicallly to urine or diet. In the analogy of proper proportionality, "in all the analogates there exists, intrinsically and formally, a certain essence consisting in a proportion, according to which essence the analogates are assimilated in proportional fashion."[48] In analogy of attribution, the unifying concept belongs intrinsically to only one analogate. In analogy of proper proportionality, the unifying concept (or essence) is found proportionally in each of the analogates.

Analogous terms, John points out, depend on a kind of abstraction different from that which leads to

univocal terms. To reach univocal terms, the mind abstracts in an unqualified fashion, so that "what is abstracted does not include that from which it is abstracted."[49] Thus the concept 'animal' does not include the distinguishing features of the concept 'man,' from which it might be abstracted. However, 'being' (and other analogous terms) must contain in an implicit or confused way that from which they have been abstracted. John simply refers to this abstraction as "not unqualified." Thus, he concludes, the abstraction of the concept 'being' is effected by the "non-declaration of the inferior," not by its exclusion; the inferior is included, but in a confused way.[50] John sums up his treatment of the unity of the analogous term:

> . . . .As an effect of confusion, the various analogates are not expressed distinctly, although they are actually present in the analogous concept. Just as when we look at a multitude from a distance no particular member of this multitude is distinguished, so the multitude of the analogates, when it is attained confusedly, is the unity of the analogue, and when it is attained explicitly, it is its diversity.[51]

The forms of the various analogates are diverse, but they can be given a unity based on proportion or relation. The analogous concept unites things of diverse form. Such use of language suggests a more conventional link between words and things. An extramental thing, if we were to accept the Modist presentation,

would need a passive mode of signifying with respect to the universal and other passive modes of signifying with respect to analogous terms.

It was pointed out earlier that John notes the place of analogy in the treatment of signification. First, the term 'sign' is itself analogous.

> Inasmuch as objects are placed under an analogous concept they are not placed under a determinate and univocal member of the division of the superior, but belong analogically to both (members of this division). . . . If the term 'man' is taken as abstracting from genuine and painted, living and dead, it is logically inferior to being, but it does not belong to any definite member of the divisions of being; it is used analogously, it is not considered determinately one and it is not determinately placed in one member of the division of being.[52]

In the case mentioned, the term 'man' would refer to individuals in several different categories of being. It refers analogously to each of these things, though it refers most properly to a substance.

> The sign in general is divided analogously into natural sign and conventional sign, true sign and fictitious sign, real sign and sign of reason; it does not belong to any determinate division of being or of relation, but each of its inferiors belongs intrinsically to a determinate genus.[53]

John here states the same distinction in three different ways, contrasting the natural, true, or real sign with the conventional, fictitious sign of reason. 'Sign' is thus one of the terms referring to a confused multitude. This analysis suggests the weakness of the connection between the natural sign and the conventional

sign.

John distinguishes the relationship between a conventional sign and what it signifies from the relation of an analogous concept to its inferiors.

> The significative sound does not signify by virtue of its intrinsic nature, but by imposition, i.e., as an effect of application. Whereas one and the same sound can lend itself to several applications, it is impossible that several natural representations should belong to one and the same concept, since the essence of the concept consists in representation.[54]

John here merely repeats Aristotle's observation that words can be equivocal, but concepts cannot, since significant sounds can represent extra-mental things as an effect of application.

It does not seem that application or convention can erase this distinction between equivocal and analogous terms. John says the following concerning metaphor:

> But men are used to comparing things with each other on account of resemblances or connotations that the things imply, and the name of a thing comes to be applied to another thing. Under the name so transferred the comparison or connotation is, so to speak, concealed and expressed indirectly. The thing to which a name is applied by metaphor (e.g., the brave man) is (implicitly) compared to the object that the name properly designates (e.g., the lion), but this does not mean that the name signifies that thing ('lion' does not signify brave man), even in secondary fashion.[55]

The diversity of essences thus prevents a metaphor from becoming analogous. 'Lion' refers to a specific form. This differentiates its signification from that

of terms like 'sign' which refer to a confused multitude.

This chapter has suggested the extension and care of John's discussion of signification. My contention is that John shows the importance of form in a particular theoretical approach to signification without causing the confusions Ockham had feared. He resembles Ockham in his definition of the sign and distinction between various kinds of signs. He attributes a greater reality to relations than Ockham had, and he places the sign within this metaphysical category. Like Ockham, he regards the conventional sign as a being of reason. Finally, his discussion of analogy suggests that the notion of form is insufficient for a full theory of signification. Some of the more important philosophical and theological terms have a qualified unity differing from the unity of univocal terms. Before proceeding to a statement of conclusions, the next chapter will consider some historical evaluations of the Modists.

NOTES

Chapter IV

[1] Quoted in Peifer, The Mystery of Knowledge, pp. 53-54.

[2] Simon et al. Material Logic of John of St. Thomas.

[3] Ibid.

[4] Peifer, p. 151.

[5] Ibid.

[6] Aquinas, Summa Theologiae I, q. 85, art. 7 ad 2.

[7] Peifer, p. 163.

[8] Simon et al., p. 388.

[9] Ibid., p. 389.

[10] Ibid., p. 396.

[11] Ibid.

[12] Ibid., p. 401.

[13] Ibid., p. 403.

[14] Ibid., p. 395.

[15] Ibid., p. 397.

[16] Ibid., p. 147.

[17] Ibid., p. 400.

[18] Ibid., p. 430.

[19] Ibid., p. 307.

[20] Ibid.

[21] Ibid.

[22] Ibid., p. 308.

[23] Ibid., p. 313.

[24] Ibid., pp. 319-320.

[25] Ibid., p. 325.

[26] Ibid., p. 327.

[27] Ibid., p. 227.

[28] Ibid., p. 231.

[29] Ibid., p. 325.

[30] Ibid., p. 31.

[31] Ibid., pp. 331-332.

[32] Ibid., pp. 335.

[33] Ibid., p. 339.

[34] Ibid., p. 60.

[35] Ibid., p. 66.

[36] Ibid., p. 73.

[37] Ibid., p. 75.

[38] Ibid., p. 141.

[39] Ibid., p. 142.

[40] Ibid., p. 147.

[41] Ibid., p. 150.

[42] Ibid., p. 152.

[43] Ibid., p. 154.

[44] Ibid.

[45] Ibid., p. 156.

[46] Ibid., p. 157.

[47] Ibid., p. 159.

[48] Ibid.

[49] Ibid., p. 172.

[50] Ibid., p. 173

[51] Ibid., p. 175.

[52] Ibid., p. 404.

[53] Ibid.

[54] Ibid., p. 147.

[55] Ibid., p. 169.

CHAPTER V

CONCLUSIONS

John Poinsot thus incorporated some basic points found in the Modist grammars into his own treatment of signification, indicating certain points about which his views differed from those of Ockham. Ockham's treatment of signification differs considerably from that of the Modists, but he agrees with them on many fundamental issues. The later Ockhamists and Renaissance grammarians completely lose sight of the merit of the speculative grammars. Historical criticism of these writers has reflected this negative evaluation. After surveying some of the more important literature, I will offer a few brief conclusions regarding the contribution of the Modists.

Part 1: Critical Response to the Modists

Many historians of linguistics have taken the Modists to task for their imposition of logic and metaphysics on grammar. Gilson, who views their work

unsympathetically, summarizes their attitude towards grammar.

> . . . .The grammarians of the thirteenth century noticed that each language raised two sorts of problems, some proper to the language in question (Hebrew, Greek, or Latin grammar), others common to all languages (what is a noun, a verb, an adverb, etc.) The first sort of problems could not become an object of science; the second sort of problems, on the contrary, could be taught in a scientific way on account of their generality.[1]

Gilson is not here referring to the Modists, but to their immediate predecessors, who developed the notion that grammar could be a science. The speculative grammars deal with both kinds of questions--those particular to Latin and those common to all languages--but they often suggest that they are merely using Latin parts of speech to exemplify general principles. Gilson then mentions some specific aspects of these grammars.

> Hence the progressive constitution of what was to be called later on "speculative grammar" (grammatica speculativa), whose object it was to teach the general rules followed by the human intellect in expressing itself, namely, its various "ways of signifying" what it thinks (modi significandi). Thus conceived, grammar could become a science and be taught as a true learning because its object was universal and its conclusions deducible from principles.[2]

Here, Gilson speaks of the Modists. Thomas of Erfurt's work was called Grammatica Speculativa, and he deals with the modi significandi. The Modists try to show that the actual properties of words result from the metaphysical features of the realities they signify. The historian mentions specifically one of the outstanding men among

the theoretical grammarians, the remarkable Roger Bacon.

> As Roger Bacon vigourously puts it: "Grammar is substantially the same in all languages, even though it may undergo in them accidental variations." He himself was keenly aware of the irreducible nature of particular languages and of the importance of their study; no language, he said, can be translated into another without losing its proper qualities. Bacon did not want to suppress particular grammars; he merely conceived the possibility of a general one; the universal grammar of human language, taken precisely qua human.[3]

In Roger Bacon, as in the Modists, 'substance' and 'accident' take on a broader meaning.

H.O. Taylor detects a beneficial influence in the efforts of these logically-trained grammarians.

> . . . . Dialectic brought both good and ill, proving itself helpful in the regulation of syntax, but banefully affecting grammarians with the conviction that language was the creature of reason, and must conform to the principles of logic.[4]

Taylor thus faults the Modists for their eagerness to show that grammar follows directly from logic. He goes on to quote from a second outstanding predecessor of the Modists, Robert Kilwardby.

> One likewise notes with curious interest that, from their dialectic training, apparently, grammarians first found as many species of grammar as languages, and then forsook this idea for the view that, in order to be a science, grammar must be universal, or, as they phrased it, one, and must possess principles not applicable specially to Greek or Latin, but to congruous construction in the abstract; "de constructione congrua secundum quod abstrahit ab omni lingua speciali," are the words of the English thirteenth-century philosopher and grammarian, Robert Kilwardby.[5]

Taylor repeats Gilson's observation that the speculative grammarians sought principles common to all languages.

This led them to the general discussion of the sign and of signification which has been the focus of this paper.

Many grammarians have judged this influence to have been almost entirely negative; Prof. R.H. Robins and Charles Thurot are particularly harsh on this point. Robins regards the Modist view of language as "narrow."

> The relation between logic and grammar as they saw it was that by logic we arrive at truth and knowledge, and by grammar we are enabled correctly to express and communicate them in words. Language was for them the verbal expression of the thoughts of the intellect. This extraordinarily narrow and distorted conception of language has persisted into modern times and seriously hindered linguistic studies.[6]

Robins accurately characterizes the Modist view of the relation between logic and grammar. His view that this is "narrow and distorted" may result from his thinking that the Modists recognized no other purpose for language than that of signifying affirmative scientific propositions. They did concentrate on such use, but they did not hold that language served no other purpose; even the inclusion of the interjection within the analysis of parts of speech confirms that they knew they were emphasizing a particular aspect of language, that aspect of most interest for logic.

Thurot focusses criticism particularly on the method of the speculative grammars.

> As for the method of grammarians of the Middle Ages, it cannot be defended. It was poor both as a way of teaching and as science. They made the mistake of giving to authentic texts an authority which only belongs to the facts and to reason;

> they were mistaken in trying to explain the facts instead of studying them; finally they were wrong in basing their explanations on principles which were stranger than those they were seeking to explain: forgetting that Aristotle had said that each science has its proper principles, and not dreaming that metaphysics could not furnish the principles for grammar. All their reasonings are no more than vague subtleties, fallacies, which cannot be of any use today.[7]

This is a powerfully expressed criticism. In speaking of authoritative texts here, Thurot is no doubt referring to Priscian's grammar and Aristotle's logic and metaphysics. The Modists build from these basic works. It is true that they believed that the explanations they provided for the principles of Priscian's grammar represented an advance. Thurot notes Aristotle's remark that each science must have its proper principles. To seek to find in metaphysics an explanation for the parts of speech certainly is to depart from Aristotelian principles. With respect to the last point, I have attempted to show that the Modists use of *form* in the explanation of signification must be distinguished from their effort to deduce particular parts of speech from Aristotelian metaphysics. There is validity, then, in Thurot's criticism. However, this departure from Aristotle suggests that the Modists did not slavishly follow the texts with which they were working. They hoped to use Aristotelian principles to offer a further explanation of language, going beyond what Aristotle or Priscian had done.

Recently, linguists have taken up again some of the general problems considered by the Modists. Some historians have called for a re-evaluation of medieval grammar. G.L. Bursill-Hall praises highly the Modist investigations.

> We must recognize that grammatical theory made tremendous advances in the Middle Ages and they, in the course of their speculation, were led to consider problems in grammar which are still of great concern to the linguist of today, e.g., universals, adequacy, deep structure, and the incorporation of meaning into grammatical statement.[8]

Bursill-Hall concurs with Taylor's contention that logic was helpful in certain respects in the development of grammar. He singles out Thomas of Erfurt for particular praise.

> There is every reason to consider Thomas's grammar the most important achievement of the Modistae. It was certainly the most widely produced and most widely commented during the Middle Ages; but in terms of internal evidence, the Grammatica Speculativa seems to be the most complete grammar available to us. . . . Thomas's work . . . shows the refinements of time and presumably the results of a period of intensive speculative activity.[9]

Here, Bursill-Hall comments favorably on the "speculative" aspect of these grammars. He has more sympathy than Thurot toward the effort to find explanations of grammatical phenomena.

He agrees, though, that the Modist effort to develop grammar using strictly semantic criteria as the basis for a hierarchy of parts of speech is a blind alley, from the point of view of grammar.

> There is also a very definite hierarchy in the system of partes orationis, which is structured in terms of the essence of the partes orationis; we have therefore a clear-cut division (which happens to coincide with the division between the declinable and indeclinable partes). . . . The highest places in the hierarchy are filled by those partes which express 'ens' or 'esse' in their general modes of signifying; these are the nomen and pronomen, verbum and participium, which are collectively referred to as 'magis principales.'[10]

When faced with the necessity of developing grammar without the help of semantic criteria, the Modists actually fare better.

> We find then that the loss of the matter/form contrast compelled the Modistae to resort to formal criteria in their description of the indeclinables, and since their morphosemantics is equally impossible, the Modistae used formal syntactic criteria to establish their indeclinable parts.[11]

Because the parts of speech they regarded as less important had little evident relation to substance, the Modists developed the aspect of grammar dealing with these parts of speech with little effort to apply semantic criteria. Bursill-Hall notes that these grammars contributed to the development of syntax.

> Martin's (Martin of Dacia) and Thomas's sections on syntax represent an attempt to break away from tradition and, despite their many shortcomings, become a concise, very systematic and as a result very original statement of syntactic theory.[12]

Bursill-Hall echoes here Taylor's commendation of a particular influence of logic in the development of grammar. Again, his description of the Modist effort highlights its similarities with contemporary efforts (of Chomsky and others) to apply logical theory to the study of

language. However, Bursill-Hall points out what he considers a fundamental flaw in Modist grammar - their effort to interpret Latin in such a way that it would conform very well to their metaphysics.

> It is interesting to see that the philosophical and logical training of the Modistae made them, without realizing it, create a syntax which is in actual fact based on the favourite sentence-type of Latin; their motive was the expression of substance which must somehow be in a state of flux, hence the requirement of suppositum and appositum, and yet it was ultimately the structure of their language which forced them to this.[13]

Here, Bursill-Hall oversimplifies the question. The argument that an assertion requires at least two different kinds of words can be traced back to Plato's Theaetetus. Individual words cannot perform the same function as propositions. The need for a complex (that is, for a structure with different kinds of parts) may result from the nature of signification and not from the structure of Latin.

Bursill-Hall advances beyond many earlier writers in interpreting speculative grammar as part of a genuine tradition leading to contemporary grammar and linguistics. His criticism is free from the exaggeration found in Robins and Thurot. He can see the similarity between the precise systematization of the Modists and recent efforts to establish a more truly scientific foundation for the study of language.

I have abstracted from strictly grammatical questions, though I agree with Bursill-Hall that the Modists err

in extending metaphysical explanation to particular parts of speech. The treatment of signification in the speculative grammars, if distinguished from the grammatical exaggerations, merits attention. The Modists, like the terminist logicians, apply the distinction between matter and form to the word and to the proposition. This places them within the philosophic tradition as well as within the linguistic tradition. Nominalist objections reflect on their theory of signification, and John Poinsot's logic takes up some of their themes.

Gilson notes the influence of grammar on the development of medieval logic. He first offers another brief description of the work of the Modists.

> The history of logic in the fourteenth century is complicated by at least two elements foreign to logic properly so-called: grammar and metaphysics. . . . In the fourteenth century, at the same time when grammar was invading metaphysics through logic, metaphysics invaded grammar. This movement, visible ever since the twelfth century, gave rise to "speculative grammar" (grammatica speculativa). Its two characters are: 1) to be an abstract speculation about the classification and functions of words in language; 2) to be, by virtue of its very abstraction, independent from the grammars of particular languages.14

Even this brief passage suggests that Gilson regrets the blurring of boundaries between these three disciplines. In fact, Ockham's criticism of the Modists could appear in these terms - they failed to distinguish properly, he would suggest, between the properties of real things and the properties of the signs we use to represent them.

John Poinsot attempts to show the place of signification in the metaphysical order; a natural sign is a real relation, while a conventional sign is a relation of reason.

Gilson notes that contemporaries of the Modists did not resist this invasion.

> This intrusion of logic into grammar was resented by a few "humanists" but welcomed by many other grammarians, the more so as, most of the time, the same men were equally competent in both disciplines. There is a visible continuity from the definition of "word" (vox) by Priscian (I,1; Hertz, I, 5) to its nominalistic interpretation by Abelard (ed. Geyer, 37-38; 124-125). Grammar is nominalistic by definition; a logician can carry its nominalism from grammar to logic, then to metaphysics. In the fourteenth century, at the same time when grammar was invading metaphysics through logic, metaphysics invaded grammar.[15]

The historian makes several important observations here. First, the speculative grammarians were capable logicians, familiar with Aristotelian terminology. Second, they developed ideas that had been present in the work of earlier scholastic writers (e.g., Abelard). Third, this was a case of mutual influence; grammar found its way into metaphysics. In the later Ockhamists, we find evidence that some philosophers did mistake grammatical arguments for metaphysical arguments. The passages examined earlier from Robert Holkot's work suggest such an error.

The work of the later Ockhamists drew a strong responsefrom their contemporaries. Gilson discusses John Gerson's reaction to the philosophic confusion of the fourteenth century.

> The evil that needed curing is remarkably described by Gerson in his Fifty Propositions on the modes of signification (1426). . . . When he cast his eyes on his own university, the chancellor discovered there only a general confusion of the orders of knowledge, each one using the mode of signification proper to a certain discipline and another object. He saw the masters of grammar, whose object is the congruity of discourse, solve their problems by methods proper to logic, whose object is the truth or falsity of propositions, while masters of logic claimed to solve by those same methods the problems of metaphysics, a science which does not bear upon propositions but upon things. And he saw that grammarians, logicians, and metaphysicians believed that they could solve the problems of theology by all these methods at once, as though theology had not its own methods and its own object, which is the word of God.[16]

This suggests the confusion of the era of the Modists. Again, Gilson's criticism here bears more on the work of the later Ockhamists than on that of the Modists. Certainly he would regard their efforts to deduce Latin grammar from metaphysics as misguided. At the same time, the distinction he makes between grammar and logic matches that found in Siger of Courtrai. Moreover, these grammarians did not attempt to resolve metaphysical or theological questions on the basis of their conclusions in grammar. Gilson here re-constructs the chaotic state of philosophy; such a perception no doubt pushed many of the Renaissance writers toward simplification in grammar and logic.

J.P. Mullally, without evaluating the speculative grammars, suggests their interest for philosophers.

> One of the most important and influential products of the middle ages, which has thus far received little attention from historians of

> philosophy, was the development of a philosophical grammar by the so-called Modistae. The oldest known example of it is the Summa Grammaticae of Roger Bacon; the most widely known is the Grammatica Speculativa (also known as the Tractatus de Modis significandi) of Thomas of Erfurt, which was formerly attributed to Duns Scotus. The speculative grammar, which was fabricated in tracts of this nature, is important because theologians made copious use of its fixed precise terminology and because it was the subject of attack by the Ockhamists who wrote tracts Destructiones modorum significandi.[17]

This passage suggests several further areas for investigation. First, this work has not concerned itself with the earlier speculative grammars, such as that of Roger Bacon. Second, it has not considered the theological use of the notion of modes of signification. I have discussed the differences between the Modist view of signification and Ockham's view and have pointed up similiarities between the speculative grammars and John Poinsot's inquiry into signification.

William Barrett, in an unpublished master's essay, notes particularly the neo-Platonic influence in Thomas of Erfurt's speculative grammar. He takes the work to be representative of Duns Scotus' thought, and he notes departures from the views of Aristotle. Moody's brilliant Logic of William of Ockham no doubt influenced Barrett; Moody takes much of Ockham's criticism to be directed to a neo-Platonic Aristotelianism found in Scotus.

Barrett points out that the disciplines which study signs cannot be true sciences according to Aristotelian standards.

> For the 'why' which science should ask for must eventually terminate in a definition, and this definition will be scientific only if it formulates some nature. But in a study of signs, definitions are only of names. The difficulty in such a science can be grasped in another way: it lies in the doubtful being of a sound or concept apart from what is signified or conceived; accidents not readily separate from that in which they are cannot be conceived apart from their subject.[18]

Barrett here interprets Ockham as saying that logic is not a science, though in fact what Ockham said was that logic is not a real science (i.e., it is not a science concerning real things). He indicates the difficulty of placing the sign in a metaphysical category. John Poinsot resolves this with his treatment of relation.

Duns Scotus joined Augustinian and Aristotelian elements; in Barrett's view, this combination led Thomas of Erfurt to envision a true universal grammar, that is, a science of signs expressing truths regarding language as such. Barrett characterizes these truths as <u>a priori</u>.

> As in mathematics the principles are not generalizations of sense-experience, but rather obtained by operation upon intelligible matter, so in the treatise we are considering the principles are derived intellectually from considerations of significance as such, and not generalized empirically from language. This work is an <u>a priori</u> grammar.[19]

The Modists approach grammar with principles not derived empirically from the study of language. However, this results from their treatment of the conventional sign as subsidiary to and dependent upon the natural sign. The primary example of signification is the concept.

Understanding of the concept illuminates the conventional sign for the Modists.

Barrett also contends that the Modists blur the distinctions between sciences. They seem to place word-sciences on a par with those studies which examine real extra-mental things. He describes Thomas of Erfurt's division of the sciences.

> Thus we say 'man is an animal,' 'man is a species,' 'man is a noun.' The three types of proposition illustrate at the same time the division of the sciences into real, rational, and sciences of expression (scientia sermocinalis).[20]

He does not take into account, though, that the Modists used the same terminology as the terminist logicians. The terminists sought to develop a treatment of the universal and of science that would be of use for any philosopher, whether he were nominalist, extreme realist, or moderate realist. The use of the term scientia sermocinalis should therefore not be understood to mean that word sciences have the same status as natural sciences.

Barrett notes that the speculative grammars could be traced to some brief remarks in Aristotle's De Interpretatione, where "noun and verb are treated in a way that parallels that given by Thomas of Erfurt."[21] He contends that the blurring of the distinction between speculative and practical sciences suggests Augustinian influence.

> Thus the Speculative Grammar offers itself as an instance of both a demonstrative, or theoretic, science (the title itself is indicative, added the demonstrative procedure we have already indicated)

> as well as an instrument. This in itself may be considered a sign for locating the work in a philosophic tradition. For the identification of speculative and practical is essentially augustinian. In Aristotle distinction is kept sharply between the two: in a speculative science the principles lie in the very natures studied; but the principles of a practical science reside in the activity itself. . . . In the 'Grammar' systematic knowledge of signs is sought in terms of the principles of signifying, which are then instrumental to the activity of expression.[22]

The author interprets the effort to develop a speculative grammar as an indication of augustinian influence. I would suggest rather that one aspect of these works--the direct transition from general considerations regarding signification to particular considerations regarding Latin--particularly indicates a neo-Platonic influence. The repeated application of the matter-form distinction also suggests such an influence. The speculative or theoretical aspect of the Modist grammars has some merit, and John Poinsot incorporates this aspect into his treatise on logic.

Recent work in the history of linguistics and in the history of philosophy has evaluated the work of the Modists more highly than did earlier histories. In grammar, the systematic studies of the Modists are similar in form and in inspiration to the transformational grammars. The Modists also sought universal features of language. In philosophy, more at-ention has been given to Ockham's theory of signification and to the work of the terminists. I have suggested here that the Modist treatment of

signification and their application of the notion of form in this area merits consideration. An exaggerated grammatical realism, which appears also in the Modist works, blurs distinctions between sciences. Gilson attributes to this realism some of the confusion of the fourteenth century. Barrett traces it to an Augustinian influence.

The method of the speculative grammars was poorly suited for the development of particular grammars. This helps to explain the basis for Robins's and Thurot's criticism. Grammarians needed to reject deliberately the semantic concentration of Modist grammar in order to grasp and interpret particular facts related to Latin or to the vernacular languages. Later grammarians, like the Renaissance men of letters, approached language from a perspective that differed from that of the Modists and even seemed opposed to it. But it is fairer to the Modists to interpret their work as a contribution to that aspect of language study which is now called semantics. Their exaggerated confidence in the power of reason to provide explanation and justification for particular facts of grammar mars work which is in many respects sound.

Part 2: Some Particular Questions

After examining the views of the Modists and their critics and considering John Poinsot's clarifications, the relevance of these observations to theoretical issues mentioned earlier becomes an issue. First, why should

historical observation, tied to particular authors and theories, influence consideration of a theoretical issue? Second, if some link exists between particular fourteenth-century doctrines and contemporary questions about language, what conclusions can one derive from the Modists' work and from John Poinsot's logic?

Some striking similarities exist between fourteenth-century debates on epistemological questions and contemporary developments in the theory of language. Logicians had notes this before; Moody has called attention to the contribution of medieval logic. The Modists also analyze phenomena which remain puzzling today. This analysis differs from familiar approaches in such a way that it sheds new light on some contemporary questions. The Modists attempt to describe and define signification and to indicate its relation to knowledge and to the world. This attempt, though difficult to interpret because of its technical terminology, sketches an analysis which avoids some of the confusions which beset even contemporary treatments.

Our study began with the observation that three fundamental perspectives on signification parallel the three familiar positions regarding the universals. An extreme realist, Augustine for example, conceives of the universal (or form) as somehow existing apart from the mind and apart from the thing known. The nominalist (Nicholas

of Autrecourt, for instance) denies any reality whatsoever to the universal. The moderate realist or conceptualist affirms that the universal signifies a reality but has not existence apart from the mind.

In the study of language, the Modist treatment is tainted with extreme realism. The three modes--the mode of being, the mode of understanding, and the mode of signifying--seem to refer to three ways of existing possible for the form. This could easily be understood to suggest that the universal had reality apart from its existence in the mind. The repeated use of the distinction between matter and form suggests that the Modists need to be clearer about the differences between extramental substances and the signs referring to them.

Ockham reacts strongly against extreme realism. It has been noted above that his treatment of natural and conventional signification matches that which is at the basis of speculative grammar. However, he emphasizes the point that the universal is nothing--neither substance nor accident--apart from the mind. His repetition of this point and his contention that it is of great importance indicates his concern that the unclear use of the notion of form in the Modist analysis of parts of speech could become a widespread error. Ockham wanted to reduce the other metaphysical categories to substance and quality.

John Poinsot, aware of Ockham's objections, nevertheless gives considerable importance to form in his treatment of signification. Beginning from the distinction between the natural and the conventional sign, he goes on to distinguish carefully between the two. He places the sign within the category of relation; unlike Ockham, he does not feel that this category can be reduced to substance or accident. Because 'sign' is itself an analogous term, John's treatment of analogy is of interest. Moreover, the use of various analogues suggests that the notion of form is not in itself sufficient for an understanding of signification. In different ways, John and William of Ockham both underline the importance of context for the proper understanding of terms.

The writers discussed here agree that the mind or soul has a type of existence different in kind from that of the body whose principle of life it is. The use of the matter-form distinction in the discussion of language suggests that the resolution of the problem of signification parallels the resolution of questions concerning the relation of soul and body. To a certain extent, this parallel reappears in contemporary debate. For example, what is the nature of the language acquisition device? Questions regarding signification naturally depend on questions regarding the structure of mind. Curiously enough, the suggestion that there must be an elaborate structure to

explain this remarkable phenomenon resembles somewhat the highly articulated grammar of the Modists. But in the earlier debate, Ockham and John Poinsot were not contending that the mind is material or that it is a simple mechanism. They were arguing rather that it was immaterial and that it could make use of many different possible systems of conventions in order to signify its concepts and reasoning.

In contemporary discussion, some theories of language contend that explanation of this phenomenon requires no recourse to mind (that is, to any immaterial principle), while others insist that language only depends on mind. Behaviorism (as found, for example, in the work of B.F. Skinner) exemplifies the first approach. Stimulus-response theory, on this view, provides an adequate basis for the analysis and explanation of verbal behavior. On the other hand, those who uphold the existence of innate ideas interpret speech and writing as the application of material tags to a highly-articulated mental structure. Such writers treat words as the pale reflections of archetypal concepts. Even the apparently anti-Platonic thought of Benjamin Whorf, for instance, supports the view that there is a tight bond between thought and language. His analysis suggests that a speaker of any language would be bound to treat concepts of space or time implicit in his grammar as changeless Ideas.

In this contemporary discussion, as in the medieval dispute, questions concerning meaning interact with

considerations regarding the mind. For the Modists, the modes of understanding and the modes of signifying, materially the same, differ formally. Language gives a fractured material representation of the products of the mind, which is itself immaterial. The grammatical categories reflect aspects of real things, but some categories have little connection with substance. Speculative grammar interprets grammatical categories in terms of Aristotelian metaphysical categories. A sentence needs certain elements to reach two distinct levels of completion (perfection, in the Modist terminology); at the first level, the sentence expresses the speaker's (or writer's) thought, while at the second level, it succeeds in causing similar conceptions to arise in the listener's (or reader's) mind. The Modists try to balance natural and conventional elements. The human mind reasons discursively and understands things by analysing them into parts. The Modists treat as evident what contemporary works might regard as problematical. Does the word express the content of a mental act? Can the word trigger the same mental act in the hearer? For the Modists, the question is not whether this occurs, but how. The notion of form provides the key. A material sign presents a form (to which it is conventionally attached) to the hearer, who abstracts form from matter, just as the person who speaks abstracts form from matter in the act of knowledge, then communicates the form abstracted to others.

Ockham and John Poinsot criticize this notion. The individual word, since its link with any form is conventional, cannot bring the form to the mind. Somehow, the complex, though built up from parts each of which has only a conventional link to extra-mental things, can effectively communicate knowledge of these things. The Modists suggest that this process operates through the presentation of the same form that is known to the intellect. In fact, as the criticism of Ockham and Poinsot shows, the explanation cannot be this simple. Grammatical realism seems to provide a simple explanation of signification, but a careful examination of the position reveals insoluble difficulties.

Some philosophers have tried to assimilate language to other forms of representation. In his Cratylus, Plato (perhaps ironically) describes an ideal language in which each word would clearly present what it signified; sound or physical appearance would lead the mind directly to the signification of the word. Wittgenstein's picture theory treats the statement as a transparent and universally intelligible presentation of a state of affairs. Wittgenstein draws out this analogy, employing "logical space" as a metaphor to clarify the notion of logical possibility. At the other extreme in contemporary discussion, W.V. Quine's denial of the possibility of radical translation implies that men cannot find truly

equivalent statements; there can be no objective determination of synonymy. His familiar aphorism that to be is to be the value of a variable suggests that many interpretations are possible for a given system of signs and that the world does not force any of these interpretations on the person interpreting such a system.

Nothing very similar to a picture theory appears during the era discussed in this paper. The Modists describe a complex system of signification in which even individual signs have features that lead the mind to knowledge of what they signify. Nevertheless, this does not take place because the sign or proposition functions as a picture. The Modists use 'form' to refer to an abstract and immaterial reality. In discussing the universal, Ockham argues that the mind has an ability to picture real things. For him, the concept or natural sign can be compared to a picture of what it represents.

Certain objections to the theory of signification traced in these pages merit consideration. First, this view may appear balanced simply because it never comes to grips with the question of true skepticism. This must be conceded. The Modistae themselves offer little defense even to Ockham's rather mild critique. John Poinsot defends his views from "nominalism," but he does not address himself to the suggestion that concepts or words provide the bounds of thought. Should these writers have

tried to prove that signification is a distinct human phenomenon best understood in terms of the explanatory concepts they developed? Doubtless they understood possible skeptical arguments (for example, from Augustine's criticism of the Academic skeptics), but they make little attempt to answer them. Two brief defenses could be offered on this point. First, deep-rooted skepticism blocks the initial steps needed to establish a science. Because these writers took for granted some basic premisses about the phenomena they discussed, they could investigate them methodically. Physicists need not demonstrate the existence of the material world. Several recent philosophers of logic have tried to avoid epistemological issues, at least in the initial stages of their work. Second, the Modists regarded signification as an initial empirical observation. For these writers, a thorough causal analysis of linguistic phenomena would lead to recognition of an immaterial principle, the soul. Their works lack such analysis, but they were convinced that this had already been clearly established. The need for such justification appears in the light of later works.

Fairer standards, when applied to Modist grammar, reveal several weaknesses. Though earlier writers (for example, Roger Bacon) had warned of the need to study languages, the Modists generalize broadly from considerations of Latin, regarding it as the ideal language. Though they

distinguish between metaphysics and grammar, they attempt to link in a novel way considerations found in Aristotle's metaphysics and Priscian's Latin grammar. They can never convincingly establish a connection. Finally, medieval humanists (e.g., John of Salisbury) and later the Renaissance men of letters deride the tyranny of dialectic. (Occasionally, contemporary critics likewside complain that the effort to develop a fully scientific study of language can be stifling, impairing the natural development of style.) John Poinsot's work modifies and corrects the weaker elements in the speculative grammars, emphasizing in his own work the development of a theory of signs. But his work, like that of the Modists, makes use of the matter-form analysis initially developed by Aristotle.

The Modists, Ockham, and John Poinsot developed a theory of language which rests on presently unpopular metaphysical premisses - the dual material-immaterial constitution of man, the analysis of material beings into matter and form, the dependence of knowledge on immateriality, and the relation of all the particular sciences to metaphysics. But the realism found in these works provided the basis for Peirce's efforts in this field. Can a Cartesian linguistics succeed? It is logically possible, but not highly plausible. Problems of language trouble Cartesian theory, since it can easily founder on the difficulty of relating mind to extended being. Language also provides

a challenging problem for the strict materialist, unless he simply denies that signification is a distinctive phenomenon requiring explanation.

The Modists attempt such an explanation. Faced with a puzzling reality, they apply to its analysis the Aristotelian account of causality. John Poinsot, realizing that the sign must be carefully distinguished from real substances, treats it as a real relation (the natural sing) or a relation of reason (the conventional sign) and places the scientific study of this reality within logic. Poinsot distinguishes his study from metaphysics. Like the Modists, he accepts knowledge and signification as evident realities. More recently, C.S. Peirce followed a similar path. He, too, would argue that an intelligible content is found within material beings and, in a distinct manner, in men. This intellectual optimism--confidence that material beings reveal their causes upon analysis--represents a basic philosophic option. What degree of confidence can one place in sensation, or in simple observations? The Modists and John Poinsot regard knowledge and signification as realities which are recognized clearly by men.

Two historical points could be derived from this study of the Modists. First, the history of human thought does not trace a line of irreversible and constant progress. The Renaissance gained in appreciation for the classics, appreciation of proper historical method, and breadth of

interest. But it lost sight of many developments in logic, and I have argued that it lost the initial stages of a philosophical understanding of language. John Poinsot took up and clarified these initial arguments. Second, in the treatment of basic philosophic questions, certain fundamental options appear. Similar choices in these fundamental options lead to the development of similar treatments of language, mind, and the world. New interest in questions of signification leads to contemporary approaches which, though couched in different language, resemble the alternative perspectives of Ockham, Poinsot, or the Renaissance grammarians.

NOTES

Chapter V

[1]Gilson, History, p. 314.

[2]Ibid.

[3]Ibid.

[4]H. O. Taylor, The Medieval Mind, Vol. II, pp. 154-155.

[5]Ibid.

[6]R. H. Robins, Ancient and Medieval Grammatical Theory, p. 89.

[7]Charles Thurot, Notices et Extraits . . . , p. 504.

[8]Bursill-Hall, Grammatica Speculative of Thomas of Erfurt, p. 26.

[9]Bursill-Hall, Speculative Grammars of the Middle Ages, p. 32.

[10]Ibid., pp. 86-87.

[11]Ibid., p. 132.

[12]Ibid., p. 291.

[13]Ibid., p. 308.

[14]Gilson, History, p. 781.

[15]Ibid.

[16] Ibid., p. 529.

[17] J. P. Mullally, The Summulae Logicales of Peter of Spain, p. lxxxii.

[18] William Barrett, The Treatise Grammatica Speculativa . . . p. 12.

[19] Ibid., p. 13.

[20] Ibid., p. 21.

[21] Ibid., p. 37.

[22] Ibid., p. 39.

SELECTED BIBLIOGRAPHY

Primary Sources:

Bacon, Roger. Summa grammaticae. (ed. Steele) Oxford: Clarendon Press, 1940.

Boethius of Dacia. Boethii Daci Opera. Pinborg, J. & Roos. H., ed. Copenhagen: Hauniae, G.E.C. Gad, 1969.

Duns Scotus. B.J.D. Scoti Commentaria. Quaracchi, 1912-1914.

Ockham, William. Summa Logicae, ed. Ph. Boehner St. Bonaventure, New York: Franciscan Institute, 1951 (Pars Prima) and 1954 (Para Secunda and Tortia Prima).

Priscian. Institutionum Grammaticarum, Vol. II & III of Grammatici latini, ed. H. Keil. Leipzig: B. G. Teubner, 1855.

Siger of Courtrai. Les Oeuvres de Siger de Courtrai. Vol. VIII in Les philosophes belges ed. Wallerand Louvain: Editions de l'Institut Superieur de Philosophie, 1913.

Thomas of Erfurt, Grammatica Speculativae. (listed above under Duns Scotus).

_____. The Grammatica Speculativa of Thomas of Erfurt, ed. G. L. Bursill-Hall. London: Longman, 1972.

Thurot, Charles. Notices et Extraite de Divers Manuscrits Latins pour servir a l'Histoire des Doctrines Grammaticales au Moyen Age. Paris: Imprimerie Imperiale, 1868.

Secondary Sources:

Aarsleff, Hans. "The History of Linguistics and Prof. Chomsky". Language, Vol. 46 No. 3 (September, 1970).

Alston, William P. Philosophy of Language. Englewood Cliffs, New Jersey: Prentice-Hall, 1964.

Anderson, James F. The Bond of Being. St. Louis: Herder Book Co., 1949.

Anscombe, G.E.M., & Geach, P. Three Philosophers. Oxford: Basil Blackwell, 1963.

Aquinas, Thomas. Commentary on the Posterior Analytics. Albany, New York: Magic Books, 1974.

_____. Commentary on De Interpretations. tr. J. Oesterle Milwaukee: Marquette University Press, 1962.

_____. Commentary on Aristotle's De Anima. tr. K. Foster and L. Humphries. London: Routledge & Kegan Paul, 1951.

_____. Disputed Question on the Soul. tr. J. Rowan. St. Louis: Herder Book Company, 1949.

_____. On Truth, tr. R. Mulligan, S. J. Chicago: Henry Regnery Co., 1952.

Aristotle. Analytica Posteriora, tr. by G.R.G. Mure in The Works of Aristotle Translated into English. London: Oxford University Press, 1950.

_____. Categoriae and De Interpretatione. tr. by E. M. Edghill in The Works of Aristotle Translated into English. London: Oxford University Press, 1950.

_____. Rhetorica, tr. W. R. Roberts in The Works of Aristotle Translated into English. Oxford: Oxford University Press, 1946.

_____. Topica and De Sophisticis Elenchis. tr. by W. A. Pickard-Cambridge in The Works of Aristotle Translated into English. London: Oxford University Press, 1950.

Baldwin, C. S. Renaissance Literary Theory and Practice. New York: Columbia University Press, 1939.

Barrett, William. "The Treatise Grammatica Speculative, Attributed to Duns Scotus: Its relation to metaphysics and to logic." Unpublished Master's thesis at Columbia University, 1934.

Bochenski, I. M. Ancient Formal Logic. Amsterdam: No. Holland Press, 1958.

_____. The Methods of Contemporary Thought. Dordrecht, Holland: D. Reidel Publishing Company, 1965.

Boehner, P. Collected Articles on Ockham. St. Bonaventure, New York: Franciscan Institute, 1958.

_____. Medieval Logic. Manchester: Manchester University Press, 1952.

_____. Ockham: Philosophical Writings. London and Edinburgh: Nelson, 1967.

_____. "Ockham's Theory of Supposition and the Notion of Truth." Franciscan Studies, Vol. 6, 1946.

Bursill-Hall, G. L. Speculative Grammars of the Middle Ages. The Hague and Paris: Mouton, 1971.

Black, Max. Margins of Precision. Ithaca, New York: Cornell University Press, 1970.

Carre, Meyrick. Realists and Nominalists. Oxford: Oxford University Press, 1956.

Cassirer, Ernst. The Philosophy of Symbolic Forms. tr. R. Mannheim as Vol. I of Language. New Haven: Yale University Press, 1953.

Chenu, M. D. "Grammaire et Theologie aux XII et XIII Siecles," Archives d'Histoire doctrinale et litteraire du moyen age X and XI 1935-36.

Chomsky, Noam. Cartesian Linguistics. New York: Harper & Row, 1966.

_____. Language and Mind. New York: Harcourt, Brace, Jovanovich, 1968.

Crowley, Theodore, Roger Bacon: The Problem of the Soul in his Philosophical Commentaries. Louvain: Editions de l'Institut Superieur de Philosophie, 1950.

Deely, John N. "The Two Approaches to Language: Philosophical and Historical Reflections on the Point of Departure of Jean Poinsot's Semiotic," The Thomist Vol. 38, #4, 1974.

Elie, Hubert, Le Complexe Significabile. Paris: J. Vrin, 1937.

Fodor, Jerry A. The Language of Thought. New York: Thomas Y. Crowell, 1975.

Fodor and Katz, J. J. The Structure of Language. Englewood Cliffs, New Jersey: Prentice-Hall, 1964.

Geach, Peter. Reference and Generality. Ithaca, New York: Cornell University Press, 1962.

Gilbert, Neal. Renaissance Concepts of Method. New York: Columbia University Press, 1960.

Gilson, Etienne. Heloise et Abelard. Appendices: I. Le Moyen Age et le Naturalisme Antique; II. Philosophie medievale et Humanisme. Paris: J. Vrin, 1938.

_____. History of Christian Philosophy in the Middle Ages. New York: Random House, 1955.

_____. Philosophie et linguistique. Paris: J. Vrin, 1969.

Greenberg, Joseph H., ed. Universals of Language. Cambridge, Mass.: M.I.T. Press, 1966.

Heath, T. "Logical Grammar, Grammatical Logic, and Humanism in Three German Universities," Studies in the Renaissance Vol. XVIII (1971).

Hyma, Albert. The Youth of Erasmus. Ann Arbor: University of Michigan Press, 1930.

Inciarte, Fernando. El Reto de Positivismo Logico. Madrid: Ediciones RIALP, 1974.

Jespersen, Otto. The Philosophy of Grammar. New York: W. W. Norton, 1965.

Katz, Jerrold J. Philosophy of Language. New York: Harper & Row, 1966.

_____. Semantic Theory. New York: Harper & Row, 1972.

Kennedy, L.A. Renaissance Philosophy. The Hague & Paris: Mouton, 1973.

Kneale, W. and M. The Development of Logic. Oxford: Clarendon Press, 1962.

Kretzmann, N. tr. William of Sherwood: Introduction to Logic. Minneapolis: University of Minnesota Press, 1966.

_____. "Semantics, History of," The Encyclopedia of Philosophy New York: Harper & Row, 1967, P. Edwards, ed.

Kristeller, Paul Oskar. Medieval Aspects of Renaissance Learning. Durham, North Carolina: Duke University Press, 1974 ed. E. P. Mahoney.

_____. Renaissance Philosophy and the Medieval Tradition. Latrobe, Pennsylvania: Archabbey Press, 1966.

_____. Renaissance Thought: The Classic, Scholastic, and Humanist Strains. New York: Harper & Brothers, 1961.

Laistner, M. L. W. Thought and Letters in Western Europe, A.D. 500 to 900. Ithaca, New York: Cornel University Press, 1966.

Lonergan, Bernard J., S. J. Verbum: Word and Idea in Aquinas. Notre Dame, Ind.: Notre Dame University Press, 1967.

Macdonald, Margaret , "The Philosopher's Use of Analogy," in Flew, Antony, ed. Logic and Language. Garden City, New York: Doubleday & Co., 1965.

Massaut, J. P. , "Erasme et St. Thomas," Colloquia Erasmiana Turonensis. Vol. II. Paris: J. Vrin, 1972

McGarry, Daniel D., trans. Metalogicon of John of Salisbury. Los Angeles, Calif.: University of California Press, 1955.

McKeon, Richard. Selections from Medieval Philosophers. Vol. I. New York: Charles Scribner's Sons, 1929.

Menne, Albert, ed. Logico-Philosophical Studies. Dordrecht, Holland; D. Reidel Publishing Co., 1965.

Michalski, K. La philosophie au xiv^{e} siecle. Frankfurt: Minerva GMBH, 1969.

Miller, Robert G. The Philosophy of Language. Albany, New York: Magi Books, 1975.

Montagnes, Bernard, O. P. La Doctrine de L'Analogie de L'Etre D'Apres Saint Thomas d'Aquin. Louvain: Editions de l'institut Superieurs de philosophie, 1963.

Moody, Ernest A. The Logic of William of Ockham. New York: Russell and Russell, 1965.

_____. Truth and Consequence in Medieval Logic. Amsterdam: No. Holland Press, 1953.

_____. Studies in Medieval Philosophy, Science, and Logic. Los Angeles: University of California Press, 1975.

Mullally, J. P. trans. and ed. The Summulae Logicales of Peter of Spain. Notre Dame: University of Notre Dame Press, 1945.

Murphy, James J. Rhetoric in the Middle Ages. Berkeley, Los Angeles, London: University of California Press, 1974.

Ong, W. J. Ramus: Method and the Decay of Dialogue. Cambridge, Mass.: Harvard University Press, 1958.

Paetow, L. J. The Arts Course at Medieval Universities with Special Reference to Logic and Grammar. Urbana, Champaign; Illinois University Press, 1910

_____. The Battle of the Seven Arts. Berkeley: University of California Press, 1914.

Quine, W. V. Word and Object. Cambridge, Mass.: M. I.T. Press, 1960.

Rijk, L. M. de Logica Modernorum (2 volumes). Assen: Van Gorcum, 1967.

Robinson, Ian. The New Grammarians' Funeral. Cambridge, Mass.: Cambridge University Press, 1975.

Ryle, G. The Concept of Mind. London: Hutchinson, 1949.

Robins, R. H. Ancient and Medieval Grammatical Theory in Europe. London: G. Bell & Sons, 1951.

_____. A Short History of Linguistics. London: Longman, 1967.

Rotta, Paolo. La Filosofia del Linguaggio nella Patristica e nella Scolastica. Turin: Fratelli Bocca, 1909.

Scaglione, A. D. Ars grammatica. The Hague, Paris: Mouton, 1970.

Seigel, J. Rhetoric and Philosophy in Renaissance Humanism. Princeton: Princeton University Press, 1968.

Simon, Yves R., Glanville, J., Hollenhorst, G. The Material Logic of John of St. Thomas. Chicago: University of Chicago Press, 1955.

Taylor, H. O. The Medieval Mind. Cambridge: Harvard University Press, 1949.

Thomson, S. Harrison, "Robert Kilwardby's commentaries in Priscianum and in Barbarismum Donati," New Scholasticism XII (1938).

Van Steenberghen, F. Aristotle in the West. tr. Johnston. Louvain: Editions de l'institut Superieur de Philosophie, 1970.

Veatch, Henry, Intentional Logic. New Haven: Yale University Press, 1952.

Weinberg, Julius. Nicholas of Autrecourt. Princeton: Princeton University Press, 1948.

Weissman, David. Eternal Possibilities. Carbondale and Edwardsville, Illinois: Southern Illinois University Press, 1979.

Wittgenstein, Ludwig. Philosophical Investigations. tr. G.E.M. Anscombe. Oxford: Basil Blackwell & Mott, 1953.

_____. Tractatus Logico-Philosophicus. Tr. D. F. Pears & B. F. McGuinness. London: Routledge and Kegan Paul, 1961.