

JOHN LOCKE'S ATTACK ON FORMALISM -
A COMPARISON OF LOCKE AND SERGEANT

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A Thesis

Submitted to the School of Graduate Studies
in Partial Fulfilment of the Requirements

for the Degree

Doctor of Philosophy

McMaster University

December 1978

JOHN LOCKE'S ATTACK ON FORMALISM

DOCTOR OF PHILOSOPHY (1978)
(Philosophy)

McMASTER UNIVERSITY
Hamilton, Ontario

TITLE: John Locke's Attack on Formalism - A Comparison of
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NUMBER OF PAGES: x, 455

ABSTRACT

In the fourth book of An Essay Concerning Human Understanding, particularly in the chapters entitled "Of Maxims" (IV:VII), "Of Trifling Propositions" (IV:VIII), "Of the Improvement of our Knowledge" (IV:XII), and "Of Reason" (IV:XVII), John Locke deals mainly with propositions, maxims, syllogisms, demonstration, and disputation. In the second book of the Essay he discusses mainly Ideas. There seems to be a connection between the manner he characterizes Ideas, the signficatory role he assigns to them (IV:XXI), and his discussion of the above mentioned topics in the fourth book. Together they constitute a critique of certain logico-epistemological doctrines and tendencies. These doctrines and tendencies, which are in this dissertation collectively labelled as "Formalism", fall within a context where Logic was considered as providing the method to obtain knowledge. They involve certain senses of "form" in the characterization of the traditional parts of logic, namely, terms, propositions, and discourse, as instruments of knowledge, warranting the use of the label "Formalism". John Sergeant's presentation of the method to knowledge exhibits the employment of senses of "form" in

the characterization of the three parts of logic for epistemological purposes. Hence, Sergeant is selected to represent this "Formalism".

John Locke (1632-1704) is well known but John Sergeant (1622-1707) has not been given due recognition. His philosophical enterprise is of significance to Lockean scholarship, not only because his views manifest to a considerable extent the logico-epistemological doctrines which Locke attacks, but also because Locke seems to have responded to Sergeant's critical response. Sergeant's views, though anticipated in his earlier religious works, become pronounced in his subsequent philosophical works, particularly in Solid Philosophy Asserted...

(1697), which is a chapter by chapter critical response to Locke's Essay. Locke had in his possession a copy of this book and had made 118 marginal comments in it. This copy is now kept at St. John's College Library, Cambridge, England. Some of the marginal comments anticipate Locke's additions to the fourth edition of the Essay. Certain additions appear to have been made in response to Sergeant's criticisms. An examination of Locke's critical views in the light of Sergeant's doctrines helps one to understand Locke's logico-epistemological views, determine with assurance the target of his attack, appreciate more fully the manner in which he organizes and develops his critique, and sense the motives behind some of the additions to the fourth edition of the Essay. Such an examination reveals the "anti-formalism" entrenched in his logico-epistemological position.

ACKNOWLEDGEMENTS

This dissertation would not have been possible if not for McMaster University and for the wholehearted sponsorship of her Department of Philosophy. I gratefully acknowledge their help.

Many of the books for this research are not readily available. I wish to thank St. John's College Library, Cambridge, England, for making available in microfilm Locke's copy of Solid Philosophy Asserted and to Professor J. W. Yolton for lending me the same. My thanks are due to the staff of Mills Library for doing their best to get for me many of the 17th century works.

I wish to thank Dr. E. S. de Beer for providing me with some valuable unpublished information concerning Sergeant's correspondence with Locke.

I owe a great deal to the members of my supervisory committee Professors J. Noxon, D. Odegard, D. L. Hitchcock and L. Greenspan for their very helpful and enlightening criticisms and suggestions. My greatest debts, which I gratefully acknowledge, are to Professor James Noxon for his thorough and painstaking supervision and for his expert advice at every stage of this production, and to Professor Douglas Odegard of Guelph University for

spending much of his time in helping me to understand Locke and for suggesting that a course paper of mine may be developed into a dissertation. Professors Noxon and Odegard patiently read through my drafts and made detailed and helpful comments. I am grateful to Dr. David L. Hitchcock for his incisive criticisms and valuable suggestions, particularly where I deal with topics of Logic.

My thanks are due to Dr. Constantine Georgiadis for his useful clarifications on Aristotelian philosophy.

I wish to thank Miss Vera Koledin for turning out such an excellent piece of typing within a short period of time.

To my wife Sarojini, who has helped me in various ways and has been always beside me during these strenuous times, I owe a special thank you. I should also thank my two sons who have not only tried their best to keep their peace at home but also have helped me to organize my desk and thereby my thoughts.

Many friends have helped me in various ways. Even though I do not mention them by name, I acknowledge their help and encouragement.

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ABBREVIATIONS

References to the works of Locke and Sergeant are cited in parentheses immediately following quotations. References to other works appear as notes at the end of each chapter. The abbreviations used are as follows:

JOHN LOCKE

Essay An Essay Concerning Humane Understanding. In Four Books. Unless otherwise specified, all references are from Nidditch's edition (Oxford, Clarendon Press, 1975). When passages are quoted or topics are mentioned from the Essay, the reader is directed to Book, Chapter and Section by a note of the form (IV:VII:4), which means Essay, Book IV, Chapter VII, and Section 4.

Works The Works of John Locke, A New Edition, Corrected. Ten Volumes, London, printed for Thomas Tegg, 1823, reprinted Scientia Verlag-aalen, 1963.

JOHN SERGEANT

Letter of Thanks A letter of thanks from the Author of Sure-Footing to his Answerer, Mr. J. T., Paris, 1666.

Reason against Raillery Reason against Raillery: (Answer to Dr. Tillotson's Preface against J. S.).

Errour Non-Plust Errour Non-Plust: or Dr. Stillingfleet shown to be The Man of no Principles.

Solid Philosophy Asserted Solid Philosophy Asserted, Against the Fancies of the Ideists: or The Method to Science farther illustrated, with Reflexions on Mr. Locke's Essay concerning Human Understanding, London, 1697.

<u>Non-Ultra</u>	<u>Non-Ultra: or a letter to a learned Cartesian; Settling the Rule of Truth and First Principles, Upon their Deepest Grounds, London, 1698.</u>
<u>Transnatural Philosophy</u>	<u>Transnatural Philosophy or Metaphysics: demonstrating the Essences and Operations of all Beings whatever, which gives the Principles to all other Sciences, London, 1700.</u>

The words and phrases which are in italics in the original texts are underscored when quoted.

JOURNALS

<u>J. H. I.</u>	Journal of the History of Ideas
<u>J. Hist. of Phil.</u>	Journal of the History of Philosophy
<u>C. J. of Phil.</u>	Canadian Journal of Philosophy
<u>A. J. of Phil.</u>	Australasian Journal of Philosophy
<u>Phil. Rev.</u>	The Philosophical Review
<u>Phil. Quart.</u>	The Philosophical Quarterly
<u>NQ</u>	Notes and Queries
<u>MS</u>	The Modern Schoolman
<u>D</u>	Dialogue
<u>PS</u>	Philosophical Studies

CHAPTER I

INTRODUCTION

My main task in this dissertation is to examine some of Locke's logico-epistemological views. They are found mainly in his An Essay concerning Human Understanding.

In the final chapter of the Essay (IV:XXI) Locke presents Ideas and Words as signs (IV:XXI: 4 & 5). I do not deal with his theory of language and hence my preoccupation is not with his views on words as signs. My concern is rather with his idea-signs. When I relate the signficatory role he assigns to ideas to his characterization of them as "objects" or "immediate objects" (I:I: 8; II:VIII: 8; IV:I: 1; Correspondence with Stillingfleet, Works, Vol. IV, pp. 132-3, 134, 144, 145, 233, 357, 362; Marginal Comment No. 3, Preface, p. 8; Elements of Natural Philosophy, XII, Works, Vol. III, pp. 329-30), I find that his theory of ideas goes against some of the prevalent views concerning the nature and functions of ideas. Hence, his theory may be described as a critique of ideas.¹

In the fourth book of the Essay, particularly in the chapters entitled "Of Maxims" (IV:VII), "Of Trifling Propositions" (IV:VIII), "Of the improvement of our Knowledge" (IV:XII), and "Of Reason"

(IV:XVII) Locke's discussion of certain logico-epistemological topics like propositions, maxims, syllogisms, and demonstration has also a critical import.² An examination of the relevant texts reveals that Locke is involved in not merely describing the above topics but also in criticizing certain views concerning their nature and function.

There seems to be a close connection between the logico-epistemological criticisms as given in the fourth book of the Essay, and his characterization of ideas, as found mainly in its second book.³ His criticisms seem to be at three levels - at the level of ideas, propositions, and demonstration or inference.

In this dissertation, the target of Locke's logico-epistemological critical enterprise is labelled as "Formalism". In the light of such a description of his target, Locke may be called an "anti-formalist".⁴ I have selected John Sergeant as the most appropriate representative of the "Formalism" which Locke attacks. In Chapter II, I give a brief account of the doctrines or tendencies which may collectively be labelled as "Formalism", and indicate the main reasons for so labelling them. I also give an account of Sergeant's philosophical enterprise, and mention the reasons for selecting him to represent the "Formalism" which is under attack.

To get at the main issues of the controversy between Locke and Sergeant, I find the following methods of investigation helpful:

1. A comparative analysis of Locke's logico-epistemological

views as expressed in the Essay and Sergeant's critical response to them as expressed in Solid Philosophy Asserted (1697).

2. Even though my main textual sources are the above mentioned works; I refer to some of the other works of these authors whenever necessary and helpful. Other works belonging to this period are sometimes cited when they illuminate the points of controversy between Locke and Sergeant and highlight their respective doctrinal positions.

3. In his copy of Solid Philosophy Asserted, Locke makes 118 marginal comments on Sergeant's views as expressed in the above work.⁵ Like a slip of the tongue a marginal comment is sometimes more revealing than lengthy explications. Some of these marginal comments help in understanding some of Locke's logico-epistemological views, the point of some of his criticisms and the reason for some of his additions in the fourth edition of the Essay. The examination of these marginal comments finds an important place in my comparative analysis.

4. An analysis of the Locke-Sergeant controversy within the framework provided by the Tripartite Distinction of Logic helps me to examine the main issues in a 17th Century conceptual framework. The traditional Tripartite Distinction was prevalent and widespread during the 17th Century.⁶ According to this distinction, Logic has three parts, namely Terms, Propositions, and Syllogisms,

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corresponding to the three operations of the mind, namely, Simple Apprehension, Judgement and Discourse.

In Chapters III, IV and V of this dissertation I attempt to examine Locke's logico-epistemological critical views adopting the above methods.

In Chapter III, I deal with Locke's attack on "Formalism" at the level of Simple Apprehension. Sergeant used "Notion" for Locke's "Idea". The Idea-Notion controversy provides an appropriate framework for the analysis of Locke's "anti-formalism" and Sergeant's "Formalism" at this level.

In the chapters entitled "Of Maxims" (IV:VII), "Of Trifling Propositions" (IV:VIII), and "Of the Improvement of our Knowledge" (IV:XII)♠, Locke's criticisms seem directed at certain functions assigned to Identical Propositions in the method to knowledge. Sergeant's claims concerning Identical Propositions seem to provide the target for such criticisms. The controversy between them over the role of Identical Propositions brings to light their respective "anti-formalistic" and "formalistic" positions at the propositional level. Chapter IV, in the main, deals with this.

In the chapter entitled "Of Reason" (IV:XVII) Locke is mainly involved in criticizing the role of the syllogism and here he seems to go against the claims Sergeant makes for the syllogism. Their discussions on the role of the syllogism are tied up with their theories

of demonstration and the place they assign to demonstration in their account of the method to knowledge. The controversy between them over the necessity and usefulness of the syllogism reveals their respective "anti-formalistic" and "formalistic" positions at the level of discourse. Locke's criticism of the syllogism is also tied up with his attack on disputation, and also reveals his "anti-formalism". I consider these topics in Chapter V.

The examination of Locke's critical views in the light of the "Formalism" which Sergeant represents leads to certain significant consequences pertaining to the character of Locke's logico-epistemological enterprise and how it takes shape, particularly in the later editions of the Essay. I indicate these consequences in Chapters III, IV and V and summarily in Chapter VI. It should be pointed out at the outset that such a comparative analysis makes one realise that Locke and Sergeant are not indulging in a mere family feud. Differences between their logico-epistemological views are deep seated and may be associated with certain philosophical preconceptions, particularly those pertaining to the place they give to metaphysics and metaphysical explanations.⁷ Moreover, the examination of Locke's views in the light of those of Sergeant does not in any way help to make manifest a well-developed logical or epistemological theory. Locke himself points out that he is involved in the work of an under-labourer - in preparing the ground for the builder rather than erecting the building (Essay: The

Epistle to the Reader, pp. 9-10). Even though the Essay provides certain positive views on logico-epistemological topics of which some will be noted during the course of this investigation, he was pre-occupied with 'removing some of the rubbish, that lies in the way to knowledge' (Ibid., p. 10). Surely one cannot expect an under-labourer to erect the building.

CHAPTER I--Notes and References

1. J. W. Yolton discusses the ways in which Locke's Logic of Ideas went against the 'Notional Way' of Kenelm Digby, John Sergeant and others who belonged to the 'Aristotelian-Thomistic tradition' (John Locke and the Seventeenth Century Logic of Ideas, J. H. I. , Vol. 16, pp. 451-52).
2. The reason for describing the said topics as 'logico-epistemological' becomes clear when one realises the lack of a definite distinction between logical and epistemological questions during the period under consideration. See 2:2 and particularly note 126 of Chapter II.
3. The close connection between Locke's critique of ideas and other logico-epistemological criticisms fall within the overall connection which he envisages between Books II and IV. He introduces Book III between them mainly because he finds a close connection between Ideas and Words, but such an introduction was not in any manner intended to separate Book II from IV. See the manner he concludes Book II (II:XXXIII: 19).
4. Margaret Wilson in her article, 'Leibniz and Locke on First Truths' describes Locke as an "anti-formalist" (J. H. I. , Vol. XXVIII, 1967, pp. 347-66).

J. W. Yolton acknowledges this and endorses such a description of Locke (Locke and the Compass of Human Understanding, Cambridge, 1970, Chapter III, pp. 91-103).
5. See Appendix I. of this dissertation.
6. See 2:2, particularly footnote 128 of Chapter II.
7. Armstrong, R. L. , John Locke's "Doctrine of Signs": A New Metaphysics, J. H. I. , Vol. 26, 1965.

Yolton, J. W. , Locke's Unpublished Marginal Replies to John Sergeant, J. H. I. , Vol. 12, 1951, pp. 538-546, 549-555, 555-558.

CHAPTER II
SERGEANT AND FORMALISM

2:1 John Sergeant:

In this dissertation, "Formalism" stands for a group of logico-epistemological doctrines or tendencies with metaphysical and religious overtones. These doctrines or tendencies were prevalent during Locke's time. When provoked by his criticisms, those who upheld these doctrines responded critically. By attending carefully to these responses we will be able to understand better the nature of the doctrines or tendencies that were under attack.

Locke's Essay was controversial almost from the time it first appeared. In a letter to Molyneux of February 22, 1696/7, Locke observed:

My book crept into the world about six or seven years ago, without any opposition, and has since passed amongst some for useful, and, the least favourable, for innocent. But, as it seems to me, it is agreed by some men that it should no longer do so. Something, I know not what, is at last spied out in it, that is like to be troublesome, and therefore it must be an ill book, and be treated accordingly. It is not that I know anything in particular, but some things that have happened at the same time together, seem to me to suggest this: what it will produce, time will show. ¹

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Locke's claim here that his book was "without any opposition" during its first six or seven years is not fully correct, for even during these years the Essay was under criticism.

The short epitome of the Essay, published in Le Clerc's journal, Bibliothèque Universelle in January 1688, was subjected to criticism.²

The tract entitled, Cursorry Reflections upon a Book call'd, An Essay concerning Human Understanding, written by John Norris, was published in 1690, the year of the first edition of the Essay.³

This tract was critical of the Essay. A friend of James Tyrell wrote

in 1690: "Mr. Locks new Book admits of no indifferent censure, for tis either extremely commended, or much deenyed, but has ten Enemies for one friend:...(sic)".⁴ James Lowde had reacted critically

to the Essay in his book, A Discourse Concerning the Nature of Man

... (1694)⁵ and Locke had responded to it in the second edition of the

Essay.⁶ Perhaps Locke did not consider these criticisms as amounting

to a serious "opposition" to the Essay. But, his concern, as revealed

in the above letter to Molyneux and in his short reply to the first of

Thomas Burnet's attacks,⁷ reveals the increasing controversiality of

the Essay.

Nevertheless, the reaction to the Essay was not totally negative.

At the insistence of Molyneux, who was one of Locke's closest friends

and ardent supporters, Dr. Ashe of the University of Dublin introduced

the Essay as a text book at Trinity College, Dublin in 1692.⁸ By 1697

the Essay was becoming increasingly popular at Oxford and Cambridge.⁹ But its increasing popularity was not well received in certain university circles. Attempts were made to discourage and even forbid its use.

In a letter to Locke, Anthony Collins remarked about the reception of the Essay at Oxford thus:

I am promised by a Friend at Oxford a particular account of the Proceedings of the Heads of Colleges with relation to their forbidding any of your Booke to be read in the University. I should be very glad so considerable a recommendation might for the benefit of mankind be made publick to the world; for what they have done plainly shows that in the way of reason they are not to be dealt with, which they very well approve of when it serves their purpose.¹⁰

Tyrell gave the full details of this attempt in a letter to Locke of April 1704, a part of which is given below:

.. in the beginning of November last, there was a meeting of the Heads of Houses then in town; it was there proposed by Dr. Mill [John Mill, Principal of St. Emund Hall, 1689-1707] and seconded by Dr. Maunder [Roger Maunder, Master of Baliol College, 1685-1704] that there was a great decay of logical (longcut) exercises in the University, which could not be attributed to anything so much as the new philosophy which was so much read, and in particular, your Book and Le Clerc's Philosophy: against which it was offer'd, that a Programma should be published, forbidding all tutors to read them to their Pupils. This was like, at first, to have passed, till it was opposed by some others there present, and particularly by Dr. Dunster [Warden of Wadham, 1689-1719]; who not only vindicated your Book, but said that he thought the making the Programma would do more harm than good; first, by making so much more noise abroad.

as if the University went about to forbid the reading of all philosophy but that of Aristotle; next, that he thought that, instead of the end proposed, it would make young men more desirous to buy and read those books, when they were once forbid, than they were before. Then, at another meeting, their resolution upon the whole was, that upon Dr. Edwards' [Dr. Jonathan Edwards] proposal they agreed, instead of a Programma, that all Heads of Houses should give the tutors private instructions not to read those books to their pupils, and to prevent their doing it by themselves as much as lay in their power...¹¹

Locke's Essay along with Le Clerc's book(s)¹² had a disturbing effect on the practice of Logic then prevalent at Oxford and hence those who supported this Logic showed their opposition to the books concerned. But the examination of critical outbursts such as these, though helpful, is not in itself adequate to determine and characterize the target of Locke's critique. Resolutions against and sanctions on the use of the Essay suggest that there is something provocative in the Essay. Anyhow they do not in themselves bring out the theoretical basis of the provocation. It is here that the critical responses to the Essay, as manifested in the writings of Locke's opponents, acquire their significance. They bring out the theoretical basis which was responsible for such outbursts as resolutions against and sanctions on the use of the Essay.

It is unnecessary to give a comprehensive account of the early literature devoted to the Essay. The writings of John Sergeant are representative of the critical response to the Essay and provide a

suitable basis for discussion.

When Locke is taken as the critic and Sergeant the advocate of "Formalism", I do not claim that Locke is unique in his critique nor Sergeant in his advocacy of "Formalism". Many of Locke's logico-epistemological criticisms and proposals may be detected in the writings of such predecessors and contemporaries as Francis Bacon, Descartes, Hobbes, Gassendi, Tillotson, Boyle, Glanville, Sydenham, Arnauld, and other minor seventeenth century philosophers.¹³ No attempt is made here to determine the extent to which the logico-epistemological doctrines underlying Locke's criticisms are original.

Sergeant too is not made to represent all the facets of the critical response to Locke's Essay but merely the logico-epistemological doctrines or tendencies called here "Formalism". Here too he is not considered unique in his advocacy of "Formalism". As Yolton observes,

.. there existed, in the early part of the seventeenth century, a group of men concerned with maintaining what they took to be the doctrines of Aristotle, Everard and Kenelm Digby, Carpenter, Pemble, Culverwell, and Thomas White partially compose this group, although some followed Aristotle more strongly than others. Sergeant, one of the major critics of Locke's Essay, was a later exponent and follower of this school.¹⁴

Howell labels Sergeant as a seventeenth century Peripatetic along with Robert Sanderson, Henry Aldrich, John Wallis, Philip du Trieu, and Richard Crakanthorp.¹⁵ There is some justification to so label Sergeant, since he identifies himself with the Peripatetics, when he

defends their doctrine of Formal Mutation and Composition (Method to Science, Appendix: The Grand Controversy Concerning Formal Mutation in favour of the Peripatetick School). He describes them as those who "take pains to understand Aristotle either by his own books or by his First Interpreters" and he proudly identifies himself with them (Ibid.: section I, p. 375). The Peripatetic Philosophers attempted to preserve the Aristotelian doctrines in the face of the non-traditional teachings of philosophers like Bacon, Descartes, Gassendi, and the Port-Royal Logicians, and claimed that they were more Aristotelian than those who sought to interpret Aristotle through later interpreters. But, Sergeant also acknowledges Thomas Aquinas, as a great philosopher, and adopts some of his doctrines, which too are a part of the "formalism" that Sergeant advocates.¹⁶ Hence, Sergeant may be placed in the Aristotelian-Thomistic tradition and the "Formalism" which he represents may be considered as belonging to the Aristotelian-Thomistic tradition. But it has to be remembered that some of the logico-epistemological doctrines, which "Formalism" encompasses, were also upheld by those who did not belong to the Aristotelian-Thomistic tradition.¹⁷

Before examining the reasons for selecting Sergeant to represent "Formalism", certain particulars concerning his life may be noted. John Sergeant: certain relevant biographical details:¹⁸

John Sergeant was born at Barrow-upon-Humber, Lincolnshire

in 1622 or 23. He was the son of William Sergeant, a yeoman of very modest means. John Sergeant commenced his education at the nearby village of Barton. He entered St. John's College, Cambridge in 1639 where he studied Philosophy for five years. Upon completing his B. A. degree, on the recommendation of his College, he was appointed Secretary to Dr. Thomas Morton, The Bishop of Chester, Litchfield and Durham. Bishop Morton (1564-1639) was a leading ecclesiastic of this period and an ardent Anglican controversialist.¹⁹ It was one of Sergeant's duties as Secretary to compose the polemics in which the Bishop was involved. It was during his time as Secretary to Bishop Morton that Sergeant was converted to Roman Catholicism along with his friend Dr. Godden, who later became President of English College, Lisbon, where Sergeant held several posts of responsibility. Accompanied by Godden, Sergeant entered this College in 1643. Here he came under the influence of Thomas White, a philosopher and controversialist who wrote under the pseudonyms of Albius, Anglus and Blackloe.²⁰ In 1650 Sergeant was ordained Priest. In 1651 he became Master of Humanities, and in 1652 Procurator. Later in the same year he was appointed Prefect of Studies. Then he was recalled to the English Mission Field where he had made many converts. He then returned to Lisbon to resume his position as Procurator and Prefect of Studies. In 1655 he was appointed Professor of Philosophy and was also elected a Canon of the Secular Chapter. For the next twenty years

he was actively involved in the Catholic-Protestant controversy. He must have been a figure of considerable importance, for most of the leading figures of the Anglican Church entered the lists against him.²¹ Although a leading Catholic theologian, Sergeant was also controversial in the eyes of some of his Catholic colleagues, who opposed the views of Thomas White. Sergeant was considered "the author of a system of controversy entirely grounded on the erroneous principles of Blackloe" (i. e. Thomas White, 1582-1676),²² which he published in a book entitled Sure Footing. Among the Catholics he was usually called "Blackloe's Philip", an allusion to the secondary part which Philip Melanchthon acted under Martin Luther.²³ It is reported that, when Sergeant was in Paris in 1673, he had engaged in a controversy with Dr. Peter Talbot, the Catholic Archbishop of Dublin who, with John Warner, sent some of Sergeant's controversial writings to the Pope, as being controversial.²⁴ During the Revolution of 1688 and the years following it, Sergeant passed off as a physician assuming at different times the names of Dodd, Holland, and Smith.²⁵

The long theological controversy in which Sergeant was involved is not relevant to this dissertation and hence will not be dealt with.

But it is of interest to note that Locke had lent his copies of Discourse of the Laws Against Hereticks and The Policy of the Clergy of France to Sergeant in April, 1682.²⁶ Locke was also interested in the controversy between Sergeant and Tillotson over the role of Identical

Propositions.²⁷

Sergeant is of interest to us because of his philosophical, particularly his logico-epistemological, views. These are found in a developed and organized manner in his later works, which are explicitly philosophical in content. Nevertheless, some of his logico-epistemological views are anticipated in his earlier religious works. For instance, his Sure Footing in Christianity or Rational Discourses on the Rule of Faith (1655), which is believed to be his most controversial theological work, is indicative of his use of Identical Propositions.²⁸ Tillotson detects this and criticizes Sergeant.²⁹ In his A Letter of Thanks from the Author of Sure Footing to his Answerer Mr. J. T. (1666), Sergeant responds to Tillotson and this response contains a section defending Sergeant's use of Identical Propositions.³⁰ This defence is strengthened and developed on the basis of his Metaphysical and Logical theory in his Faith Vindicated from Possibility of Falseness (1671) and Reason Against Raillery (1671), particularly in Discourses II and III of the latter work. In his Method to Arrive at Satisfaction in Religion, (1671), which is really given as an appendix to the former treatise, Sergeant attempts to present a satisfactory Rule of Faith for Religion so that the true religion may be distinguished from the false and be founded on sound principles. So as to justify this presentation, he attempts to reduce each of his major claims to an Identical Proposition.³¹ Such an enterprise is also indicative of his use

of Identical Propositions. Locke owned a copy of this work.³² In his Errour Non-Plust or Dr. Stillingfleet shown to be a Man of No Principles, With an Essay how Discourses concerning Catholick Grounds bear the Highest Evidence (1673), Sergeant criticizes Stillingfleet for not basing his doctrines on First Principles, namely the Laws of Identity and Non-Contradiction.³³ Sergeant's characterization of Stillingfleet "as a man of no principles"³⁴ is indicative of the role and status Sergeant assigns to First Principles and to Identical Propositions as First Principles. Hence, some of his religious works, though theologically polemical, are philosophically significant.

The Method to Science, published in 1696, when Sergeant was seventy-three years old, is his first major explicitly philosophical work. The term "science" here is used to indicate any body of organized knowledge which can be demonstrated from Maxims by means of syllogistic deductions. He attempts to present a method to attain such knowledge. In his preface to the said book, he points out that Man has fallen short of true knowledge not merely because of "original sin" but mainly because of not adopting the proper method. According to him, Mathematics has advanced much because Mathematicians had followed the proper method.³⁵ He presents a method similar in many ways to the geometrical method. He claims that there is nothing more that is substantially necessary to a method to attain scientific knowledge when,

.... Our Notions being cleared, First Principles established, the true Form of Syllogism established, Proper Middle Terms found and the necessity of the consequence evidenced; all those Conclusions may be Deduced with Demonstrative Evidence which ly within our Ken, or which we can have occasion to enquire after (Method to Science, Dedicatory, p. 12)

As we shall note later, his method had metaphysical overtones. In addition to his Preface, his Method to Science contains three main chapters, which he labels as "Books" containing several "Lessons". In Book I he deals with Notions, which are for him the basic elements of knowledge. In Book II he deals with the Proposition, its structure and role in the attainment of knowledge. Here he elucidates and presents his theory of the role of Identical Propositions as "First Principles" and the "Rule of Knowing Truths". In Book III he gives his account of Discourse and proposes the Syllogistic mode of Demonstration as the legitimate method to attain knowledge. In the Appendix to this work he defends the Peripatetic theory of Formal Mutation and Composition. Before completing this Appendix, he sent a copy of Method to Science along with a letter to Locke, dated May 10, 1696 and signed as Smith, which is one of Sergeant's pseudonyms.³⁶ In this letter he confesses that he had glanced only cursorily at the Essay, but that even through such a glance he was able to detect that he and Locke differed very much over the role of Identical Propositions. Later we shall have occasion to deal with this letter in greater detail (Chapter IV).

A more careful reading of Locke's Essay resulted in Sergeant's major philosophical work, published in 1697 and entitled,

Solid Philosophy Asserted Against the Fancies of the Ideists: or The Method to Science farther illustrated, with Reflexions on Mr. Locke's Essay Concerning Human Understanding.

Like his Method to Science this book is also directed,

To those Learned Men of both our Universities who have a Due Regard to Truth, and a Sincere Desire of Knowledge. (Solid Philosophy Asserted, The Epistle Dedicatory, p. 1)

Sergeant realized that the Essay was gaining in popularity in the Universities and this concerned him. He states:

After I had published my Method to Science, which I dedicated to your selves, I came to receive certain information that very many Students in both the Universities, and not a few of those also who were to instruct others, did apply themselves to the Way of Ideas, in hopes to arrive by that means at Philosophical Knowledge. My best Judgment, grounded on very Evident Reasons, assured me, that that Method was far from Solid, and utterly unable to give you the True Knowledge of any thing in Nature:... (Solid Philosophy Asserted, The Preface, p. 1)

The "Way of Ideas" or "Way by Ideas" or "Way of proceeding upon Ideas" are phrases which were very familiar in the polemics that followed the publication of the Essay.³⁷ Sergeant associates this "Way of Ideas" with the Ideists and places Locke along with Descartes among them.³⁸ Sergeant's Solid Philosophy Asserted may be taken as mainly resulting from his concern about the increasing popularity of the "Way of Ideas", as a method to knowledge in the universities.³⁹ In addition

to the Preface, Solid Philosophy Asserted contains five Preliminaries and twenty-two Reflexions. In the first four Preliminaries, Sergeant criticizes Locke's use of Ideas and substitutes for them "Notions". In the fifth Preliminary he gives the sense in which he uses terms which were in common philosophical usage then. In the subsequent twenty-two reflexions, he gives a chapter by chapter critical commentary on the Essay. Since he agrees with Locke's stand on Innate Principles, Sergeant does not deal with Book I of the Essay. As the title of Sergeant's book indicates, these critical observations on Books II, III and IV of the Essay are made in the light of his Method to Science.

In 1698, he published a tract entitled, Non-Ultra: or a Letter to a Learned Cartesian: Settling the Rule of Truth and First Principles, upon Deepest Grounds. Even though the Cartesian to whom this letter is addressed is not mentioned by name, Locke and Le Grand are mentioned and criticized. In this letter, Sergeant presents the Identical Proposition in the twin roles he assigns to it, as the Rule of Knowing Truths and as First Principle. This presentation is made in the light of the views of Locke and Le Grand in particular and the Ideists in general.

In the same year Sergeant brought out another tract, entitled, Idae Cartesianae ad Lydium veritatis lapidem (Terminorum Scilicet Connexionem) expensae: Ubi dissertatio- A Le Grand De Ratione cognoscendi, ac appendix ejusdem. De Formali Mutatione, principiis

esse destitutae uno primis intellectus Principiis oppositae demon-
stratur. Locke seems to have been familiar with this work for he
 cites it in two of his marginal comments in Solid Philosophy Asserted. ⁴⁰

In 1699 Sergeant published the tract, Raillery defeated by Calm
Reason: or the new Cartesian method of arguing and answering Ex-
posed. This work is of philosophical interest for more than one rea-
 son. Here he makes explicit his motivation for indulging in philosophy -
 one that could be traced to his religious convictions. He states his
 motives for philosophical study thus: -

The regard I had to Christian Faith was the chief
 Motive that prevailed with me to write Philosophy ..
 That I write Philosophy to maintain the interest of
 Faith and not out of the vain Motive of being held a
 Meer Philosopher ... ⁴¹

This work also indicates that he was disturbed with the spread of scepticism as a result of the increasing use of the "Way of Ideas" as a method of knowledge. According to him this resulted in 'hindering the progress of scientific knowledge' and 'prejudicing religion itself'. ⁴²

In 1700, Sergeant published his last philosophical work entitled, Transnatural Philosophy, or Metaphysics: Demonstrating the Essence and Operations of all Beings whatever, which gives the Principles to all other Sciences. This book too is directed to 'The Sincere Lovers of Truth in both the Universities'. ⁴³ Here he makes a defence for the priority he gives to Metaphysics and to Metaphysical Principles. A final defence of his method to knowledge with all its metaphysical

overtones is made in the light of the method of the Idealists - Locke and Descartes in particular.

Sergeant was a prolific writer, who kept on writing until the very end of his life. Just to give an idea of how prolific he was, I have given a list of his writings.⁴⁴ But in this dissertation we will deal with only some of his writings - particularly his Solid Philosophy Asserted.

He died in 1707.

Reasons for selecting Sergeant as the representative of Formalism.

Even though Sergeant did not respond only to Locke nor was his the only response to Locke, he is selected to represent the "Formalism" that Locke attacks, for the following reasons.

The religious controversialist did not spend all his time and resources criticizing Locke, but his philosophical enterprise may be considered as a critical response mainly directed towards Locke.

As we have already noted, prior to his response to Locke, Sergeant had criticized Tillotson over his stand on the role of Identical Propositions. As we shall note in Chapter IV, Locke's stand on this question is similar in many respects to that of Tillotson. Hence, Sergeant's critical response to Tillotson, as manifested in his writings addressed to the latter, is indirectly applicable to Locke and anticipates to a great extent Sergeant's response to Locke over the same

issue.

In several places Sergeant places Locke along with Descartes and the Cartesians like Le Grand and criticizes them, labelling them all as "Ideists".⁴⁵ Sergeant finds that Locke is on common ground with the Cartesians in several of their doctrines. In Non-Ultra . . . which is a letter to an unidentified cartesian, Locke is specifically mentioned and criticized.⁴⁶ Sergeant's presentation of Identical Propositions as "Maxims" and "Rule of Knowing Truths" in this letter may be taken as a critical response to Locke. We shall have occasions to deal with this letter in greater detail in Chapter IV. In Trans-natural Philosophy Sergeant mentions Locke along with Descartes and criticizes the "Way of Ideas".⁴⁷ Hence, Sergeant's critical response to the doctrines of the "Ideists" was very much directed at Locke.

Solid Philosophy Asserted is a chapter by chapter critical commentary of Locke's Essay.

Sergeant mentions that, before he had read the Essay carefully, he had written his Method to Science.⁴⁸ But this work too may be taken as a part of his critical response to Locke, since it provides the theoretical basis for his criticisms of Locke in the subsequent works. As the full title of Solid Philosophy Asserted indicates, in the latter work Sergeant attempts to criticize Locke's Essay in the light of the doctrines he had propounded in Method to Science; Solid Philosophy Asserted is "Method to Science farther illustrated".

Hence, the major philosophical works of Sergeant may be taken as constituting a critical response to Locke.

Locke's doctrines had a disturbing effect upon the religious and moral beliefs of his day and aroused opposition from leaders of the church.⁴⁹ Stillingfleet, the Bishop of Worcester, is the most well known critic from such quarters. Yolton, in his John Locke and the Way of Ideas, places Locke's Essay in the seventeenth century historical context and finds that:

Locke's epistemological doctrines had a disturbing effect upon the traditional moral and religious beliefs of his day; that, being in the midst of many radical movements of the century (the new science, the growing naturalistic tendency in religion, the empirical foundation for all knowledge), Locke's doctrines were held suspect from the start; and so forceful was his formulation of many of the principles presupposed by these movements that he was considered by his contemporaries one of the more dangerous and important writers of the day.⁵⁰

Sergeant was prominent among those who suspected Locke's logico-epistemological views of leading to unacceptable religious consequences. Sergeant's ecclesiastical background and vocation explain the religious motivation for his critique of Locke. In this respect he resembles Stillingfleet.

According to Sergeant, the chief aim of Science as a body of organized knowledge is to beget "virtue" - "not only to raise us to Higher Contemplation, but also to comfort, and strengthen Divine Faith in us" (Solid Philosophy Asserted, The Preface, p. 26). He

finds that the method to knowledge propounded by "Ideists" like Descartes and Locke had dangerous religious consequences. He pointed out:

It appears both by their Writings, and by their particular manner of handling their Subjects, that they meant ingeniously and sincerely to follow what they conceived to be True. Onely I must say of both of them, that, if their Way of Philosophizing, and, therefore, their Philosophy itself, be shown to be far from True and Solid; then, in case any Chief Christian Tenet should come to be explicated by their Ways, those Sacred Points themselves must necessarily, for the Reason now given, receive some Taint and Blemish by such Ill-Founded Explanations. (Solid Philosophy Asserted, The Epistle Dedicatory, p. 13)

Like Stillingfleet, Sergeant was concerned with the application of what he considered a defective method to explicate religious doctrine. Even though motivated by religious considerations, Sergeant's critical response to Locke is more at the logic-epistemological than at the theological level. This is why Sergeant and not Stillingfleet is selected to represent the critical response to Locke. Stillingfleet describes Locke's analysis of the way to knowledge as the "Way of Ideas" or "Way by Ideas" and criticizes him in the light of what Stillingfleet calls the "Way of Certainty by Reason", where Maxims and Syllogistic Deduction find an important and indispensable place.⁵¹ In the role he assigns to Maxims and Syllogisms, Stillingfleet resembles Sergeant a great deal. But, while Stillingfleet is preoccupied with drawing out the religious implications of Locke's epistemological doctrines and highlighting

their ill effects on religious doctrine, Sergeant is mainly concerned with the examination of Locke's logico-epistemological doctrines. Locke's recurrent attempts to refute Stillingfleet's allegation concerning the dangerous religious implications of the "Way of Ideas" indicates the main concern of the Bishop's critical response. 52

Sergeant's concentration at the logico-epistemological level is made evident in several ways. Let us first consider his own review of his book, Solid Philosophy Asserted. The review runs thus:

"I wanted some particular subject to which I might apply the doctrine I had delivered in my Method to Science: till lighting casually on Mr. Locke's Essay concerning Human Understanding, and hearing how it spread in the Universities, I saw to my best judgment, that Providence put that book into my hands, that I might answer it. Many learned writers of the Church of England had opposed it, but yet only here and there as occasion light. They had also lookt upon it as a subtil train to blow up all religion and accused it of leading to Deism, and other strange tenets. I did not, it seems, look so far into it as they: but tho' I did not love to tax ingenious men with what they did not palpably and openly assert: I could not but discern that (tho' it had many good things in it) still the whole air of its main parts did so manifestly set fancy above reason, that those young wits, who did once swallow that doctrin, and had thorowly imbib'd it, would of course laugh at all reveal'd religion and account all the mysteries of Christian Faith, to be meer nonsense and contradiction. For since these mysteries are above our common unelevated reason, they must aportion be much more above fancy: and I saw very evidently that this whole way of ideas, of which the main of his book consisted, was meerly fantastic. This oblig'd me to

write a full answer to that whole book as far as it needed, and not only to nibble at it here and there as others had attempted. Hereupon I writ large reflexions on that treatise of his, at once doing him the justice to let pass, and oftentimes commend, what was blameless: and with the same impartiality confuting what I judg'd dangerous (tho' remotely) to faith, and injurious to truth. I intituled my large book, Solid Philosophy, asserted against the Fancies of the Ideists.

The chief points there treated were the things themselves spiritually existing in our understanding as its objects, which I proved by 15 demonstrations: whence follow'd that all the doctrin of ideas was fantastick; for to what end were similitudes in our minds, the thing itself being there.

I show'd how and why our soul came into our body, and how all our knowledge came into our soul. I explicated the meaning of most of the words us'd by philosophers. I compute over and over that empty poetry of a vacuum, and of (as he calls it) an incomprehensible inane. I show how unphilosophical it is to put God as Author of Nature, not to carry on the course of it orderly, by cause and effect, but by voluntary annexing one thing or idea to another. That God's immensity and eternity are not to be explicated by a kind of commensuration to a body and its modes. That measures of time are to be taken from the periods or parts of the sun's motion, and not from the running of a train of ideas in our head. That imaginary time, as well as imaginary space were meerly fantastick. What infinity is, and how we came by the true notion of it. How man is free, and how pre-determin'd by God, he determines himself to action. In what the natural notion of virtue consists. That the appearing good in the object, and not uneasiness, determines the will. That we know the most common notions most easily, and individuals least of all. How we came by a notion of spiritual natures. What causality is, and what is the principle of individuation. What are the general rules to know the sense of words. Whence our notions come to be simple or compound,

confused or distinct, clear or obscure. (How knowledge is defined. How secondary qualities made.) That 'tis inexplicable, how we come to know the things by ideas. General maxims vindicated from Mr. Locke's unaccountable doctrine in disregarding them. How unreasonably Mr. Locke confounds corporeal with spiritual, and human with brutal natures. With what nonsense he denies general principles. How he is utterly out in every title concerning judgements; and in thinking we must assent upon probabilities: and in his discarding the use of syllogisms. That a more firm assent is due to points certainly known to be revealed, than to scientific conclusions. What's due to reason, what to divine revelation. How most all error comes by assenting on probabilities. In the last place, comes my division and subordination of sciences, making way towards my writing metaphysicks. I do not enumerate here Mr. Locke's errors which are very numerous, but only some of the main points, in which I confuted him, omitting multitudes of others. "53

Sergeant's concern over the ill-effects of Locke's Way of Ideas on the religion of the young wits in the universities, as mentioned in the first paragraph of the review, provides the religious motivation for his critique of Locke but Sergeant points out that he did not go so far as the writers of the Church of England and examine all the religious consequences supposed to be implicit in Locke's doctrines, as for instance the Deistic consequences of his doctrines. Sergeant's claim is that he was giving a comprehensive critical commentary on the Essay rather than nibble at it here and there or be preoccupied with religious consequences which were supposed to be implicit in the Essay. To indicate the comprehensiveness of his examination he lists the main

topics he deals with in his Solid Philosophy Asserted. This list reveals that, although he deals with issues other than logico-epistemological, questions such as his criticism of the use of Idea as the object of Simple apprehension, his exposition of Causality, his vindication of General Maxims and the use of Syllogisms find a prominent place. The latter may be regarded as typical logico-epistemological topics.

Sergeant's main controversy with the Ideists in general and with Locke in particular was over the method to knowledge - over the "Way of proceeding upon Ideas". In his preface to Solid Philosophy Asserted Sergeant observes: -

When I had near finished my Method I gave a Cur-
sory Look over Mr. Locke's Essay concerning
 Humane Understanding; and I hap'd to light on some
 places, which gave me a high Esteem for it; inso-
 much that I began to conceive some Hopes that his
 Ingenious Thoughts might, with some few Altera-
 tions, be reconciled to True Philosophy; For, I
 was at that time far from intending to make any
Reflexions upon it, but highly extoll'd it where-
 ever I came; judging of the Whole, by the Scant-
lings I had seen of it (as it were) accidentally. But,
 the last September, setting myself to take a nearer
 and fuller View of the Whole Book, I quite lost the
 Hopes, I had gladly enetertained formerly, of Ac-
 cording it with Philosophical Principles; and be-
 came much concerned, that so Excellent a Wit
 should be half lost to the Commonwealth of Learn-
 ing, by lighting unfortunately into such an Unac-
countable Method. (Solid Philosophy Asserted,
 The Preface, Section 2, p. 3)

Sergeant further emphasizes: -

But the main Consideration which takes off all

Individuousness from my Carriage in this Particular, is, that in this whole Contest between the Ideists and me, there is Nothing at all that is Personal. 'Tis not the Parts on Abilities of the Contenders, but their Method which is in Dispute.
(Ibid., Section 6, p. 7)

The dispute over the Method is essentially a logico-epistemological one, even though, as it will be noted in chapters III, IV and V, there are certain religio-metaphysical overtones, which may be associated with this issue.

Sergeant emphasizes the indispensability of a proper method to attain knowledge, when he continues thus:-

The Slowest and Lamest Traveller, who can but creep foward in a Right Path, shall sooner arrive at his Journey's End, than Another whose Legs are Nimble, and his Pace swift, if he takes a wrong Way at his first setting out. Rather his greater Strength and Agility do, in such a case, enable him only to run more widely astray; as the strongest Bow shoots farthest from the Mark, if the Shaft be wrong levell'd. (Ibid., p. 7)

He finds the Ideists in a predicament similar to a good athlete taking the wrong path. Sergeant observes:-

Let the Talent of Wit in the Ideists be Incomparable, (as doubtless that of Cartesius was, to whom I may, with Justice, join Mr. Locke) if the Methods they take be not proper to attain True Science, their Errours, when they mistake, (as I am sure they do in their Principles, and, consequently, in most of their Conclusions) must be to the same Degree more Enormous, as their Fancies are more Ingenious. (Ibid., section 6, p. 7)

This makes him re-emphasize that,

'Tis their Method then, or their Way of Proceeding and building upon Ideas which I most blame and oppose. (Ibid., pp. 7, 8)

He finds that many University students and instructors were applying themselves

... to the Way of Ideas, in the hopes to arrive by that means at Philosophical Knowledge. (Ibid., section 1, p. 1)

According to Sergeant, such a method is utterly unable to give knowledge and even makes knowledge impossible (Ibid., section 1, p. 2)

and hence he counts it his duty to,

.... Strike at the Root, and to overthrow the Whole Way of Proceeding upon Ideas, by whomsoever advanced; and to demonstrate by many Clear, and, I hope; Unanswerable Arguments, and Multitudes of Instances that it was Superficial, Fruitless, Insignificant and merely Phantastical. (Ibid., section 1, p. 2)

As an alternative to the "Way of Ideas" Sergeant presents his method to knowledge, which is an elaboration of the method already propounded in his Method to Science, but now recast in the light of Locke's criticisms and his "Way of Ideas". The controversy between Sergeant and the Ideists over the method to knowledge highlights the epistemological facet of Sergeant's critical response. The logical facet of this response is realized, when one recognizes that both Locke's critique and Sergeant's defence of the method to knowledge really boil down to a discussion of the epistemological value of certain parts of Logic -

such as that of Terms, Propositions, Maxims, and Syllogisms. In section 2:2 the relationship between the logical and epistemological will be dealt with.

But Sergeant is not alone in such a logico-epistemologically oriented critical response to Locke. John Norris, Henry Lee, and Leibniz may be also cited.⁵⁴

John Norris, Fellow of All Souls College and Rector of Bemerton, made allegations that Locke had failed to account for the nature of ideas, which Norris regarded as the "fundamental mistake" of Locke.⁵⁵ This is brought out in Cursory Reflections upon a Book called, An Essay concerning Human Understanding (1690). In addition to this criticism, Norris queries the manner in which Locke formulates his criticism of Innate Principles and describes the Lockean theory of truth as being too subjective. These criticisms are no doubt logico-epistemological in character. McEwen, in his introduction to his edition of Cursory Reflections, acknowledges that Norris did more by questioning Locke's epistemology than most of his contemporaries, who were concerned with trying to trace the religious consequences of Locke's critique of Innate Principles.⁵⁶ Yolton acknowledges Norris to be one of the few who were able to view Locke's epistemology objectively and consider its consistency and validity apart from its implications for religion.⁵⁷ Norris may be more objective in his criticisms than were the theologically oriented critics of his day, but his

response is still "cursory" when compared to that of Sergeant. Norris' book (Cursory Reflections . . .) is only 44 pages in length in contrast to Solid Philosophy Asserted, a work of 460 pages. Out of the 44 pages of Norris' book 31 pages deal with only two topics, namely Locke's failure to give an adequate account of the nature of ideas and the inconsequentiality and inconsistency of Locke's criticism of Innate Principles. After dealing with these two topics, Norris states:

Having thus far reflected upon the two principal parts of this work, concerning Innate Principles and the Origin of Ideas, in a continued Way of Discourse, all that further remains is now to consider only some few passages as they stand by themselves.⁵⁸

Norris did not think that the other parts of the Essay, even its Fourth Book, which mainly deals with epistemology, needed a "continuous" treatment. In this respect, Sergeant's response to Locke, as manifested particularly in Solid Philosophy Asserted and Non-Ultra, is more comprehensive in the logico-epistemological field, than that of Norris. Norris' more systematic work, An Essay towards the Theory of the Ideal or Intelligible World was published in two parts. The first part, which deals with the theory itself, was published in 1701. The second part, which deals with the theory in relation to Human Understanding, was published in 1704.⁵⁹ These parts were out only after the fourth edition of Locke's Essay was published (1700). Locke's major additions to the Essay were made in the fourth edition. We will

examine the significance of the timing of Sergeant's critical response later in this section and then we will find out why Sergeant's writings are given preference over Norris' second work. At this juncture it is sufficient to note that Norris' Cursory Reflections is less comprehensive than Sergeant's writings and hence the latter are given preference.

Henry Lee's Anti-Scepticism or Notes Upon each Chapter of Mr Lock's Essay concerning Humane Understanding, "with an explication of all the Particulars of which he treats (and in the same Order"⁶⁰ and Leibniz's New Essays concerning Human Understanding⁶¹ are also chapter by chapter critical commentaries on the Essay. Both these works contain alternative proposals in the light of and with reference to Locke's criticisms. Both give a prominent place to the discussion of logico-epistemological questions. These works may be considered as comprehensive and logico-epistemologically oriented as Sergeant's Solid Philosophy Asserted. H. O. Christopherson observes that Lee's Anti-Scepticism was "the most elaborate contemporary criticism of Locke's Philosophy".⁶² Hence, the question arises as to why Sergeant's works are preferred to these works to characterize and determine the "Formalism" that Locke attacks.

It is here that the timing of Sergeant's critical response receives its significance. Even though Locke made some additions in the fifth edition of the Essay, the last major and most substantial additions

were made in its fourth edition, which was out by December 1699.⁶³

But the above mentioned works of Lee and Leibniz and Norris's second work, An Essay towards the Theory of the Ideal World, were published after the fourth edition of the Essay, Anti-Scepticism in 1702, New Essays only in 1765 and the two parts of Norris's second work in 1701 and 1704 respectively. Locke may have been aware of the critical enterprise of Lee and Norris but the evidence we have from his correspondence indicates that he took notice of their works after the publication of the fourth edition of the Essay.⁶⁴ Leibniz had written certain critical comments prior to New Essays... and Locke had a chance to read and respond to them.⁶⁵ But his correspondence with Molyneux reveals that he had not paid adequate attention to them. Burnet had sent a copy of Leibniz's paper, Réflexions de Mr L---sur l'Essai de l'Entendment Humain de Monsieur Locke to Locke. Locke sent this paper along with his comments to Molyneux in a letter dated April 10, 1697. Locke comments:

In obedience to your commands, I herewith send you a copy of Mr L's paper. . . . Mr Burnet has had it this year or two, but never communicated it to me till about a fortnight ago. Indeed, Mr Cunningham procured me a sight of it last summer, and he and I read it paragraph by paragraph over together, and he confessed to me, that some parts of it he did not understand; and I showed him in others, that Mr. L--'s opinion would not hold, who was perfectly of my mind. I mention Mr Cunningham to you, in the case, because I think him an extraordinary man of parts and learning, and he is

one that is known to Mr L---. To answer your freedom with the like, I must confess to you, that Mr. L---'s great name had raised in me an expectation which the sight of his paper did not answer, nor that discourse of his in the *Acta Eruditorum*, which he quotes, and I have since read, and had just the same thoughts of it, when I read it, as I find you have. From whence I only draw this inference, that even great parts will not master any subject without great thinking, and even the largest minds have but narrow swallows. [Works, Vol. IX, pp. 406-7]

Locke seems to have been disappointed with Leibniz's comments, but he does not reveal his candid opinion of them. Both Burnet and Leibniz attempted to elicit Locke's judgement but never succeeded in procuring any detailed comments from Locke. The most that Locke ever said was that there were some things in Leibniz's remarks that were "unintelligible" but refused to specify his judgement any further. When Leibniz heard that Locke had not understood all his objections in Reflexions . . . , he rewrote them partly and caused them to be communicated to Locke anew under the following title: Echantillon de Reflexions sur le I et II^e de l'Essai de l'Entendment humain de Mr Locke (1698). Locke however did not respond to even this.⁶⁶ Sergeant's writings are preferable to Leibniz's critical comments because Locke, as we shall see shortly, paid more attention to Sergeant's criticisms than Leibniz's.

Leibniz's New Essays . . . (1765), Lee's Anti-Scepticism (1702) and Norris's second work, An Essay towards the Theory of the Ideal

or Intelligible World (1701 and 1704) may be as comprehensive and logico-epistemologically oriented as Sergeant's writings but were not available to Locke before the publication of the fourth edition of the Essay. Sergeant's works were out and available to Locke before he published the fourth edition. Method to Science was published in 1686, Solid Philosophy Asserted in 1697 and Non-Ultra in 1698. Hence, Locke had a chance to respond to them.

Locke no doubt over-reacted to Sergeant as he did to most of his other critics. "Mr Sergeant, a Popish priest", Locke wrote to Molyneux, "whom you must needs have heard of, has bestowed a thick octavo upon my Essay, and Mr Norris I hear is (again) writing hard against it. . . . Shall I not be quite slain, think you, amongst so many notable combatants, and the Lord knows how many more to come? . . ."⁶⁷ I do not wonder at the confusedness of Sergeant's notions, or that they should be unintelligible to me; I should have much more admired had they been otherwise: I expect nothing from Mr Sergeant but what is abstruse in the highest degree".⁶⁸ He also mentions to Molyneux that there is "neither sense nor coherence" in Sergeant's writings.⁶⁹ But Locke's reaction to Sergeant's writings does not stop with condemnation. As his second reply to Stillingfleet indicates, by May 1698 Locke had started reading Solid Philosophy Asserted.⁷⁰ He made marginal comments in his copy of this book and it is my contention that Locke responded to Sergeant in a positive way. Locke's response to

Sergeant is detectable in some of the additions to the fourth edition of the Essay - those which deal with logico-epistemological issues and are found in his chapters entitled, "Of Maxims", "Of Trifling Propositions", "Of the Improvement of our Knowledge" and "Of Reason" (IV:VII:VIII:XII:XVII).

If such a hypothesis is accepted, then Sergeant's critical response is involved in Locke's attack on "Formalism" more directly than that of Leibniz or Lee. This does not mean that the doctrines which Locke attacks are not manifest in their writings. The fact that Locke counter-attacks Sergeant helps us to determine with more assurance the target of Locke's attack, through an examination of Sergeant's writings.

The hypothesis that Locke's major additions to the fourth edition of the Essay on the above-mentioned logico-epistemological questions are made with the views and criticisms of Sergeant in mind, is supported by the following considerations:

1. Locke had in his possession Sergeant's Method to Science,⁷¹ which was sent by Sergeant himself along with his letter of May 10, 1696.⁷² Locke owned a copy of Solid Philosophy Asserted.⁷³ In his second reply to Stillingfleet, dated May 4, 1698, Locke refers to Solid Philosophy Asserted.⁷⁴ This reference indicates that Locke had started reading it by this time. He not only read it but took the time to pen 118 marginal comments, some of which are quite lengthy. Two

of these comments indicate that Locke was familiar with Sergeant's Ideae Cartesiane... (1698).⁷⁵ He owned this book.⁷⁶ Harrison and Laslett mention that Locke had a copy of Sergeant's Method to Arrive at Satisfaction in Religion (1671).⁷⁷ Here Sergeant resorts to Identical Propositions to justify his discourse on the Rule of Faith.⁷⁸ Since this work forms an appendix to Reason against Raillery: Answer to Dr. Tillotson's Preface against J. S. (1671), in all probability Locke would have been familiar also with the latter book. Locke had in his possession Non-Ultra... (1698).⁷⁹ Certain additions, which Locke makes in the fourth edition of the Essay and which will be dealt with in greater detail in chapters IV and V, indicate his familiarity with the views expressed in these tracts.⁸⁰ Hence, Locke was familiar with the major works which constitute Sergeant's critical response. As we have already noted the timing of Sergeant's writings gave Locke a chance to read through these before he published his fourth edition. Sergeant's writings were available to Locke at the proper time.

2. Locke's marginal comments in his copy of Solid Philosophy Asserted also lend support to my interpretative hypotheses. This copy had come into the hands of James Crossley, a well known 19th century bibliophile, who added the following note in its fly-leaf:-

This book came from the United Libraries of John Locke and his Nephew Lord Chancellor King. The MSS Notes which are many and very curious are the Autograph of John Locke and form a most

desirable Memorial of that Great Philosopher. The Book itself was written by John Sergeant, a Roman Catholic Priest, of whom an account will be found in Dodd's Catholic Church History Vol. 3, and Wood's Athenae.

J. C. 1845

[The initials J. C. here stand for James Crossley]⁸¹

Crossley's Library was sold at two public auctions, at Manchester in May 1884 and at Sotheby's in London in July 1884 and June 1885.⁸² Locke's copy was sold at the Sotheby auction to Mr. J. Bass Mullinger, the Librarian of St. John's College, Cambridge, who had bought it for his Library.⁸³

These marginal comments have been generally neglected in Lockean Scholarship. James Crossley was the first to point out their value when he wrote thus:-

I have Locke's copy of Sergeant's 'Solid Philosophy Asserted', 1697, 8vo, the margins of which are filled with answers in Locke's autograph to the animadversions contained in that book. It is somewhat strange that neither these nor his manuscript notes on the pamphlets of Dr. Thomas Burnet of the Charter-House, which are also in my possession, have ever been published or noticed by his biographers.⁸⁴

The marginal comments on Burnet's pamphlets were subsequently published by Noah Porter in 1887.⁸⁵

In addition to the accounts given of Sergeant in Dodd's Church History and Wood's Athenae Oxonienses, Thomas Cooper gives an account in the Dictionary of National Biography. The Catholic and New

Catholic Encyclopedias also find a place for Sergeant but he has not been treated adequately in philosophical literature. Attention has been paid to Locke's marginal comments in Solid Philosophy Asserted only recently.

The Encyclopedia of Philosophy [1967] edited by Paul Edwards ignores him. The only history of Philosophy that I am aware of, which gives a reasonable account of Sergeant, is Sorley's A History of British Philosophy to 1900 (1920). Of the histories of Logic which I have consulted, only Robert Adamson's A Short History of Logic (1911) mentions Sergeant and that too only in a footnote [pp. 147-8] referring to just one of his works, namely, Method to Science.

Sergeant's importance in the history of Philosophy is mainly on account of his role as a critic of Locke. But, even in such a capacity he has not been given due recognition.

In the biographical works on Locke, Peter King's The Life and Letters of John Locke (1884) does not mention Sergeant at all. Fox Bourne's The Life of John Locke (1876) mentions Sergeant as one of the "assailants" of Locke, along with Norris and Thomas Burnet.⁸⁶ But there is no mention of his works. Maurice Cranston's John Locke, a biography (1959) informs us that Sergeant is one of the critics of Locke and merely cites "Solid Philosophy Asserted".⁸⁷ In his Bibliographical introduction of the study of John Locke (1930 & reprinted in 1968), H. O. Christopherson mentions Sergeant as one of Locke's adversaries and

describes him as a "very fertile writer".⁸⁸ Method to Science and Solid Philosophy Asserted are cited but no mention is made of Locke's marginal comments.

A. C. Fraser, in his edition of the Essay (1894) cites Sergeant along with Norris, Thomas Burnet, Leibniz, Boughton and Lee as a critic of Locke.⁸⁹ Fraser mentions Solid Philosophy Asserted and observes Locke's reaction to it in his correspondence with Molyneux, but no mention is made of Locke's marginal comments.⁹⁰

A. S. Pringle Pattison's edition of the Essay (1924) cites Sergeant in a footnote as one of those who criticized Locke's theory of Personal Identity but does not mention anything about his logico-epistemological criticisms and Locke's response to them.⁹¹

James Gibson in Locke's Theory of Knowledge and its Historical Relations (1917) attempts to present Locke's logico-epistemological criticisms in their historical perspective, but merely mentions Sergeant along with Stillingfleet as a critic of the "new way of ideas".⁹² Aaron cites Sergeant as one who opposed Locke but whom "Locke did not consider himself called upon to answer".⁹³ In a footnote Aaron mentions his awareness of Solid Philosophy Asserted and Locke's marginal comments.⁹⁴ Von-Leyden cites Sergeant and Solid Philosophy Asserted and considers Sergeant as one of the earliest critics who considered Locke to hold the Representative Theory of Perception and who had criticized him for that.⁹⁵

In his book entitled The Development of Berkeley's Philosophy (1923), G. A. Johnston draws attention to Sergeant as the "little known critic"⁹⁶ who is the "critic of Locke and precursor of Berkeley".⁹⁷ Johnston realizes that very little attention has been paid by historians of philosophy to Sergeant's work. So as to give more recognition to him, Johnston gives a "short account of Sergeant's general attitude to the problems of philosophy in view of the interest it possesses for the student of Locke and Berkeley".⁹⁸ He mentions the main philosophical works of Sergeant, namely, Method to Science, Solid Philosophy Asserted, and Transnatural Philosophy. In discussing some of the important aspects of the philosophy of Sergeant as found in the above books, Johnston brings out the difference between Sergeant and Locke. But in his account Johnston does not mention Locke's marginal comments.

Norman C. Bradish, after reading the copy of Solid Philosophy Asserted, which contains the marginal comments, published an article entitled, "John Sergeant: A Forgotten Critic of Descartes and Locke" in The Monist of 1929. Here he mentions his intention to publish the marginal comments⁹⁹ but never did so, except in the form of his thesis on John Sergeant, submitted to North-Western University in 1932.¹⁰⁰ Bradish's research attempts to highlight the differences between the philosophies of Sergeant and Locke. The logico-epistemological differences are discussed but not dealt with sufficiently. Since Bradish

was attempting a more comprehensive comparative analysis he could not deal in more detail with the logico-epistemological facet of their philosophies. In his article, "Locke's Unpublished Marginal Replies to John Sergeant" in Journal of the History of Ideas of 1951, J. W. Yolton reproduces and discusses some of the major marginal comments in the light of the issues over Method, Substance, and Perception between Sergeant and Locke. This is the first time Locke's marginal comments were published. In John Locke and the Way of Ideas (1956), Yolton gives an account of Sergeant's views and discusses these marginal comments with reference to these views. Robert L. Armstrong, in his article, "John Locke's Doctrine of Signs: A New Metaphysics" in the Journal of the History of Ideas, Vol: 26, 1965, discusses the anti-metaphysical attitude of Locke and presents Sergeant as the representative of the Metaphysics that Locke criticizes. Here Armstrong cites some of the marginal comments. Brian Cooney, in his article, "John Sergeant's Criticisms of Locke's Theory of Ideas" in the January 1973 issue of Modern Schoolman cites some of these marginal comments. To my knowledge, these are the only pieces of research which deal with these marginal comments.

Locke's marginal comments in Solid Philosophy Asserted have not been penned in a casual manner. They are 118 in number and some of them quite lengthy. Even the errata are scrutinized and minutely checked with 43 page and line references on the inside back

cover. There are two references in these notes to Sergeant's Ideae Cartesiane..., which was published in 1698, one year after Solid Philosophy Asserted.¹⁰¹ In his second reply to Stillingfleet, dated May 4, 1698, Locke refers to certain sections of Solid Philosophy Asserted.¹⁰² Hence, in all probability, he must have read it and made his comments around this time, which is significantly prior to the completion of the fourth edition of the Essay (December 1699).

According to Yolton, "It is possible of course, that these marginal comments were preliminary to a formal reply to Sergeant, a reply which Locke never completed".¹⁰³ Locke did not respond to Sergeant in the manner he responded to Stillingfleet and Norris, but some of the marginal comments in Solid Philosophy Asserted may be considered as preliminaries to some of the additions Locke makes to the fourth edition of the Essay. Some of the comments are inserted almost word for word into the fourth edition. Some others have been rephrased. Some of the doctrines already given in the previous editions are highlighted or brought out more forcefully in the additions to the fourth edition.¹⁰⁴ Some of the marginal comments anticipate these points which are so highlighted. The precise manner in which these comments anticipate some of the additions to the fourth edition will be examined in the course of this dissertation in the relevant contexts. At this juncture, it is sufficient to note that the very fact that some of these marginal comments anticipate some of the additions

supports my hypothesis that some of Locke's additions to the fourth edition are made in the face of, and with reference to, Sergeant's critical response.

3. Another consideration in support of my hypothesis is that there are grounds for believing that, during a particular period of his academic career, Locke had been in the practice of responding to his critics in and through his additions in the editions of the Essay, though on a very selective basis. Sergeant's critical response belongs to this period and he falls within this category of critics to whom Locke responded in this manner.

The fact that Locke had indulged in such a practice at one period of his academic career does not mean that he took the practice of responding to critics as a sort of dialogue, for the purposes of exchanging views for mutual benefit, and for working out a better solution. Yolton goes so far as to suggest that there is no evidence in any of Locke's published or unpublished remarks that he ever admitted the validity of his critics' observations.¹⁰⁵ Usually when Locke responded to his critics, he merely confirmed his position and showed impatience at their inability to understand his position.¹⁰⁶ He did not receive criticism well and the bitterness evoked by it increased as the number of his critics grew.

Locke's response to Lowde placed in the Epistle to the Reader in the second, third and fourth editions of the Essay and transferred

to a long footnote to II:XXVIII:II in the fifth edition is one of the very few instances where Locke mentions his critic by name. In this connection, his letter of June 28, 1694 to Molyneux is significant. Locke remarks:

There appears to me so little material in the objections that I have seen in print against me, that I have passed by all but one gentleman's, whose book not coming to my hand till those parts of mine were printed that he questions, I was fain to put my answer in the latter end of the epistle. 107

It is implicit in the above remark that had Locke received Lowde's book (Discourses concerning the Nature of Man, 1694) in time he would have replied to Lowde at the appropriate place in the body of the Essay. There are certain other similar instances which lead me to believe that Locke's response to Lowde was not an isolated case but rather an instance of his practice of responding to his critics by making additions in the editions of the Essay.

Locke makes a substantial addition in II:XXI:71, in the fifth edition of the Essay, in response to some comments made by P. von Limborch on Locke's discussion of Power. Locke informed Limborch by letter dated August 12, 1701, of this addition, suggesting that Limborch might insert it in his copy of Coste's edition of the Essay, which Limborch had in his possession. 108

M. Barbeyrac, a French critic of Locke, who had read Coste's translation of the Essay, cited some translation defects and made a

query on the "composition" of simple ideas in Locke's discussion of Space and Duration (II:XV:9).¹⁰⁹ In response to Barbeyrac's comments, Locke adds a footnote in his fifth edition.¹¹⁰ Though he does not mention Barbeyrac by name in this addition, Coste informs us of this.¹¹¹

In the fifth edition of his Essay, Locke elaborates on a paragraph in The Epistle to the Reader. He realises that criticism of his Essay had increased greatly and decides thus:-

There are so many instances of this, that I think it Justice to my Reader and myself, to conclude, that either my Book is plainly enough written to be rightly informed by those, who persue it with that Attention and Indifferency, which everyone, who will give himself that Pains to read, ought to imply in reading: or, else that I have writ mine so obscurely, that it is in vain to go about to mend it. Which ever of these be that Truth, 'tis my self only am affected thereby, and therefore I shall be far from troubling my Reader with what I think might be said, in answer to those several Objections I have met with, to Passages here and there of my Book. Since, I persuade myself, that whether they are true or false, will be able to see, that what is said, is either not well founded, or else not contrary to my Doctrine, when I and my Opposer come both to be well understood.

(Essay: The Epistle to the Reader, pp. 11, 12)

Locke's decision not to reply any more to his critics and to allow the reader to determine the worth of his doctrine seems to have been taken as a result of an unmanageable increase in criticisms.

There are grounds for believing that criticisms of the Essay had increased greatly, particularly since 1697, so much so that Locke had

thought that there was a plot against him.¹¹² But Locke's decision not to reply to any more of his critics is at least suggestive of a practice hitherto followed.

Thomas Burnet, smarting under Locke's silence, commences his third set of remarks (1699) with the complaint that he had not received a reply from Locke to his second set of remarks (1697) and that this silence on the part of Locke will be

... understood in several ways, so it may be subject to that construction among others, that you could not satisfy those objections or querries without exposing your principles more than you had a mind they should be exposed.¹¹³

Locke marginally replies thus:

He that reads my books with a faire mind will not make such a construction.¹¹⁴

When Burnet made his complaint Locke was involved in editing the Essay and in writing Of the Conduct of the Understanding. Hence, I take it that he includes the editions of the Essay, when he says "my books" in the above comment.

It has to be also remembered that during this time (i. e. between 1697 and 1699) Locke was involved in a long drawn-out and time consuming controversy with Stillingfleet.¹¹⁵ It was also during this time that John Edwards initiated his scathing attack on Locke. Perhaps his preoccupation with Stillingfleet prevented Locke from replying to the other critics on an individual basis. In the fourth

edition of the Essay Locke changes "Resurrection of our Bodies" to "Resurrection of the dead" in two places (IV:III:29, p. 560, line 5 and IV:XVIII:7, p. 694, line 12). In his correspondence with Stillingfleet, Locke emphasizes that he believes in the "Resurrection of the dead" and not in that of the "same bodies". He attempts to convince the Bishop that this is how the "Article of Faith" concerning "Resurrection" has to be taken. The additions in the fourth edition are in keeping with such an emphasis and is another instance of Locke responding to his critics by making additions or modifications to the various editions of the Essay.¹¹⁶

Perhaps authorized by Peter King, some passages from the Stillingfleet-Locke controversy were added as footnotes to the relevant sections of the fifth edition of the Essay.¹¹⁷ But the additions from the Stillingfleet-Locke controversy do not warrant the generalization that Locke's additions to the fourth edition were also primarily in response to Stillingfleet. Significantly these footnote additions to the fifth edition do not pertain to the sections with which we are concerned - those which deal with logico-epistemological questions and are mainly found in the fourth book of the Essay. There are nine footnote additions to the fifth edition of the Essay from the Stillingfleet-Locke controversy. None of these deals directly with logico-epistemological issues. Two deal with the dangerous consequence Locke's account of Ideas, particularly his attack on Innate Ideas, has on religion (I:I:8,

p. 47; I:IV:8, p. 88). Three deal with Locke's theory of substance and its effect on Christian doctrine (II:II:2, p. 119; II:XXIII:2, p. 295; II:XXIII:2, p. 296). One deals with the use of General Terms (III:III:II, p. 414). Another deals with the connection between Locke's view of Personal Identity and the Christian doctrine of the Resurrection of the Body (II:XXVII:29, p. 348). The two footnotes which are made to the Fourth Book of the Essay deal with Locke's account of "certainty" and its impact on Christian Faith (IV:I:2, p. 525) and with controversy over "Thinking Matter" (IV:III:6, p. 540). These additions indicate the theological orientation of Stillingfleet's criticisms of Locke. They do not pertain to the additions with which we are concerned, and which deal with mainly logico-epistemological issues (see footnote 104).

During the critical outburst to his Essay, Locke reveals his attitude towards the task of the critic thus:-

The world has now my book, such as it is: if any one finds, that there be any questions that my principles will not resolve, he will do the world more service to lay down such principles as will resolve them, than, to quarrel with my ignorance (which I readily acknowledge) and possibly for that which cannot be done. I shall never think the worse of mine, because they will not resolve every one's doubts, till I see those principles, laid down by any one, that will: and then I will quit mine. 118

Critics are not to be merely negative, but are called upon to present their alternatives, making explicit their principles. It is significant that Sergeant's critical response was not merely negative, but one

which made explicit the principles on the basis of which Locke's doctrines are dismissed and Sergeant's alternatives are propounded. In this respect Sergeant's response seems to meet the requirements stipulated by Locke. Whether or not Locke acknowledges this need not be decided.

Locke also mentions: -

If any one find anything in my Essay to be corrected, he may, when he pleases, write against it; and when I think fit I will answer him. For I do not intend my time shall be wasted at the pleasure of every one, who may have a mind to pick holes in my book, and shew his skill in the art of confutation. ¹¹⁹

As this passage indicates, Locke was very selective in his responses, particularly when the number of critics increased, but that does not mean that he was not sensitive to the criticisms and had ignored all his critics. He may not have changed his views and position as a result of the criticisms but the additions to the later editions of the Essay, particularly the fourth and fifth editions, indicate that he answered some of his critics mostly by re-affirming his stand and elaborating on the views which he had already stated in the earlier editions. Sergeant seems to belong to this category of critics. No doubt Locke did not reply to Sergeant in as open and individual a manner as he had replied to Stillingfleet through correspondence, or to Norris through "Some Remarks Upon Norris's Book, &c", ¹²⁰ or to Lowde through an addition to the Essay specifically addressed to him. Locke did not

inform Sergeant when he made the additions, as he informed Limborch. But that does not mean that Locke did not respond to Sergeant and that Locke's time and resources were spent on responding mainly to Stillingfleet and a few others whom Locke names. This seems to be the opinion of scholars like Bourne and Aaron.¹²¹ Sergeant's critical response belongs to a period in Locke's life when he was replying to his critics on a very selective basis. When we take this into consideration along with the considerations already mentioned, namely, Locke's familiarity with Sergeant's writings and the manner in which the marginal comments anticipate the additions to the fourth edition of the Essay, my hypothesis that some of Locke's additions were in response to Sergeant's critical response seems acceptable.

Locke is not attacking Sergeant specifically but the doctrines which he represents, and these doctrines were widespread then. When confronted by Locke's criticisms, those who upheld the logico-epistemological doctrines critically responded, and Sergeant was one of them. Due to the timing of Sergeant's response and the availability of his works, Locke was able to confirm and reinforce his criticisms and the logico-epistemological doctrines underlying them in the context provided by Sergeant's critical response. Since Locke is here responding to a set of logico-epistemological doctrines and tendencies which were held not by Sergeant alone, Locke naturally uses phrases like "I know there are some" (IV:VIII:3, p. 610), "I know a great deal of Talk,

propogated from Scholastick Men of Sciences" (IV: VII:II, p. 598), rather than mentioning Sergeant specifically.

2:2 Formalism:

Locke's second set of notes on logic, entitled Systema Logicae, believed to have been penned by him during his undergraduate days at Oxford, is of interest to us. Locke writes thus:-

Logic, considered not as natural reason nor as a system but as an acquired quality of the mind, is the art of directing the mind towards knowledge of things. The object of Logic, or what is treated in it, is being-of-reason. Such being exists objectively only in the mind. The purpose [of Logic] is the direction of the mind or of mental acts, which are of three kinds - the apprehension of simple terms, their composition, and inferring one thing [or term] from another. By reference to these three acts, Logic is divided into three corresponding parts, in view of the name and nature of the terms. 122

In these notes Locke observes the following tendencies in Logic:

1. That of distinguishing between Natural and Artificial Reason.
2. That of considering Logic as a method to knowledge.
3. That of organizing Logic into three parts.
4. That of regarding "object of Logic" as existing 'objectively only in the Mind'.

These tendencies were prevalent during his day. They may be taken as providing the conceptual framework within which the logico-

epistemological controversy between Locke and Sergeant occurs.

The distinction between Natural and Artificial Logic is one of the main points of controversy among the logicians of this period.¹²³ When Sergeant claims that "Logic is the Proper Art" to give the "Certain Method" to knowledge (Solid Philosophy Asserted: Preface, section II, p. 14) and presents his "Demonstrative Logicke" as this Logic (Ibid., section 13, pp. 16-17), he has in mind Artificial Logic. He associates such a Logic with the "Men of Art", the "Acute Logicians" and the "Speculators". According to him, Natural Logic belongs to the "Vulgar" and the "ordinary" (Method to Science, Preface, Books I & III, Appendix, p. 381). Sergeant's distinction is in keeping with the way these two logics were commonly distinguished. Burthogge indicates that Artificial Logic was associated with the 'Logic of the Schools', particularly with that of Aristotle, and Natural Logic with the "plain and illiterate men".¹²⁴ There was a degradation of Natural Logic implied in such a distinction. Philosophers like Sergeant allied themselves with Artificial Logic and considered Natural Logic as pertaining to a lower form of reasoning associated with the "uncultivated" and the 'vulgar' (Ibid.).¹²⁵

When Locke notes that "Logic is the art of directing the mind towards the knowledge of things" he records another widespread tendency. The Logic of the 17th Century was not a discipline demarcated to such a decisive degree that made possible a definite distinction

between logical and epistemological questions. Epistemology had not developed as a distinct discipline. The characterization of Logic as providing the method to knowledge was very much in vogue in the traditional Scholastic-Peripatetic circles as well as among the non-traditional Ramistic, Systematic, and Port-Royal Logicians. 126

Sergeant's views represent this tendency to view Logic as a means to knowledge. In his Method to Science he formulates the question, "Why Should Man fall short of knowledge which is his Natural Perfection?" (Preface, section I, p. 1). Sergeant thinks that Man had fallen short of knowledge because of the adoption of faulty methods to attain it. The Ideists, including Locke, are criticized on account of their Way of Ideas, which for Sergeant is a faulty method to knowledge. In presenting his alternative method to knowledge, Sergeant claims in several places both in Method to Science and Solid Philosophy Asserted that Logic is the art which provides the method. For instance, he states:

Who is there that applies himself to find out a Certain Method to arrive at Truth and attain Knowledge, without which all our studies are of no purpose?
Logick is the Proper Art to give us this Method.
 (Solid Philosophy Asserted: Preface, section II, p. 14)

The Tripartite Distinction of Logic is perhaps the third point which Locke notes. 127 Such an organization of Logic is common among the Logicians of this period, both traditional and non-

traditional.¹²⁸ According to this distinction, Logic has three parts, namely, Terms, Propositions and Syllogisms, these corresponding to the three mental acts of simple apprehension, judgement and discourse. Samuel Smith, a Systematic of influence during this period, whose book Aditva ad Logicam (Approach to Logic) was a steady seller from 1619 to 1685, describes the organization of Logic thus:

Logic as a whole is divided into three parts: the first treats of simple terms: the second of terms compounded: the third of discourse. For, as boys ought first to be taught to recognise letters and syllables of the alphabet, then to combine characters, and at last to read the combinations so beginners in Logic ought at first to be taught what is a term, in what manner it should be formed, and what uses it has in Logic, then in what manner a proposition is made from simple terms, and what are its structures, and finally from what propositions is erected the Syllogism. All this we now begin (God willing) to show in three books, and we follow the order of building, and take the position of beginning from the simple term, and of going on to the proposition, and then to the discourse.¹²⁹

This may be taken as a classical statement on the nature and function of the Tripartite Distinction in Logic. In the context of an epistemologically oriented Logic, the three parts of Logic receive a new status. Logic is called upon to direct the three mental operations so as to obtain knowledge by them and the corresponding parts of Logic, namely, Terms, Propositions and Syllogisms, came to be regarded as instruments of obtaining knowledge or as three constituents of the body of knowledge. They came to be characterized and assessed on



epistemological grounds too. Sergeant's presentation of the method to knowledge exemplifies such a characterization and assessment.

Sergeant describes Logic as "a God given Art to Man to improve in his reasoning and to avoid error, so that he may attain Science", which according to Sergeant, is knowledge of the highest quality, "the best Natural Perfection of our Understanding" (Solid Philosophy Asserted, The Epistle Dedicatory: p. 2). According to him,

... those who were addicted to Attentive Reflexion or Speculation, invented a Way, and Settled Artificial Rules, how to manage their Notions, Judgements and Discourses. Which Rules laid orderly together. . . did in time compose that excellent and most useful Science call'd LOGICK. (Ibid. , p. 2)

This Logic, which formulates the rules for the three parts, is employed by Sergeant to attain knowledge; the three parts of Logic - Notions, Propositions and Syllogism - now become three instruments or constituents of knowledge. His Method to Science is organized on the basis of this Tripartite Distinction. He deals first with Notions, which according to him are what Logicians call "Terms" (Book I, Lessons I & II); secondly with Propositions (Book II) and thirdly with Syllogism as the ideal form of discourse (Book III). In order to be adequate instruments or constituents of knowledge, these parts of Logic had to be so characterised as to meet epistemological requirements.

of these parts of Logic in their epistemological role that some of the senses of the term "form" which were in use during the 17th century become involved.¹³⁰ These shades of meaning of "form" become associated with the characterization and assessment of the logical enterprise as a means to knowledge. As already noted, the consideration of Logic as providing the method to knowledge is prevalent in both traditional and non-traditional circles. The organization of Logic on the basis of the Tripartite Distinction is also so prevalent. The consideration of the three parts of Logic as instruments or constituents of knowledge follows, when Logic is so considered and organized. During the 17th century there were some philosophers who not merely employed the three parts of Logic as instruments or constituents of knowledge but went further and attempted to justify their epistemological role and status by characterizing them in a particular manner. It is here that the senses of "form" become employed. Sergeant's presentation of the method to knowledge exhibits the employment of the senses of 'form' in the characterization of the three parts of Logic for epistemological purposes. Sergeant claims:

Lastly, (which is the Chief Point), Who is there that applies himself to find out a Certain Method to arrive at Truth, and attain Knowledge, without which all our Studies are to no purpose? Logick is the Proper Art to give us this Method; and I see Students do generally make use of any Logician, so he but talks dryly of the Operations of the Understanding; of Propositions, Syllogisms, and

Demonstration; tho', perhaps, he gives not one Word of Reason for his Unproved Sayings, to enlighten the Understanding of the Learner, or inform him (ex Natura rei), whence and why this and the other Rudiment, or Rule must be so: Such an Author may indeed enable a Learner, to say as he says, and talk after him in imitation, as it were; but he can never instruct him to understand what's true, and why it is true, or to demonstrate himself; which was the main design of my Method. (Solid Philosophy Asserted, The Preface, section II, pp. 14-15)

Sergeant claims that he goes further than other logicians of his day and gives the reasons for the use of the rudiments and rules of Logic as instruments of knowledge. The exhaustive manner in which he attempts to justify the use of the parts of Logic in his Method to Knowledge as found in Method to Science, Solid Philosophy Asserted and Non-Ultra. supports his claim in the passage cited above. It is in the justificatory explication of the parts of Logic as instruments or constituents of knowledge that Sergeant employs the senses of "form". He makes use of "form" in his explication of "Term", "Proposition" and "Discourse" as instruments for attaining knowledge or as constituents of the body of knowledge. I am not aware of Sergeant using "formalism" or "formal" explicitly to characterize his logic or epistemology. But, because of the involvement of the senses of "form" in his logico-epistemological views, it seems appropriate to select him to represent the "formalism" which Locke attacks.

Formalism at the level of Simple Apprehension:

The 17th Century Logic was basically a Logic of Terms rather than a Calculus of Propositions, since the "Term" and not the "Proposition" was considered the basic unit. 131

The characterization of "term" was to a great extent related to the attitude adopted towards the logical enterprise as such.

Those who saw Logic as a *Scientia Sermocinalis* (Science of Words) took the basic unit of Logic to be linguistic in character, and hence the term was regarded as the written or spoken word. In an age where Rhetoric and Verbalism were closely associated with Logic, 132 the construction of verbal presentations came to be regarded as a principal task of the logician - presentations in which grammatical propriety and rhetorical elegance found a place of prominence. Since the written and spoken words were the basic constituents of such verbal presentations, the analysis of the grammatical structure of words, their manner of formation, their placement in sentence structures and the assessment of their persuasive power became important aspects of the logician's task.

But Logic was also considered as a Science of Reasoning. In such a context, the basic unit of Logic, namely "term" was regarded as concept. The term "being-of-reason" was in common use to signify this basic unit. 133 When Logic was understood as *Scientia-Rationalis*, the logicians' task was to construct an apparatus for

correct reasoning. "Term" as the basic unit of Logic was taken to be the basic unit of this apparatus. Out of terms were constructed propositions and finally syllogisms and deductions. Samuel Smith's presentation of the Tripartite Distinction of Logic, which I have already cited, exhibits the place given to "term" in the apparatus of reasoning. Such a consideration of the place of "term" may be taken as the most classical, since Logic is best known as a Science of Reasoning.

In a context where Logic was regarded as providing the method to knowledge, and the parts of Logic as instruments or constituents of knowledge, the basic unit of Logic, namely, "term", was considered as the basic element of knowledge. Simple Apprehension, the first act of the mind, became the initial step towards knowledge and that which was apprehended came to be viewed as the elementary object of knowledge.

The 17th Century application of the terms "object", and "subject", and "objective" and "subjective" may be traced to Aristotelian and Scholastic usage. The term "subject" in the Aristotelian context primarily signifies "substance" and derivatively the "subject of a statement", that of which predications may be made.¹³⁴ Aquinas understands "subjectum" in the Aristotelian sense as primarily signifying "substantia" (that to which accidental determinations belong) and derivatively as 'subject of a statement'.¹³⁵ The term "object", on the other hand, was regarded as that to which the exercise of a Faculty is

applied, or, as that with which any process or activity is concerned, or in which it terminates.¹³⁶ Such an "object" may be, of course, that with which our knowledge is concerned, since knowing is also a process or activity. In later scholastic usage we meet with an opposition between the terms "subjective" and "objective" (and the various cognate expressions), which has its foundation in the older Aristotelian-Thomistic usage, but which reveals a more restricted application. Prantl describes such an application thus:

Subjectivum means that which relates to subjects of judgments, that is, to the concrete facts about which one thinks; while, on the contrary, objectum means what is involved merely in obiicere, that is, in the act of bringing before the mind; and objectivum falls to the account of the mind before which the fact is brought.¹³⁷

This usage of the terms "object" and "subject" prevailed during the 17th Century. In such a context the term "object" signifies what is present to the mind in any of its acts, and the adjective "objective" ('objectivus') is frequently used precisely as we now employ the opposite word "subjective", namely to characterize anything in so far as it is within or before the mind, and conditioned by its operations. On the other hand, "subjective" is used to characterize the "external fact", especially the "substantial fact".¹³⁸

When Locke notes that the "object" as "being-of-reason" exists objectively only in the mind, he records this predominantly 17th Century sense of the term "Object".¹³⁹

The "Notion" for Sergeant is what Logicians call "Term" in Logic (Method to Science, Book I, Lesson 1, p. 2). He also describes the Notion as the "object" or more precisely the "Immediate Object" of the first operation of the mind, namely, Simple Apprehension (Solid Philosophy Asserted, The Preface: sections 18 & 19, pp. 25-27).

There is an interesting similarity between this description and Locke's characterization of Idea as "Object" and "Immediate Object", which we will examine in more detail in Chapter III. In the context of Sergeant's epistemologically oriented Logic, Notion, as "object" of Simple Apprehension, is the "object" of the initial act of knowing, since Simple Apprehension is so taken (Ibid.). He regards "Notions" as the elementary "objects" of knowledge, the "seeds of science" (Ibid.: sections 1 & 2, pp. 1-4). In its capacity as "object" of knowledge, the 'Notion' has to fulfill certain requirements. In order for it to meet these requirements, Sergeant characterizes the "Notion" in a particular manner. Certain senses of "form" are involved in such a characterization.

He states:

It must be granted that we cannot have Science of anything, but by means of Discourse; that the most exact, and most evident Discourses are those we call Syllogisms: that Syllogisms are resolved into Propositions; and Propositions into Two Terms and a copula that connects them; that all that we can say of these two parts of a Proposition is, that they are Notions or Meanings of the Words that express them: that therefore, all Discourse is built on the Right putting together of these Notions and

can be built on nothing else, nor made of any other fashion; that no Discourse can be solid but what is grounded on the natures of things themselves; without which they must necessarily be airy and chimerical and impossible to beget knowledge; that, for this reason our Notions, which ground all our Discourse and Knowledge are the very natures of the Things without us, existing, spiritually in our Understanding. (Method to Science: Appendix, section 9, pp. 381-382).

This passage reveals the manner in which the Tripartite Distinction fits into Sergeant's epistemologically oriented Logic. According to him, Science is had by means of Syllogistic Discourse. Syllogisms are resolved into Propositions and they are made up of 'Notions' which are the elementary 'objects' of knowledge. In his view, these "objects" have to be the "very natures of things existing spiritually in our Understanding". Sergeant often claims that the Notions, unlike Locke's ideas, are properly grounded in reality and hence legitimate "objects" of knowledge. Sergeant presents these objects (Notions) as "things themselves". In other words, the "object" that is presented to the mind in its initial act of knowing (Simple Apprehension) is identified with the "thing", where the term "thing" is understood as what can exist independently of the mind; the totality of things, for Sergeant, constitute the reality that is external to the mind and independent of its operations. In and through the identification of the "object" of knowledge with the "thing" known, he claims, his method to knowledge is free from Scepticism and prevents knowledge from being reduced

to "a castle in the air" ("aiery" or "chimmerical"). According to him, Locke's "Idea", entails such devastating epistemological consequences. Sergeant's presentation of Notion as object of knowledge falls within an epistemological tradition, which may be traced to the Aristotelian-Thomistic theory of cognition, according to which what is cognized is identified with the cognitive agent in the act of cognition. Percipient and the thing perceived, knower and the thing known are seen by Aristotle to be identical in the 'actuality of cognition'.¹⁴⁰ But this identity between the cognitive agent and what is cognized is not to be taken literally. It is here that Aristotle resorts to his theory of "form". It is the form of that which is cognized and not that which is cognized which is in the cognitive agent.¹⁴¹ Underlying the claim that the cognitive agent directly cognizes the thing to be what it is by virtue of reception of the form, is the tenet that "form" is the constitutive determining principle of a thing, no matter in which category.¹⁴² In the act of cognition the form of what is cognized is received without matter, just as the wax receives the design of the signet without iron or gold.¹⁴³ When Sergeant attempts to drain off all corporeality from the "objects" of knowledge (Notions) and presents them as "meanings" (Solid Philosophy Asserted, Reflexion 19, section 17, p. 388; Method to Science, Book I: Lesson 1, pp. 3-4) he is trying to express the Aristotelian-Thomistic position that form alone, and not matter, enters the mind in cognition.¹⁴⁴ In order to identify the object with the thing, he resorts to

form which is simultaneously that which makes a thing to be what it is and which "spiritually exists in the Understanding". Here is an instance of his resort to metaphysical explanation. His "Formalism" at the level of Simple Apprehension has metaphysical overtones.

Formalism at the Propositional level:

Judgment is the second operation of the mind and Proposition the second part of Logic.

Another sense of "form" is involved at this level. "Form" is considered as a "pattern" or "arrangement" of the different parts of a whole, similar to the way the term, "style" was commonly understood in the 17th century, particularly in the fields of Rhetoric, Music and Fashion.¹⁴⁵ "Style" here meant a pattern or arrangement of words or parts of speech in a verbal presentation, an arrangement of notes in a musical presentation or a pattern of dress in the world of fashion.¹⁴⁶ In Logic this sense of "form" was primarily applied in the characterization and assessment of propositions and arguments. Such an application was in vogue in logical analysis long before the 17th Century. At the propositional level, "form" as pattern or arrangement of terms, was employed in the presentation of the proposition in the subject-copula-predicate structure and in the various classifications of propositions. At the level of discourse, such a sense of "form" was involved in the presentation of arguments in the syllogistic mould, and in the

testing of the validity of arguments by examining whether they are or may be put into the syllogistic mould. As we shall note in Chapters IV and V, the controversy between Locke and Sergeant was really not over such an application but rather over the application of this sense of "form" in the justificatory explication of the parts of logic (Propositions and Arguments) as instruments or constituents of knowledge. Propositions and Arguments of a certain "form" were claimed to have preference over other propositions and arguments respectively for epistemological purposes, on account of the "form" the former possessed. Herein lay the locus of the controversy between Locke and Sergeant, at the levels of propositions and of discourse.

In an epistemologically oriented Logic, there must be a satisfactory means of differentiating true from false propositions, and hence an attempt to formulate a "criterion of truth" by which one could determine the truth or falsity of propositions became one of the principal tasks of the logician. It was claimed that a true proposition should not only have the subject-copula-predicate structure but also exhibit a particular pattern of relationship between the subject and predicate terms. The relationship of identity was selected. Here the sense of "form" as pattern or arrangement of terms came to be involved in distinguishing true from false propositions. Sergeant claims that Identical Proposition is the legitimate "criterion of truth" on account of the form it exhibits ($N = N$). Any proposition having such a "form" was taken

to be self-evidently true, and any proposition which could be reduced to such a "form" was taken to be "made evident" (Reason against Raillery, Discourses I & II; Method to Science, Books II & III, Lessons III & IV; Solid Philosophy Asserted, The Preface and Reflexions 17 & 19; Non-Ultra...). The precise sense in which Sergeant claims Identical Proposition as providing the "criterion of truth" and the metaphysical assumptions underlying such a claim will be discussed in Chapter IV (4:2).

When Deduction is regarded as the most proper structural framework for the attainment of knowledge, "First Principles" or "Maxims" as they were popularly called during the 17th Century, receive an important place. Sergeant works within such a deductive framework.¹⁴⁷ Hence, he gives an important place to "maxims" in his account of the method to knowledge. Here also Sergeant claims, that Identical Propositions, on account of the "form" they exhibit, meet the requirements legitimate First Principles have to meet, when deduction is taken to be the structural framework most proper for the attainment of knowledge (Letter of Thanks to Tillotson; Reason against Raillery; Discourses II & III; Method to Science, Book II; Solid Philosophy Asserted, The Preface & Reflexion 19; Non-Ultra...; Trans-natural Philosophy). Sergeant claims that his method to knowledge is founded on 'self-evident' truths and not on "voluntary" and "unproved suppositions". A method to knowledge based on such suppositions,

according to him, is pseudo (Solid Philosophy Asserted, The Preface, section 5, pp. 6-7, & section 7, pp. 9-10).

In the justificatory explication of Identical Propositions as "criterion of truth" and "Maxims" Sergeant employs the sense of "form" as pattern or arrangement of terms (Notions). His claims concerning Identical Propositions reveal "Formalism" at the propositional level.

Formalism at the level of Discourse:

Discourse is the third operation of the mind and syllogism is the third part of logic.

Syllogism may be taken as a form of argument, where "form" is understood as a pattern or arrangement of terms in propositional units. In a context where syllogistic demonstration was given a place of monopoly in discourse, and where such demonstration was considered most conducive for making progress in knowledge, syllogism as a form of demonstration received a place of prominence in the method to knowledge. Both traditional and non-traditional logics of this period gave such a prominent place for syllogistic demonstration.¹⁴⁸ Sergeant's account of Discourse exhibits such a "Formalism" (Method to Science, Book III; Solid Philosophy Asserted, The Preface and Reflexions 19 & 20). After criticizing the method to knowledge of the Ideists as one commencing from "aiery" and "superficial" ideas and founded

upon "suppositions", Sergeant states:

Nor do I think it did ever so much as once enter the Thoughts of the Ideists, much less their Hopes, that their Discourse could be reduced to Self-Evidence, or to that Artificial Form of Close Discourse call'd Demonstrative Syllogism; which is the touchstone to distinguish what Ratiocinations are truly Conclusive, what Inconclusive or Fallacious. Without which, what do we know?

Such a critique is based on the assumption that syllogistic demonstration is indispensable to the method of knowledge.

Form and Formality:

The involvement of these senses of "form" in the characterization of the three parts of Logic as instruments or constituents of knowledge gave rise to a "set procedure". On the assumption that the elementary objects of Simple Apprehension (Sergeant's Notions) are 'things themselves', on the grounds that the Identical Propositions; through the form they manifest, provide the "Criterion of Truth" and "First Principles", and on the conviction that syllogistic demonstration guarantees conclusions which are 'certain', there was a possibility for one to get involved in a 'procedure' which may not yield knowledge at all.

Then one becomes involved in a ceremonial procedure and this type of procedure may be described through another sense of 'form', which was also prevalent during the 17th century. According to this sense, 'form' meant a set of procedures in accordance with prescribed usage, etiquette, ritual, etc., - a ceremony often implying the absence of

intrinsic meaning.¹⁴⁹ The term "formality" was usually associated with this sense of 'form' and anyone who was involved in such a procedure was described as a "Formalist" or one who was indulging in a "formality".¹⁵⁰

The intimate connection between Logic and Disputation during this period allowed for the possibility of identifying disputational procedures with the methods of attaining knowledge; victory in argument was identified with the attainment of knowledge. This encouraged the practice of a "formality" in which Locke's Oxford over-indulged. The curriculum encouraged it.¹⁵¹

Conclusion:

The senses of "form" as "determining principle of a thing", and "pattern" or "arrangement" are employed in the justificatory explication of Logic as a method to knowledge. On account of this involvement of the senses of "form", the logico-epistemological doctrines or tendencies are in this dissertation labelled collectively as "Formalism".

CHAPTER II--Notes and References

2:1

1. Locke to Molyneux, 22 February 1696/7, Works, Vol. IX, pp. 396-7.
2. Yolton, J. W., John Locke and the Way of Ideas, Oxford, Clarendon Press, 1956. Reprinted 1968, p. 9.
3. This tract was published at the end of his work Christian Blessedness..., London, S. Manship, 1690.
See Yolton, J. W., Op. Cit., p. 223.
4. Enclosed in Tyrell's letter to Locke, 27 January 1689/90. MS. Locke, C. 22, f. 80. (Yolton, J. W. op. cit., p. 3).
5. Lowde, James. A Discourse Concerning the Nature of Man, Both in his Natural and Political Capacity, Both as he is a Rational Creature, and Member of a Civil Society. With an Examination of some of Mr. Hobbes's Opinions relating hereunto. London, T. Warren, 1694.
6. Locke's response to Lowde appears in The Epistle to the Reader in the second, third, and fourth editions of the Essay, and as footnote to II:XXIII:II in the fifth edition.
7. There were two Burnets actively involved with the polemics of the Essay. The one of Kenney served as the intermediary between Locke and Leibniz. The other, who himself wrote against Locke, was of the Charterhouse, and author of Telluris Theoria Sacra, 1681-9. (Yolton, J. W., op. cit., p. 10, footnote). The latter Burnet wrote three sets of Remarks on the Essay. In response to the first entitled Remarks upon an Essay concerning Humane Understanding: In a Letter Addressed to the Author, London, M. Wotton, 1697, Locke writes:

Before any thing came against my Essay concerning Human Understanding last year, I was

told, that I must prepare myself for a storm that was coming against it; it being resolved by some men, that it was necessary that book of mine should as it is phrased, be run down.

This is found in 'An Answer to remarks upon an Essay concerning Human Understanding &c.' at the end of Locke's reply to the Bishop of Worcester's Answer, dated 29 June 1697. Works, Vol. IV, p. 186.

8. Molyneux's letter to Locke, 22 December 1692, gives details concerning the introduction of the Essay in Dublin. Molyneux writes:

Secondly, I was the first that recommended and lent to the reverend provost of our university, Dr. Ashe, a most learned and ingenious man, your Essay, with which he was so wonderfully pleased and satisfied, that he has ordered it to be read by the bachelors in the college, and strictly examines them in their progress therein.
(Works, Vol. IX, pp. 298-9)

J. W. Yolton mentions (op. cit., p. 4) that Thomas Hearne records the introduction of the Essay in Oxford in Remarks and Collections of Thomas Hearne, Oxford, Clarendon Press, for the Oxford Historical Society, 1885-1921, entry for 21 November, 1734, Vol. XI, p. 364.

9. Sergeant observes:

After I had Publish'd my Method to Science, which I dedicated to your selves, I came to receive certain information that very many Students in both the Universities, and not a few of those also who were to instruct others, did apply themselves to the Way of Ideas, in hopes to arrive by that means at Philosophical Knowledge.
(Solid Philosophy Asserted, 1697, The Preface, p. 1)

10. Anthony Collins to Locke, 18 February 1703/4, MS. Locke, C. 7, f. 18 (Yolton, J. W., op. cit., II).

11. Tyrell to Locke, April 1704, MS. Locke, C. 22, f. 167. Reprinted in Peter King's Life of John Locke, London, 1830, Vol. I, pp. 357-9. Cf. Peter King. The Life and Letters of John Locke, 1884, reprinted 1972, p. 193. In both these books I find "longcut exercises" in the said letter. In Yolton's citation of the same I find "logical exercises". (op. cit., p. II).
12. Le Clerc, Jean. Logica: Sive, Ars ratiocinandi. Autore, Joanne Clerico. Londini, Awnsham & Johan, Churchill, 1692, Dedicated to Robert Boyle.

Ontologia: Sive De Ente in genere, Londini, Awnsham & Johan, Churchill, 1692, Dedicated to Locke.
13. The similarities between Locke's views and those of the Philosophers mentioned are sometimes cited during the course of this dissertation.
14. Yolton, J. W., John Locke and the 17th Century Logic of Ideas, J.H.I., Vol. 16, 1955, pp. 432.
15. Howell, W.S., Eighteenth-Century British Logic and Rhetoric, Princeton, 1971, pp. 13-4, 60-71, 307.
16. Sergeant, J., Solid Philosophy Asserted, The Epistle Dedicatory, p. 3.
17. The Ramists (those who followed Pierre De La Ramee, also known as Peter Ramus, 1515-1572), the Systematics (those who attempted to reconcile Aristotelian with Ramistic Logic), the Cartesians (those who adopted the views of Descartes), and the Port-Royal logicians (those who adopted the Logic of Antoine Arnauld and Pierre Nicole) may be considered as advocating non-traditional logico-epistemological views during the period under consideration.

See Howell, W.S., Logic and Rhetoric in England, 1500-1700, Princeton, 1956, pp. 146-281, 282-345, 346-363.

Eighteenth-Century British Logic and Rhetoric, Princeton, 1971, Chapter 5, pp. 259-371.

18. Biographical details concerning John Sergeant have been obtained from the following sources:

- 1) Burton, Edwin. 'John Sergeant', The Catholic Encyclopedia, 1912, Vol. 13, p. 727.
- 2) Birell, T. A. 'John Sergeant', The New Catholic Encyclopedia, 1967, Vol. 13, pp. 111-2.
- 3) Sorley, W. R. A History of British Philosophy to 1900, England, 1920. Reprinted by Greenwood Publishers, 1973, Ch. VI, pp. 127-129.
- 4) Cooper, Thomas. 'John Sergeant', Dictionary of National Biography, Oxford University Press, Vol. 17, 1789-91.
- 5) Johnston, G. A. The Development of Berkeley's Philosophy, 1923, Appendix II.
- 6) Bradish, Norman. 'John Sergeant, a Forgotten Critic of Descartes and Locke', The Monist, Vol. XXXIX, October 1929, pp. 571-601.
- 7) ----- A Seventeenth Century Critic of Logic, Dissertation submitted to North-Western University, Evanston, Illinois, 1932.
- 8) Yolton, J. W. 'Locke's Unpublished Marginal Replies to John Sergeant', J. H. I., Vol. 12, 1951, pp. 528-559.
- 9) ----- John Locke and the Way of Ideas, Oxford, Clarendon Press, 1956. Reprinted in 1968, pp. 8-9, 72-86.
- 10) Howell, W. S. Eighteenth-Century British Logic and Rhetoric, Princeton, N. J., 1971.

19. Bradish, N., 'John Sergeant, A Forgotten Critic of Descartes and Locke', The Monist, Vol. XXXIX, 1929, p. 573.

According to Bradish, Morton was quite unscrupulous in his theological controversies. Bradish is of the opinion that one of the reasons for Sergeant losing confidence in the Protestant Faith was the unscrupulous ways

of Bishop Morton (Ibid. , pp. 573-4).
 According to Thomas Cooper, Sergeant's
 researches in early ecclesiastical history,
 conducted during the time when he was sec-
 retary to Bishop Morton, resulted in his
 conversion to Catholicism (Cooper T. ,
 'John Sergeant', in Dictionary of National
 Biography, Oxford University Press, Vol.
 17, p. 1189).

20. Bradish, N., op. cit. , p. 573.
21. Bradish mentions the following:
 - Jeremy Taylor, D. D. (1613-1667), Bishop of Down and Connor.
 - Edward Stillingfleet, (1635-99), Bishop of Worcester.
 - John Tillotson, (1630-94), Archbishop of Canterbury.
 - Daniel Whitby, (1638-1729), Polemical Divine and Commentator.
 - Thomas Pierce (1622-1691), President of Magdalen College, Oxford, and Controversialist.
 - Thomas Tenison, (1636-1715), Archbishop of Canterbury. (Bradish, N. , Ibid. , pp. 575-6)
22. Cooper, Thomas, op. cit. , p. 1190.
23. Ibid.
24. Birell, T. A. , op. cit. , 112.
25. Burton, Edwin, op. cit. , p. 727. Cf. Cooper, Thomas, op. cit. , p. 1190.
26. Private Communication from Mr. E. S. de Beer - letter dated December 25, 1976. The transaction between Locke and Sergeant to appear in a future volume of The Correspondence of John Locke, ed. by E. S. de Beer, Oxford, Clarendon Press.
27. The evidence here is circumstantial. Locke's friendship and frequent consultations with Tillotson (Locke's letter to Limborch, dated 11 December, 1694, on the occasion of Tillotson's death as cited by Cranston in John Locke - A Biography, second edition, 1959, p. 386), and the similarities in their criticisms

of Identical Propositions (see Chapter IV of this dissertation) make me think that Locke would have been interested in the Sergeant-Tillotson controversy.

28. I have not been able to gain access to this work. But, in his Letter of Thanks to John Tillotson (1666), Sergeant mentions (sections 5 & 6, pp. 9-12) that he employs Identical Propositions like 'A Rule is a Rule' and 'Faith is Faith' as First Principles in Sure Footing...
29. Tillotson critically comments on Sergeant's doctrine of Identical Propositions as First Principles, as indicated in Sure Footing..., and calls him 'the Lord and Professor of First Principles' (The Works of the Most Reverend Dr. John Tillotson, late Lord Archbishop of Canterbury, containing 254 Sermons and Discourses on several occasions, Together with the Rule of Faith, Dublin, Printed for S. Powell, MDCCXXXIX, Vol. I, Preface, p. 9). In his First Sermon entitled 'The Wisdom of being Religious' Tillotson endeavours to show that 'all things are not mathematically demonstrable from First Principles' (Ibid., Vol. I).
30. Sergeant, J., A Letter of Thanks from the Author of Sure Footing to his Answerer Mr. J. J., Paris, 1666, sections 5 & 6, pp. 9-12.
31. Sergeant, J., Method to Arrive at Satisfaction in Religion, 1671, pp. 259-260.
32. Harrison, J. & Laslett, P., The Library of John Locke, Oxford Bibl. Soc., Oxford, 1965, p. 230.
33. Sergeant, J., Erreur Non-Plust..., 1673, The Preface, pp. 1-5.
34. Ibid., p. 5.
35. Sergeant, J., Method to Science, Preface, pp. 3-4.
36. Burton, Edwin., op. cit., p. 727.
Cooper, Thomas, op. cit., p. 1190.
37. Stillingfleet is one of those who popularizes the phrases "New Way by Ideas", "Way by Ideas", and "Way of Ideas" in his controversy with Locke. Locke's replies to Stillingfleet indicate

how such phrases figure in their controversy. Locke writes:

My new way by ideas, or my way by ideas, which often occurs in your lordship's letter, is, I confess, a very large and doubtful expression; and may in the full latitude comprehend my whole Essay. And this, in short, is my way by ideas that which your lordship calls my new way by ideas. . . . (Mr. Locke's Reply to the Bishop of Worcester's Answer, 29 June 1697, Works, Vol. IV, p. 134. Cf. Mr. Locke's Reply to the Bishop of Worcester's Answer to His Second Letter, May 4, 1698, Works, Vol. IV, pp. 367-435).

Henry Lee describes Locke's "Way of Coming to all Knowledge" as one which "proceeds from ideas" (Henry Lee, Anti-Scepticism, 1702, reprinted by Garland Publication Inc., 1978, Book II, Chapter I, section 9, pp. 40-41).

38. Sergeant, J., Solid Philosophy Asserted, The Epistle Dedicatory, p. 5; The Preface, pp. 1-2, 4, 7 & 8.
39. Ibid., The Preface, section I, pp. 1-2.
40. Locke, J., Marginal Comment No. 5, The Preface, p. 23; No. 8, Preliminary First, p. 8.
41. Sergeant, J., Raillery Defeated by Calm Reason. . ., 1699, section 3, p. 4.
42. Ibid., section 3, pp. 3-4.
43. Sergeant, J., Transnatural Philosophy. . ., 1700, The Sub-Title of the Preface.
44. See Bibliography.
45. Sergeant, J., Solid Philosophy Asserted, The Epistle Dedicatory. Here he describes Descartes and Locke as "two gentlemen, being better vers'd in the Mathematicks than in Metaphysics; and, thence, not apprehending how Corporeal Natures could get into the Mind, or be there (p. 5). According to him the failure on the part of these two philosophers is mainly due to their adoption of the 'Way of Ideas' instead of the 'Way of

Notions'. We shall deal with Sergeant's criticism in more detail in Chapter III.

Cf. The Preface, pp. 1-24.

Non-Ultra..., sections 6, 7 & 8, pp. 596-9. Here he criticizes the Ideists, particularly Locke and Le Grand, for adopting a subjective criterion of truth.

46. Sergeant, J., Non-Ultra..., sections 21, 22, pp. 604-6.
47. Sergeant, J., Transnatural Philosophy..., 1700, The Preface, sections XII, XIII, XIV, XVI, XVIII, XIX-XXIII, pp. 26-42.
48. Sergeant, J., Solid Philosophy Asserted, The Preface, section 2, p. 3.
49. Bourne deals with the controversy concerning the Essay, particularly with Stillingfleet's opposition to it (Bourne H. R. F., The Life of John Locke, 1969, Vol. 2, Chapter XIV, pp. 404-449).

See J. W. Yolton, John Locke and the Way of Ideas, Oxford, Clarendon Press, 1956, Reprinted 1968, Chapters I, II, IV & V.

50. Yolton, J. W., Ibid., Preface, p. IX.

51. Stillingfleet writes:

But your Way of Certainty by Ideas is so wholly New, that here we have no general Principles; no Criterion, no Antecedents and Consequents; no Syllogistical Methods of Demonstration; and yet we are told of a better Way of Certainty to be attained, merely by the help of Ideas.

(The Bishop of Worcester's Answer to Mr. Locke's Second Letter (1698) as cited by J. W. Yolton, John Locke and the Way of Ideas, 1968, p. 89).

52. See The Replies of Locke to Stillingfleet. Works, Vol. IV.
53. Sergeant, J., Review of Solid Philosophy Asserted, as it first appeared in his journal Literary Life, and reproduced by Norman Bradish in 'John Sergeant: the Forgotten Critic of Descartes and Locke', The Monist, Vol. XXXIX, 1929, pp. 580-82. [underscoring in the quotation is mine]

54. Yolton observes:

But many sound criticisms of the doctrines, especially of the epistemological doctrines, were formulated by men like Norris, Henry Lee, Sergeant, Stillingfleet, Peter Browne, and lesser known or anonymous writers. Many of these, notably Norris, Lee, and Sergeant, exemplify the gradual growth of the recognition of the sceptical tendencies in the epistemology of the Essay, scepticism both as regards the abstract epistemological doctrines and as regards the effects of these doctrines upon morality and religion. (John Locke and the Way of Ideas, 1968, Ch. I, pp. 7-18; cf. Chapter III, section I, pp. 72-73)

55. Norris, J. , Cursory Reflections Upon a Book Called, An Essay Concerning Human Understanding, 1690; edited by D. McEwen, 1961, p. 4.
56. Ibid. , Introduction, p. 5.
57. Yolton, J. W. , op. cit. , Ch. II, section III, p. 65.
58. Norris, J. , op. cit. , p. 31.
59. As cited by Yolton, J. W. , op. cit. , p. 223.
60. Lee, Henry, Anti-Scepticism..., 1702, Rene Wellek's edition, Garland Publishing Inc. , New York, London, 1978.
61. As translated by Alfred G. Langley, The Open Court Publishing Co. , U. S. A. , 1949.
62. Christopherson, H. O. , A Bibliographical Introduction to the Study of John Locke, Oslo, 1930, p. 52.
63. In a letter to Samuel Bold, dated 16 May 1699, Locke writes:

My Essay is going to be printed again; I wish you were near to me, that I might show you the several alterations and additions I have made before they go to the press.

(Works, Vol. X, p. 320; Cf. MS. Locke
b. I, f. 218)

Nidditch thinks the fourth edition of the Essay was published around Early December 1699. He comes to this conclusion on the basis of Locke's letter to Sloane, dated December 2, 1699, the advertisement in the London Gazette (3556), 7-11 Dec., 1699, the entry in The Term Catalogues, III, p. 176, for Hilary Term (February), 1699/1700 (Author Index), and the Bibliotheca Annual, which states 1699 copies of the fourth edition were for sale. (Nidditch, P. H., An Essay Concerning Human Understanding, a critical edition, Oxford, 1975, Introduction, p. xxix, footnote; Cf. also Bourne, Fox., The Life of John Locke, Vol. 2, 1969, p. 441).

64. Locke took notice of some of Norris's earlier works (Cursory Reflections... (1690) and Reason and Religion; or the Grounds and Measures of Devotion, considered from the Nature of Man. In several Contemplations. With Exercises of Devotion applied to every Contemplation, London, 1689) and responded to the same in Remarks upon some of Mr. Norris's Books, etc. (Works, Vol. X, pp. 247-59; Cf. Letter to Collins, pp. 282-6).

65. In his letter to Molyneux dated 22 February, 1696/7, Locke writes:

There is lately fallen into my hand a paper of Mons. L...., writ to a gentleman here in England, concerning several things in my Essay. I was told, when I was in London, that he had lately ordered his correspondent to communicate them to me, and something else he has since writ hither. He treats me all along with great civility, and more compliment than I can deserve. And being, as he is, a very great man, it is not for me to say there appears to me no great weight in the exceptions he makes to some passages; but his great name and knowledge in all parts of learning, ought to make me think, that man of his parts says nothing but what has great weight a in it (sic.); only I suspect he has, in some places, a little mistaken my sense, which is easy for a stranger, who has (as I think), learned English out of England. The servant I have now cannot copy French, or else you should see what he says: when I have

all his papers you shall hear farther from me.
(Works, Vol. IX, pp. 399-400)

Leibniz wrote three short sets of remarks on the Essay and some comments on the Locke-Stillingfleet controversy. See: Gerhardt, C. J., Die Philosophischen Schriften von Gottfried Wilhelm Leibniz, 1875-90, v. p. 6, v. pp. 14-25, iii, pp. 174-79, pp. 185-6, pp. 197-9, and pp. 243-261. These are cited by Yolton, J. W., John Locke and the Way of Ideas, 1968, p. 8, footnote 2.

Langley, A. G., (tr.), 1949, Introduction, pp. 6-12.

In his letter to Locke, Molyneux mentions (16 March 1697 as given in Works, Vol. IX, p. 404) the following writings of Leibniz:

De primae philosophiae Emendatione, & de Notione Substantiae (Acta Eruditorum, March 1694, pp. 110-12, reprinted in Gerhardt, iii, pp. 468-70, and cited by J. W. Yolton, op. cit., p. 15, footnote 2).
Specimen Dynamicum, proadmiraNDis Naturae legibus (Acta Eruditorum, April 1695, pp. 145-57. Cited by J. W. Yolton, ibid.).

66. Langley, A. G., op. cit., Introduction, p. 6.
It must be noted that Leibniz's New Essays was based on his readings of Coste's 1700 edition of the Essay, which is subsequent to its fourth edition. Hence, Leibniz's response as found in New Essays occurred after Locke had made the additions, which are under consideration in this dissertation (Cf. Langley, A. G., op. cit., Introduction, p. 4.)
67. Locke to Molyneux, 11 September, 1697, Works, Vol. IX, p. 431.
68. Locke to Molyneux, 20 January, 1697/8, Works, Vol. IX, p. 447.
69. Ibid.
70. Locke's Second Reply to the Bishop of Worcester, Works, Vol. IV, p. 390.
71. Harrison, J. and Laslett, P., op. cit., p. 230.
72. Bodleian Library: MS. Locke C. 18, ff. 134-5. Private communication from E. S. de Beer. Letter dated 25 Dec. 1976.

73. Harrison, J. and Laslett, P., op. cit., p. 230.

74. Locke writes to Stillingfleet thus:

Your Lordship says, the academics went upon ideas, or representations of things to their minds; and pray, my lord, does not your lordship do so too? Or has Mr. J.S. so won upon your lordship, by his solid philosophy against the fancies of the ideists, that he says, "that notions are the materials of our knowledge; and that a Notion is the very thing itself existing in the understanding?" (Solid Philosophy Asserted, p. 24 and 27) Not thinking your lordship therefore yet so perfect a convert of Mr. J.S.'s, that you are persuaded, that as often as you think of your cathedral church, or of Descartes's vortices, that the very cathedral church as Worcester, or the motion of those vortices, itself exists in our understanding;
(Works, Vol. IV, p. 390)

75. Locke, J., Marginal Comments No. 5 & 6, Solid Philosophy Asserted, The Preface, p. 23 and Preliminary First, p. 8.

76. Harrison, J. and Laslett, P., op. cit., p. 230.

77. Ibid.

78. Sergeant, J., Method to Arrive at Satisfaction in Religion, 1671, pp. 259-264.

79. Harrison, J. and Laslett, P., op. cit., p. 230.

80. In Method to Arrive at Satisfaction in Religion Sergeant attempts to show that Identical Propositions serve as "foundations" on which all rational discourse are built and that every true proposition may be reduced to an Identical Proposition (pp. 259-264). Locke criticizes both these claims. Some of his additions to the fourth edition of the Essay deal in detail with his critical views on the said claims (IV:VII & VIII).

81. As written by hand within brackets in the copy which is now at St. John's College Library, Cambridge.

82. Yolton, J. W., Locke's Unpublished Marginal Replies to John Sergeant, J. H. I., Vol. 12, 1951, p. 533.
83. Ibid., p. 533.
84. Worthington, John, The Diary and Correspondence, edited by James Crossley, London, Chatham Society, 1885, Vol. II, Part I, p. 193, n. 1, as cited by J. W. Yolton, Ibid., p. 533.
85. Noah Porter, Marginalis Locke-a-Na, New Englander and Yale Review, Vol. XI, July 1887, pp. 33-49.
86. Fox Bourne states:
- Among these assailants were John Norris, the disciple of Malebranche and precursor of Butler, Thomas Burnet, the Author of 'The New theory of the Earth', and John Sergeant, A Roman Catholic Priest. 'Shall I not be quite slain, think you, amongst so many notable combatants; and the Lord knows how many more to come?' Locke wrote when the tide was setting in. But he replied to none of them, except here and there incidently in the works that have been already described.
(The Life of John Locke, VOL: II, p. 439)
87. Cranston, M., John Locke, a Biography, 1959, p. 429.
88. Christopherson, H. O., A Bibliographical Introduction to the Study of John Locke, 1930, Reprinted 1968, p. 44.
89. Fraser, A. C., An Essay concerning Human Understanding, Dover Publications, 1959, Vol. I. Prolegomena: Biographical, pp. xlv & xlvi.
90. Ibid.
91. Pringle Pattison, A. S. (ed.), An Essay Concerning Human Understanding, 1924, p. 197, footnote.
92. Gibson, J., Locke's theory of Knowledge and its Historical Relations, 1917, Chapter I, section 7, p. 13.

93. Aaron, R. I., John Locke, Third Edition, Oxford, 1971, p. 41.
94. Ibid., p. 41, footnote.
95. Von Leydén, W., Seventeenth-Century Metaphysics, An Examination of Some Main Concepts and Theories, Barnes and Noble, New York, 1968, pp. 47-48.
96. Johnston, G. A., The Development of Berkeley's Philosophy, 1923, p. 61.
97. Ibid., p. 383.
98. Ibid., Appendix, pp. 383-396.
99. Bradish, Norman C., 'John Sergeant: A Forgotten Critic of Locke and Descartes,' The Monist, 1929, p. 572.
100. Bradish, Norman C., John Sergeant, A Seventeenth Century Critic of Logic, Dissertation for Ph. D. submitted to Northwestern University, Evanston, Illinois, U. S. A., 1932.
101. Locke, J., Marginal Comments: No. 5 & 8, The Preface, p. 23 and Preliminary First, p. 8.
102. Locke's Second Reply to the Bishop of Worcester, Works, Vol. IV, p. 390.
103. Yolton, J. W., Locke's Unpublished Marginal Replies to John Sergeant, J.H.I., Vol. 12, 1951, p. 535.
104. The major additions which are of relevance here are as follows (the page references are to Nidditch's critical edition, 1975):
- 1) IV:VII: 11, pp. 598 (2) - (34) p. 601.
 - 2) IV:VIII: 3, (14) p. 610 - (12) p. 612.
 - 3) IV:XII: 3, (32) p. 640 - (19) p. 641.
 - 4) IV:XVII: 4, (25) p. 670 - (24) p. 671.
 - 5) IV:XVII: 4, (19) p. 672 - (1) p. 677.
 - 6) IV:XVII: 4, (18) p. 677 - (4) p. 678.
 - 7) IV:XVII: 4, (5) p. 678 - (26) p. 678.
 - 8) IV:XVII: 8, (9) p. 681 - (21) p. 681.
105. Yolton, J. W., John Locke and the Way of Ideas, p. 16.

106. Yolton thinks that such an attitude of Locke is understandable because 'the thought of exchanging views for mutual benefit had not taken hold of the intellectual world' (Ibid., p. 16).
107. Locke to Molyneux, dated June 28, 1694, Works, Vol. IX, p. 339.
108. Locke letter to Limborch, dated 12 August 1701, Works, Vol. X, pp. 121-22. Cf. pp. 105-122.
109. See Yolton, J. W., Introduction to his edition of the Essay, Everyman's Library, 1974, p. xiii.
110. See Nidditch's edition: footnote to II:XV:9, pp. 201-202.
111. In Coste's revised translation of the Essay (1729), the above addition begins with the following introductory statement given by Coste:

C'est M Baybeyrac, a present Professeur en droit a Groningue, qui me communiqua ces Objections dans une lettre que je fais voir a M. Locke et voici la reponse que M. Locke me dicta peu de jours apres.

As cited by P. Nidditch, op. cit., p. 202, footnote.

112. Locke writes to Burnet:

Before anything came out against my Essay concerning Human Understanding the last year, I was told, that I must prepare myself for a storm that was coming against it; it being resolved by some men, that it was necessary that book of mind should, as it phraséd, be run down.

(An answer to Remarks upon an Essay concerning Human Understanding, 1697, Works, Vol. IV, p. 186.)

Samuel Bold also expresses a similar opinion concerning the rising tide of opposition to the Essay, when he writes thus:

This excellent Treatise having been published several years and received thru all the Learned World with very great Approbation, by

those who understood English, a Mighty Outcry was at last, all of a sudden raised against it here at home. There was no doubt some reason or other, why so many should be employed, just at the same time, to Attack and Batter this Essay; tho' what was the weighty consideration, which put them all in motion, may, perhaps continue a long secret.

(Some Considerations on the Principal Objections and Arguments which have been published against Mr. Locke's Essay of Human Understanding, London, Printed for A & J Churchill, 1699, Introduction, pp. 1-2.)

113. This is cited by Noah Porter in Marginalia Locke-a-Na, New Englander and Yale Review, Vol. XI, July 1887, p. 35.
114. Locke's Marginal Comment as cited by Noah Porter, Ibid., p. 35.
115. A Letter to the Right Reverend Edward Lord Bishop of Worcester, concerning some Passages relating to Mr. Locke's Essay of Human Understanding, in a late Discourse of his Lordship's in Vindication of the Trinity, Oates, January 7, 1696/7, Works, Vol. IV, pp. 1-96.
(This letter is in response to Stillingfleet's "Discourse, in Vindication of the Doctrine of the Trinity".)

The Bishop of Worcester's Answer to Mr. Locke's Letter concerning some passages to his Essay, etc., 1697.

Mr. Locke's Reply to the Right Reverend the Lord Bishop of Worcester's Answer to his Letter concerning some passages relating to Mr. Locke's Essay of Human Understanding, in a Late Discourse of his Lordship's, in Vindication of the Trinity, London, 29 June 1697, Works, Vol. IV, pp. 97-184.

The Bishop of Worcester's Answer to Mr. Locke's Second Letter wherein his Notion of Ideas is proved to be inconsistent with itself, and with the Articles of Christian Faith, 1698.

Mr. Locke's Reply to The Right Reverend the Lord Bishop of Worcester's Answer to his Second Letter. Wherein, besides other incident Matters, what his Lordship has said concerning Certainty by Ideas, and Certainty by Faith; the Resurrection

of the Body; the Immateriality of the Soul; the Inconsistency of Mr. Locke's Notions with the Articles of the Christian Faith, and their Tendency to Scepticism; is examined. Oates, May 4, 1698, Works, Vol. IV, pp. 191-498.

John Edwards wrote The Socinian Creed (1697), attacking Locke's Reasonableness of Christianity. See Yolton, J. W., John Locke and the Way of Ideas, 1968, pp. 62-64.

116. See Locke's Second Reply to the Bishop of Worcester, May 4, 1698, Works, Vol. IV, pp. 303-334. See also footnote addition III:XXVIII:29, p. 348.
117. According to Nidditch, the inclusion of the Locke-Stillingfleet excerpts in the Fifth Edition must have been approved by Peter King, Locke's relation and executor. But whether he (a barrister and Member of Parliament and also the author of two theological books) or a more literary man who had been an associate of Locke, such as Pierre Coste, Anthony Collins, Samuel Bold or yet some other person, made the selections and wrote the remarks that each footnote contained, Nidditch thinks is not known due to lack of adequate evidence. He thinks that in all probability it was the same person(s) who acted on behalf of the late author in seeing the book through the Press, who were responsible for the said footnote additions. They are as follows: I:8 (n); I:IV:8 (n); II:II:2 (n); II:XXIII:1 (n); II:XXIII:2 (n); II:XXVII:29 (n); III:III:II (n); IV:I:2 (n); IV:III:6 (n). (Nidditch, P. H., op. cit., Introduction xxxii & xxxiii; pp. 821-822)
118. This is addressed to Thomas Burnet in "An Answer to Remarks upon an Essay concerning Human Understanding", Works, Vol. IV, p. 188.
119. Ibid., p. 189.
120. See Locke's "Some Remarks upon some of Mr. Norris's Books, Wherein he asserts P. Malebranche's Opinion of our seeing all Things in God", Works, Vol. X, pp. 247-59.
121. Bourne writes:

Among these assailants were John Norris, the disciple of Malebranche and precursor of Butler, Thomas Burnet, the Author of 'New theory

of the Earth", and John Sergeant, a Roman Catholic Priest. 'Shall I be quite plain, think you, amongst so many notable combatants; and the Lord knows how many more to come?' Locke wrote when the tide was setting in. But he replied to none of them, except here and there incidently in the works that have been already described.

(The Life of John Locke, London, 1876, Reprinted Oslo 1932, Vol. II, p. 439).

Aaron writes:

Many of the criticisms made by the Bishop were pertinent in the extreme, and Locke's efforts to answer them throw much light on his position in general. Other opponents, Thomas Burnet and Sergeant, wrote against the Essay, but Locke did not consider himself called upon to answer any of these attacks.

(John Locke, Third Edition, Oxford, Clarendon Press, 1971, p. 41)

Fraser too seems to give more weightage to Stillingfleet than to the other critics of Locke. Fraser thinks that the major criticisms which Locke made to the fourth edition of the Essay concerning Maxims and Trifling Propositions (IV:VII & VII) are directed mainly at Stillingfleet (Fraser, A. C., op. cit., Vol. II, pp. 277-78, footnote to IV:VII:II; p. 293, footnote to IV:VIII:3).

2:2

122.

"Logica sumpsta (non pro naturali ratione nec pro systemate, sed pro qualitate menti acquisita) est ars dirigendi mentem in cognitione rerum: objectum ejus, sive quod tractatus ea, est ens rationis tale ens quod est objective tantum in intellectu. Finis est directio mentis sive actum mentalium, qui cum tres sint apprehensio terminorum simplicium compositio eorum &

collectio unius ab altero. Logica in ordine ad illas in tres partes dividitur suo terminorum voce an natura."

(MS. Locke, f. 33, Fol. 185 v.)

I am giving W. H. Kenney's translation of the above passage (John Locke and the Oxford Training in Logic and Metaphysics, 1959, p. 57). Kenney observes that these Notes on Logic have "similarities to text books current then, but their exact source has not yet been ascertained" (Ibid., p. 56).

123. Richard Burthogge makes explicit this distinction thus:

Method of Reasoning is called Logick; and is either Artificial or Natural. Artificial is the Logic of Schools, of which the chiefest is Aristotle's; and is useful many waies, (sic), but among others mainly (as a Whetstone) to acute and sharpen the Wit; and to render it more sagacious, circumspect and wary, both in making and admitting deductions and consequences. Natural Logick, that of plain and illiterate men, of which I designe to discourse, is the natural method of Reasoning; in relation whereunto the Scots are said to have a Proverb, that an ounce of Mother Wit is worth a Pound of Clergy.

(Organum Vetus Et Novum, or a Discourse of Reason wherein the Natural Logicke Common to Mankind is briefly and plainly described, London, Cornhill, 1678, section 58, pp. 30-31.)

Thomas Spencer, who attempts to reconcile Aristotelian and Ramistic Logics, also takes note of the distinction between Natural and Artificial Logics. He states that Natural Logic deals with the "ways of discoursing, which the reason itself bringeth forth without the help of any order or method", while Artificial Logic is the application of a "multitude of precepts, orderly digested and approved by use" on "the ways of discoursing" (The Art of Logick, 1628, sections 2 & 5, pp. 2-5).

Cf. Coke, Zachary, The Art of Logic, London, 1654. Reprinted by The Scholar Press, England, 1969, p. 3.

124. Burthogge, R., op. cit., pp. 30-31.
125. Cf. Spencer, T., op. cit., pp. 2-5.
126. Robert Sanderson's Logicae Artis Compendium was a popular text-book of the Peripatetic tradition and was in use in Oxford during Locke's time. (Kenney, W.H., op. cit., pp. 60, 70-71; Axtell, J.L., The Educational Writings of John Locke, Cambridge, 1968, Introduction, p. 30; Von Leyden, W., John Locke Essays on the Law of Nature, Oxford, 1954, pp. 30-4). It was first published in 1615 and was given a total of 9 editions during the 17th Century (Howell, W.S., Eighteenth-Century British Logic and Rhetoric, 1971, p. 14). Locke had in his possession its First Edition (Harrison, J. & Haslett, P., op. cit., p. 228). Sanderson defines Logic as an "instrumental Art which directs the Mind in the knowledge of all things intelligible" (Logica... est ars instrumentalis, dirigens mentem nostram in cognitionem omnium intelligibilium. Logicae Artis Compendium, p. 1, as translated and given by Kenney, W.H., op. cit., pp. 70-71). A similar view is expressed by other Peripatetic philosophers of this period - Henry Aldrich (Artis Logicae Compendium, Oxford, 1696, p. 2 as cited by Howell, W.S., op. cit., p. 44); Richard Crakanthorp (Logicae Libri Quinque, London, 1641, pp. 118-19, 340, as cited by Howell, W.S., ibid., pp. 25-6); John Wallis (Institutio Logicae, 1643, pp. 1, & 12, as cited by Howell, W.S., ibid., pp. 31-2, 38).

Such a view was prevalent in non-traditional circles too.

James Zabarella of the University of Padua is believed to be one of the most influential non-traditional philosophers of this period. His books were used in Oxford during Locke's time (Kenney, W.H., op. cit., pp. 61-67). According to Zabarella, "The aim of Logic is to give a method and a way which we ought to use for acquiring knowledge of things. The unknown becomes known only through the knowledge of something already known. In order to gain knowledge of something unknown, it is necessary to proceed from established principles and to use some certain means." (Logicae vero scopus est viam ac methodum tradere, qua ad rerum notitiam adipiscendam uti debeamus; ignotum anim non cognoscitur, nisi ex alicuius noti cognitione, & ad cuiusque ignoti rei notitiam assequendam a statutis quibusdam principiis, & per certa quaedam media progredi necesse est. De Natura logicae, I, x, (1594), as translated and cited by Kenney, W.H., op. cit., p. 67.)

Zachery Coke's The Art of Logick, 1654, is not mentioned by Howell nor Kenney nor in any of the standard histories of Logic of Philosophy of this period. This book is a typical example of the attempt to blend Ramistic with Aristotelian Logic. The Systematics were an influential group of logicians who were involved in such an attempt (Howell, W. S., Logic and Rhetoric in England..., 1956, pp. 261-2). Coke may be placed as one of the Systematics. According to him,

The proper end of Logic, is the ordering and directing of Man's cogitations (or acts of Man's Understanding) in the Knowledge of Things; this is the true and proper end of Logic.
(The Art of Logick, p. 2)

Port-Royal Logic was popular during Locke's day. Its text, La Logique, ou L'Art de Penser, was written by Antoine Arnauld and Pierre Nicole, and enjoyed great success in France and on the continent from 1662 (the year of its first publication in Paris). There were five editions of it between 1664 and 1700 and eight translations into Latin, English and Spanish (Howell, W. S., Logic and Rhetoric in England, 1500-1700, 1956, pp. 101-4 & 351; Baynes, Thomas Spencer, The Port Royal Logic, Translated from the French with Introduction, Notes and Appendix, Edinburgh, 1861, Introduction, pp. xxxix-xliii). According to Roland Hall, "it is extremely possible that Locke read the Port-Royal Logic, judging by the similarities" (R. S. Woolhouse cites Hall in "John Locke and the Port Royal Logic", *N & Q*, July 1970, p. 257). Woolhouse suggests that Locke was familiar with the text of the Port-Royal Logic before its first publication in English (1685), since he finds similarities between this Logic and Locke's views as found in his Journals, and Drafts A, B & C, which are prior to 1685 (*Ibid.*, pp. 257-9). The Port-Royal Logic expresses a similar view concerning the epistemological role of Logic:

La Logique est l'art de bien conduire sa raison dans la connoissance des choses, tant pour s'en instruire soi-meme, que pour en instruire les autres. (Logic is the Art of directing reason aright in obtaining knowledge of things, for the instruction of ourselves, and for the instruction of others).

(Antoine Arnauld et Pierre Nicole, La Logique ou L'Art de Penser, Introduction, p. 37)

Hence, the view that Logic provides the method to knowledge was prevalent in both traditional and non-traditional circles during Locke's time.

127. I say "perhaps" because, according to Kenney, "The sense of the very last part is doubtful (i. e. that of the Second set of notes on logic by Locke) but it probably means that both the names and natures of the three mental acts demand three corresponding parts in logic". (Kenney, W.H., op. cit., p. 57 footnote 20.)
128. Scholastic and Peripatetic philosophers of this period organized their logics on the basis of this tripartite distinction. An instance of the Scholastic use of the tripartite distinction may be found in the works of John of St. Thomas (1598-1644). In the second part of his volume on logic, which in turn formed a part of his voluminous work entitled Cursus Philosophicus (Course of Philosophy), he commences his discussion on Logic by attempting to answer the question, "Among the topics treated by Logic, which one is principal?" His answer is as follows:

Syllogism, which is produced by the Third operation of the intellect is the principal object of Logic ... The reason is plain since, as St. Thomas teaches (Commentary on Interpretation lesson I line 1-2 and Commentary on Posterior Analytics Lesson I line 4) the three operations of the intellect are such that the first and the second are related to the third as to the principal one. It is in the third operation that reasoning is completed. . .

(John Poinsot (John of St. Thomas): Cursus Philosophicus, Vol. on Logic: Second Part (material Logic): Chapter I as translated by Y. R. Simon, J. J. Glanville, and G. D. Hellenhorst in 'The Material Logic of John of St. Thomas', 1955, p. 26.)

Robert Sanderson, an influential Peripatetic, states that his epistemologically oriented Logic is organized on the basis of tripartite distinction and quotes Aristotle for such an organization (Logicae Artis Compendium, 1618, pp. 2-3, 4, 122, as translated and cited by Howell, W. S., Eighteenth Century British Logic and Rhetoric, 1971, pp. 17-18). John Wallis

organizes his treatise on Logic on the basis of the tripartite distinction (Institutio Logicae, 1687 - Part one, consisting of 23 chapters analyzed simple apprehension and dealt with terms, predicables and predicaments; Part two, with eleven chapters, analyzed judgment and propositions; Part three, having 24 chapters dealt with discourse and Syllogism. This is Howell's observation, op. cit., pp. 31-33.)

Ramistic Logic had considerable influence in Cambridge but Oxford was not completely free from its influence (Howell, W. S., Logic and Rhetoric in England, 1500-1700, 1956, pp. 171-2). Even though Ramus did not give a separate place for Terms in his book on logic (Dialectique, 1574, as translated by Macmaine, pp. 72-73), Ramistic logicians began to organize their logics on the basis of the tripartite distinction. For instance, John Sanderson, a reputed Ramistic logician of this period, divides logic into invention and judgment, following Ramus, and then divides judgment into Terms, Propositions and Syllogisms, (Institivorum Dialecticorum Libri Quatuor, as cited by Howell, W. S., op. cit., p. 293). Sanderson's book had three editions at Oxford between 1602 and 1699 (Howell, W. S., ibid.).

The Port-Royal logicians too organized their logic on the basis of such a distinction. After Discourses I & II, La Logique ou L'Art de Penser deals with Terms (Chapters I & II), Propositions (Chapters III-XX) and Reasoning (Part III).

As Kenney observes, nearly all Logic text-books during this period divided logic into three parts (terms, propositions, and syllogisms) corresponding to the three acts of the mind (simple apprehension, judgement, and discourse). (Kenney, W. H., op. cit., p. 276.)

129. Advitus ad Logicam, A 2 v - A 31 (as translated and given by Howell, W. S., Logic and Rhetoric in England, 1500-1700, 1956, p. 294). This was a popular logical treatise of the tradition of the Systematics. It was published in 1613 and had 14 printings during the 17th Century (Howell, W. S., ibid., p. 292). According to J. L. Axtell, this book was also used as a text in Oxford during Locke's time (The Educational Writings of John Locke, Cambridge, 1968, Introduction, p. 38.).

130. The following are my main sources for the 17th Century senses of "form":

- 1) Oxford English Dictionary, Murray, ed., Vol. IV, pp. 458-63.
- 2) Webster's Dictionary, 1828; Copyright 1966, Third International edition.
- 3) Krauth, J., Vocabulary of Philosophy.
- 4) Baldwin, J., "Latin and Scholastic Terminology" in Dictionary of Philosophy and Psychology, 1901, pp. 628-37.

131. Kenney, W. H., op. cit., p. 282.

132. Logic and Rhetoric were closely associated with one another in the university curriculum of this period (See: Axtel, J. L., op. cit., p. 296 footnote 2; Howell, W. S., Eighteenth Century British Logic and Rhetoric, 1971, Chapter III, section I, pp. 75-82).

133. Burthogge, R., Organum Vetus et Novum, or a Discourse of Reason and Truth, 1678, reprinted in The Philosophical Writings of Richard Burthogge, ed., M. W. Landes, 1921, sections 6-15, pp. 11-15.

134. Baldwin, J., op. cit., pp. 632-3 & 636-7.

135. The Aristotelian-Thomistic position on "subject" is presented succinctly by Cardinal Mercier thus:

Subject: In Logic, that of the terms in a proposition of which predication is made (Log. 13). "Dic-tur subjectum, de quo alia predicantur" (In VII Metaphy. I. 2).
In Metaphysics, that to which accidental deter-minations belong; synonym for substance.
"Soli substantiae convenit proprie ratio sub-jecti" (In I Post. Anal., I. 34).

Subjective: In Metaphysics, pertaining to the subject of Accidental determinations, i. e. to substance (Gen. Met., 114, note). "Soli substantiae convenit proprie ratio subjecti" (In I Post. Anal., I. 34).

[Manual of Modern Scholastic Philosophy, 1962, Vol. II, p. 524.]

136. The "object" (of a Faculty): "That to which the exercise of a Faculty is applied" (*Objectum non est materia ex qua, sed materia circa et habet quodammodo rationem Formae in quantum dat speciem*" - *Summa Theol.*, I, 2, Q, 18, a. 2, ad. 2) - as translated and cited by Mercier, *op. cit.*, p. 517. The "Object" of knowledge is that wherein the act of knowledge rests and by which it is completed (Log. 10). ("*Objectum operationis terminat et perficit ipsam et finis ejus*" - In Sent., dist. I, q. 2, a. 1, ad. 2) - Mercier, *op. cit.*, p. 518.

137. Prantl, III, 308 note. As cited by Baldwin, *op. cit.*, p. 637.

138. Baldwin, J., *Ibid.*, 637-8.

Webster notes the use of the term "Objective" as "the existence or nature of a thing as an object of consciousness (as distinguished from an existence or nature termed 'subjective')". He states "The Scholastic Philosophy made the distinction between what belongs to things subjectively (subjective), or as they are in themselves, and what belongs to them objectively (objective) as they are presented to consciousness". (Webster, *op. cit.*, p. 16).

Cf. Krauth, J., *op. cit.*, p. 355.

139. Locke, J., Second set of notes on logic, *op. cit.*

140. The textual sources will be cited in Chapter III, where I deal with the topic in greater detail. See:
Owens, Joseph, Aristotle - Cognition a Way of Being, *Canadian Journal of Philosophy*, Vol. VI, No. 1, March 1976, pp. 1-11.

Hoenen, P., *Reality and Judgment according to St. Thomas*, translated by Henry F. Tiblier, Chicago, 1952, pp. 191-99.

141. Aristotle, *De Anima*, III:8, 431b 28-30 (McKeon ed.).

142. J. Owens states:

Back of it lies the overall Aristotelian tenet that form is the cause of being (Metaphy. 8, 1017b 15-16; Z 17, 1041b 7-28; H 2, 1043a 2-26). It is the form that makes a thing be,

no matter in which category. In the basic category of substance the form makes something be a metal, a plant, an animal, a man. In the other categories the accidental forms make a thing be extended, coloured, related. (op. cit., p. 7)

C. Georgiadis distinguishes between two conceptions of Substance in Aristotle ("Two conceptions of Substance in Aristotle", New Scholasticism, Vol. 47, 1973, pp. 23-37): the 'reistic' and the 'archological'. According to the latter, substance is the principle (arche) of the individual thing that makes it to be what it is. Georgiadis identifies 'form' with 'substance in the archological sense' ("The Individual Thing and its Properties in Aristotle"; Great Philosophers: History of the Interpretation, Dialectics and Humanism, No. 7, 1977, p. 157).

143. Aristotle, De Anima, II:12 424a 17-24 (McKeon ed.).
- Aquinas, T., Summa Theologica, Q, 84, Art 1.
144. Yolton, J.W., Ideas and Knowledge in the Seventeenth Century Philosophy, J. Hist. Phil., Vol. XIII, April 1975, No. 2, p. 147.
145. Oxford English Dictionary, Vol. IV, points 5, 8, 9 & 12, pp. 458-9.
- Webster's Dictionary, 1, 2, & 12.
146. Oxford English Dictionary, ibid.
147. As Yolton observes:

There was a method claimed for science by men of this period - John Sergeant is one. . . . a method of deducing from principles, which Locke was careful to attack and reject. This was a method to knowledge used by the Schoolmen and claimed to apply to all knowledge including knowledge of nature. . . . These were the people identified by Power, Hooke, Sprat and Glanville as the 'old dogmatists', who were more concerned with disputing than with

increasing human knowledge. They would defend any conclusion tracing all truths back to the principles of Logic. (Locke and the Compass of Human Understanding, Cambridge, 1970, p. 90)

148. Yolton, J. W., ibid., pp. 90-91.
See Chapter V (5:2 & 3) of this dissertation.
149. Oxford English Dictionary, Vol. IV, points 6-8, pp. 462-63.
Webster's Dictionary, see: 'formality' points 1 & 2.
150. Oxford English Dictionary, Vol. IV, points 1 & 2, p. 462.
Webster's Dictionary, see: 'Formalist' points 1 & 2.
151. See Appendix II of this dissertation.

CHAPTER III

LOCKE'S ANTI-FORMALISM AT THE LEVEL OF SIMPLE APPREHENSION

3:1 Introduction:

The Idea-Notion controversy between Locke and Sergeant reveals their respective "anti-formalistic" and "formalistic" positions. In a context where Simple Apprehension was taken to be the initial act of knowledge, its "object" was considered the elementary object of knowledge. Certain requirements concerning it were stipulated. 3:2 deals with them. Sergeant claims that his characterization of Notion in terms of "form" enables it to meet the said requirements and thereby be the legitimate "object" of knowledge. He thinks that Idea does not meet these requirements mainly because of Locke's failure to characterize Idea in "formalistic" terms. Sergeant's characterization of Notion is given in 3:3. How Locke's characterization of Idea goes against Sergeant's "Formalistic" presentation is discussed in section 3:4.

3:2 Requirements concerning the "object" of knowledge:

The reasons for Sergeant's condemnation of Locke's Idea and for substituting Notion stem from certain requirements the fulfillment

of which is considered necessary for knowledge to be obtained. More fundamentally they pertain to acts of awareness or the theory of consciousness as such. When knowing is viewed as a kind of conscious activity, these requirements become pertinent to the theory of knowing.

Even though Sergeant characterizes Notion on the basis of the acceptance of these requirements, they are not peculiarly his nor unique to his age. They have had various formulations and were widespread during the time of Sergeant and Locke.¹ The requirements in short are as follows:

1. That knowing has to be about something.
2. That this something should be "real".
3. That which is known should be present to the mind, which is taken as the knowing agent.
4. That which is known should be like the mind.

Let us examine these requirements in greater detail.

1. The first one is associated with the doctrine of "Intentionality of Thought", according to which, whenever one thinks, he thinks about something.² Sergeant distinguishes between thinking and imagining. He takes the former to be the activity of the Mind or "Understanding" while the latter to be that of the Faculty of Imagination or "Fancy" (Solid Philosophy Asserted, The Preface, section 18, p. 25). He considers both thinking and imagining to be intentional in character. In his view, whenever one claims that he is imagining, there must be

something about which he imagines; whenever one claims to be thinking, he has to think about something. What is imagined he calls "Phantasm" or "Image" or "Material Representation" (Ibid., sections 18-19, pp. 25-27; Preliminary First, section 4, p. 3; Reflexion 18, section 9, pp. 350-352). When an act is taken to be "intentional" it has to be about something. This "something" to which an intentional act is directed is described as its "object", which, in this context, may be taken in its predominantly 17th Century sense, as what is present to the mind in any of its acts or the contents of any act of awareness.³

For Sergeant, Notion is what is present to the Mind in its act of Simple Apprehension; Phantasm is what is present to the Faculty of Imagination or "Fancy" in its act of imagining. Both Notion and Phantasm are described as "interiour" or "immediate objects" (Ibid., The Preface, section 18, pp. 25-26; sections 20-25, pp. 27-33; Preliminary 2, section 1, pp. 24-25). According to him,

Man being One Thing, compounded of a Corporeal and a Spiritual Nature, and every Thing acting as it is, it follows, that both those Natures must concurr to every Operation that flows from him, as he is Man; and, consequently, be produced by some Faculty belonging properly to each of those respective Natures: Nor can it be doubted, but that, as those Faculties, or Powers, which are peculiar to both those Natures, are as different as are the Natures themselves; so the Immediate Objects peculiar to those Different Faculties, must likewise be as widely Different from one another, as are those Powers to which they belong; and, consequently, be as vastly Opposite, as the Natures of Body and

Spirit can distance them.
 (Solid Philosophy Asserted, The Preface, section
 18, p. 25)

"Knowing", being a human act, includes both the acts of imagining and thinking, and is not restricted to one of these, as in the case of Brutes and Angels. Brutes being totally corporeal in nature can have only "material phantasms" as their objects while Angels being totally spiritual can have only "purely spiritual objects" with "nothing of Matter or Fancy in them" (Ibid., section 18, p. 25). In the case of Man, when he is involved in the act of knowing, both the acts of imagining and thinking are involved. But, the proper "object" of knowledge has to be Notion and not "Phantasm" (Ibid., section 19-24, pp. 26-31). Even though "Phantasm" is given a place in human knowing, its legitimate "object" is Notion.⁴ The reasons for Sergeant preferring Notion becomes clear once we take into account his other stipulations concerning the "object" of knowledge. At this juncture, it is sufficient to note that he insists "knowing" to be "intentional" in character and Notion its "object". He states:

To clear then the meaning of the word (Notion), as 'tis used here from this Sleight and (in our case) Unconcerning Ambiguity, I declare, that, there being two Considerations in Knowledge, viz. the Act of my Knowing Power, and the Object of that Act, which, as a kind of Form, actuates and determines the Indifferency of my Power, and thence specifies my Act; I do not here take the word (Notion) for my Act of Simply Apprehending; but for that Object in my mind, which informs my Understanding Power, and about which that Power is

employed; in which Objective meaning I perceive
 Mr. Locke does also generally take the word
 (IDEA).

(Ibid., Preliminary II, section 2, pp. 26-27)

Sergeant takes Simple Apprehension as an act which tends towards an object and hence is "intentional" in character. When Simple Apprehension is taken as an act of knowing, as is implicit in the above passage, the "object" of Simple Apprehension is taken as an "object" of knowledge. But what is specifically required of such an "object" has to be noted. It is required to "actuate" the Knowing Power, "determine" its indifferency and "specify" its act. For Sergeant, the "object" is able to so function because it is taken to be a kind of "form". Here he understands "form" in a typically Aristotelian-Thomistic sense as what actuates any potentiality and specifies any act.⁵ The phrase "informs my Understanding Power" indicates the action of "form" on a potentiality - the "form" actuating and determining the potentiality of the "knowing Power". We shall have occasion to examine Sergeant's theory of Notion as form later in this chapter.

Here it is sufficient to note that the assumption underlying Sergeant's claim that Notion is the "object" of the act of knowing is that knowing is "intentional" in character; that, when one claims to be involved in an act of knowing, there has to be something which he knows - an "object" of the act of knowing. It is also of interest to note that Sergeant thinks that Locke took Idea generally as "object".

2. The second requirement may be called the "solidity" or "reality" requirement, according to which, what is known should be "real". "Real" here is contrasted with what is dependent for its existence on the mind which thinks about it or more generally is aware of it (Ibid., The Epistle Dedicatory, p. 2; The Preface, pp. 1, 9, 21-22; Reflexion 18, p. 342).⁶ For Sergeant, "reality" consists of particulars, which he generally calls "things". He usually alternates "things" with "substances" (Ibid., Prelim., 2, section 5, p. 29; Reflexion 13, sections 3-5, pp. 239-40). All created substances are dependent for their existence ultimately on God, the Uncreated Being.

Sergeant states:

Wherefore the meaning of that Word (thing) can be no other but that of (Capable to be) for, no Created Thing has Actual Being, or Existence, in its Essential Notion, but of its own Nature may be or not be; as, besides what is proved in my Method (Book-III; Lesson 7), is seen in the very Notion of Creature; which signifies That which has its Being from Another; which, therefore, can, of itself, be only Capable of Being...
(Solid Philosophy Asserted; Preliminary 5, section 4, pp. 90-91)

In the case of God, existence is taken to be a part of His essence. He necessarily exists and his existence does not depend on any thing else.

In the case of all created things, sometimes called 'Ens' (Ibid., pp. 90-91) they have only a 'capacity of being' (Ibid., p. 91). Modes and Accidents of Substances are also sometimes called "things". He employs the term "thing" in a stricter and also in a more accommodative

sense. According to him,

I take the word (thing) in the largest Signification as it comprehends not only Substances, which only are properly things; but also the Modes, or Accidents of Substance, which are improperly such. (Ibid., Prelim., 2, section 5, p. 29. See also Prelim., 3, section 1, p. 45)

We shall deal with this distinction in 3:3. Here it is sufficient to note, that, even though modes and accidents are dependent on substances (Ibid., Prelim., 5, sections 16 & 17, pp. 101-3; Prelim., 3, sections 11 & 12, p. 52) they qualify to be ontological entities or "things", since they can exist independently of our awareness of our thoughts about them. The constituents of Sergeant's ontology are independent of the mind which may think about or be aware of them. God exists independently of all other things; created things or substances, their modes and accidents are dependent ultimately on God, but they are not dependent on our thoughts of awareness of them.

Sergeant interprets "nothing" as what is "not a thing" as "Ens" negated (Solid Philosophy Asserted, The Epistle Dedicatory, p. 6; Prelim., 4, sections 31-34, pp. 77-79; Reflexion 13, section 3, p. 239). In other words "nothing" does not exist independently of our thoughts and awareness; what so exists is the "thing". In his view, knowledge of "nothing" per se is impossible (Ibid., Reflexion 13, section 3, p. 239).

For Sergeant there is a world that is independent of our thoughts

about or awareness of it. Such a world is populated with God, created substances (both corporeal and spiritual), their modes and accidents. It is in the context of such a "Realism" that he stipulates the "solidity" or "reality" requirement.

His constant demand that knowledge must be "solid", and that philosophical knowledge or science or any piece of knowledge worth its name must be "of things" indicate his firm belief in said requirement. For knowledge to be "solid" the method of achieving it must be grounded in reality. The method has to commence from "reality" itself and not from mere mental constructs. In accordance with the prevalent view, Sergeant takes Simple Apprehension to be the initial step in the method to knowledge and its "object", namely Notion, as the elementary "object" of knowledge. He calls Notions as "materials of knowledge" and "seeds of science" (Ibid., The Epistle Dedicatory, p. 2 & The Preface, section 18, p. 25). After stating that Simple Apprehension is "the first operation of our Understanding" and Notion its "proper object" (Ibid., Prelim., 2, section 1, pp. 24-25), he claims that the latter must be characterized in a particular manner in order to obtain knowledge through the employment of Simple Apprehension.

He states:

Notion is the very thing itself existing in our Mind;
which is undoubtedly a Solid Material, or Firm
Ground to build the Knowledge of Things, or Science
upon it.

(Ibid., Prelim., 2, section 1, p. 25)

He further claims that, if "Notion" is not taken to be "the very thing it self in my Understanding", "it is impossible any Man living should know any thing at all" (Ibid.). He points out:

I am to note, that, as the Moderns grant we know nothing without having (Ideas) of them within our minds; so I willingly acknowledge, that we cannot know any thing that is without us but by having in our Understanding Notions of those things. Now I say, those Notions must be the very things themselves in our Soul, which they deny as incredible and Monstrous...

(Ibid., section 5, p. 28)

The first part of this quotation deals with the "presence to the mind" requirement, which we shall discuss subsequently. Here we should note his insistence that Notion is the "thing itself in our Soul (Mind)". After such an insistence, he goes on to establish through 15 arguments that Notions are "things themselves in our Understanding" (Ibid., Prelim., 2, sections 6-21, pp. 29-38). Most of these arguments are repetitive but they are significant, because they reveal his convictions that the "object" of knowledge should be "real" and that it should be "present to the mind". So as to enable the "object" of knowledge to be "real" he identifies the "thing" with the "object"; Notion as "object" is identified with "thing". He insists that even "abstract notions" and notions of Accidents and Modes "include or connote" the thing. He criticizes the view which considers abstract notions as exclusive of the thing. He claims:

.. whereas I make it only Exclusive of other Notions, but to include and signify the Thing or Subject, according to some Consideration, or (as it were) Part of it; in the same manner (to use a grosser example) as the Hand or Foot signify the Man or Thing to which they belong, according to his power of Handling or Walking. Hence I hold, that Whiteness, Breadth or Hardness in the Wall, do signify and import the Wall itself, precisely quatenus, or as it is White, Broad and Hard. Whence I affirm, that all Science, which consists of those Abstract and Mutually-distinct Notions as of its Materials, is truly a Solid Knowledge of those very Things. (Ibid., Prelim., 3, section 9, p. 50)

According to him, an abstract notion like "Humanity", "though expressed abstractly does signify the Thing or Man". "Humanity is the Thing or (Homo) according to what's his constitutive" (Ibid., section 10, p. 51). Notions may be of Accidents and Modes but they "include and connote" the thing (Ibid., Arguments 2 & 3, sections 11 & 12, p. 52). Accidents are for him "the unessential but intrinsic properties of the thing"; they "advene to the thing" (Ibid., section 11, p. 52; Cf. Prelim., 5, section 16, pp. 101-102). Notions of Accidents are "the unessential properties of the Thing in our Understanding"; they are the "unessential conceptions of the Thing" (Ibid., Prelim., 3, section 11, p. 52). Modes are "manners of how a thing is" (Ibid., section 12, p. 52; Cf. Prelim., 5, section 17, pp. 102-3). Modes are the "manners of how a Thing is"; they "involve essentially the Thing of which they are modes, and to which, as such, they relate" (Ibid., Prelim., 3, section 12, p. 52). Notions are "the manners of how a Thing is"

in our Understanding; they are "conceptions of how a thing is" (Ibid.).

The theoretical basis for characterizing Accidents and Modes in the above manner is tied up with his views on "substantial" and "accidental forms" and we deal with this in 3:3. What has to be noted here is his underlying emphasis - that any type of notion is the thing itself "in our Understanding". He states that Notions are things themselves; that they are "considerabilities" or "conceptions of things"; that they signifie the thing"; that they "involve the thing", that they relate to the thing; that they include and connotate the thing (see: Solid Philosophy Asserted & Method to Science). Despite this varied and rather careless manner of expression, his underlying claim is that Notions, are "things themselves". The manner in which he characterizes this identification between Notion and Thing will be discussed in 3:3. In his view, such an identification between the "object" and "thing" is necessary for knowledge to be possible. He criticizes the Idealists and their logic as "visionary", "empty", "airy" and "superficial" because he is convinced that they failed to meet the "reality" or "solidity" requirement (Solid Philosophy Asserted, The Preface, pp. 1-36). According to him, their characterization of the "object" of knowledge, (Idea in particular) does not manifest the said identification. After presenting his 15 arguments in the Second Preliminary to establish that "Notions are things themselves in our Understanding", and, after giving four arguments in the Third Preliminary to establish that even abstract

notions and those of accidents and modes are "things themselves in our Understanding", he concludes thus:

It would not be hard to multiply Arguments to prove this nice Point; fetched both from Metaphysics, and also from Logick, and the verification of all Propositions, did I conceive it to be needful. But, I see plainly, that all the Arguments in my former Preliminary (i. e. the fifteen arguments to establish that Notions are things themselves in our Understanding) do conspire with their United force, to make good this Fundamental Position. For, if this Truth be once firmly established, that our Notions are the Things themselves; as far as they are conceived by us, it must follow, that all our Science being built on those Notions, has for its Solid Basis the very Thing it self, and not any other Things, or Nothings, distinct from the Thing known; such as are their pretty Spiritual Looking-Glasses, those Unaccountable, Inexplicable, Unnecessary, and Useless Things called Ideas.

(Solid Philosophy Asserted, Preliminary III: section 18, pp. 52-53)

According to him, for knowledge to be "solid" the "object" known in the initial act of knowledge (Simple Apprehension) has to be the "thing itself".

3. According to the third requirement, what is known has to be "present to the mind".

Sergeant's first argument to establish that the Notion is the "thing itself in the Understanding" runs thus:

When I simply apprehend the Thing, or any Mode or Accident of it, this Operation of my Understanding is within my Mind, and compleated there; therefore the Thing Apprehended, which is the Object of that Operation, must be there likewise;

For, otherwise, this Operation of my Mind, it being Immanent, and not Transient, or passing out of my Mind to the Thing without me, cannot be employed about that Thing, contrary to the Supposition. Nor could the Thing be truly said to be Apprehended, unless this Operation, called my Apprehension, had the Thing for its Object; and this within my Understanding, it being an Internal Operation. But, that which is within me when I know it, is the Notion of it: Therefore the Notion of it (taken, as is declared above, objectively) is the Thing itself in my Understanding.

(Solid Philosophy Asserted, Preliminary II: Section 6, Argument I, p. 29)

The "immanency" of the acts of the mind is also made explicit, when Sergeant states:

Again we experience, that we consider, judge, and discourse of the very thing itself and of its very nature: which (these being Interior and Immanent Acts, bred and perfected within our soul) we could not do, unless the objects of those Acts, or the very Things themselves were there.

(Method to Science, Book I: Lesson I, p. 2).

[See also: Prelim., 4:4: p. 61]

For Sergeant, since the acts of the mind are immanent, when something external is known, it has to be present to the mind; no action at a distance is conceived possible.⁷ If what is known is not present, he asks,

How could the Soul's Acts of Understanding which are Immanent Acts, become Transitive, and affect a Thing which is without her?

(Solid Philosophy Asserted, Prelim., 4, section 4, p. 61)

The necessity of the "presence to the mind" condition for the attainment of knowledge is also made explicit in the following argument:

I know the very Thing; therefore the very Thing is in my Act of Knowledge: But my Act of Knowledge is in my Understanding; therefore the Thing, which is in my Knowledge, is also in my Understanding. (Ibid., Prelim., 11, Second Argument, section 7, p. 29)

The soundness of the above argument need not be decided here. What has to be noted is Sergeant's basic contention that, if the "Thing" is not present to the mind, since the locus of the act of knowing is the mind, the "thing" concerned cannot be known. In the third and fourth arguments (Ibid., sections 9 & 10, p. 30) he attempts to establish that, if what is known is not present to the mind, knowledge is not possible. In his view, if Ideas are not things themselves, one cannot claim to have knowledge of things through Ideas, since Ideas only are present to the mind and not the "things" concerned (Ibid., sections 9 & 10, p. 30). It has to be noted at the outset that Sergeant's employment of spatial language should not be taken literally. He did not believe in the literal presence of the thing in the act of knowing it. The "presence to the mind" requirement arises from the Aristotelian theory that in the act of knowing there is an identity between the knower and the known. This is effected through the "form" of the thing. The precise nature of Sergeant's "presence to the mind" requirement will become clear once we appreciate his use of "form" here, which we shall discuss in 3:3. At this juncture, it is sufficient to note that Sergeant insists "presence to the mind" as an essential condition the

"object" of knowledge has to meet. He formulates the said requirement in more Aristotelian terms thus:

And, if neither the Idea brings the Thing into the Knowing Power or (which is the same) into the Mind; nor the Mind, or Knowing Power goes out of the Soul to it, I know not how they can pretend to show how the Knowing Power, and the Thing known, can ever come to meet, as they must whenever an Act of Knowledge is made.

The "presence to the mind"-requirement is tied up with the stipulation that what is known by the mind should be like it. Let us examine this requirement.

4. That only what is like mind can be present to the mind is the fourth requirement.

The "object" of Imagination or Fancy, according to Sergeant, cannot be present to the Mind or Understanding, since it is corporeal in nature. He claims that Notion being spiritual in nature can be present to the Mind and be its "immediate object" (Solid Philosophy Asserted, The Preface, sections 18-24, pp. 25-31) because Notion, unlike Phantasm, can exist "spiritually" or "intellectually" in the Understanding, since it is "like the mind".

If what is corporeal in nature is to be known it has to be present to the Mind. For it to be present to the mind, Sergeant insists that the "object" has to be like the mind. Hence, when "things" which are corporeal in nature are to be known, a transformation from the corporeal to the spiritual is imperative. In the third Preliminary, Sergeant

attempts to give a detailed account of the manner in which this transformation takes place - how the corporeal things become spiritual in nature and become present to the Mind. He blames Aristotle and others, who had advanced the doctrine that only what is like mind can be present to it and be known by it, for not explaining how this transformation takes place. Then he goes on to give his account, which may be considered a physiological explanation with metaphysical overtones (Ibid., Prelim., 4, sections 11-29, pp. 65-76).

External bodies are said to emanate effluvia, which are, for Sergeant, the literal aspects of the bodies concerned. These effluvia enter the pores of the various sense organs. He puts it thus:

Wherefore, since Bodies, in their whole Quantity, or Bulk, cannot be conveyed by the Senses into the Brain, the Author of Nature has ordered that all Bodies, upon the least Motion of Natural Causes, Internal or External, (which is never wanting) should send out Effluvia, or most minute and imperceptible Particles; which may pass through the Pores of those Peruious Organs, called the Senses; and so, be carried to the Brain.

(Ibid., Prelim., 4, section 12, p. 65)

Sergeant considers Man as a compound of material and spiritual natures; the body is the matter and the soul the form of Man (Ibid., section 13, p. 65). The material and the spiritual parts of man come together at some point which, according to Sergeant, is "Corporeal-Spiritual" in nature and is comparable to Descartes's Pineal Gland (Ibid., section 14, p. 66). Following Scholastic tradition, Sergeant

calls this the "seat of knowledge" (Ibid., sections 16, 17, 18, 20, 24 & 27, pp. 67-74). Every effect that alters the material part of man at this point (i. e. the brain and nearby regions) also creates a parallel effect in the spiritual part. The material effluvia do not enter the spiritual part. There is a parallelism involved here - the alterations in the spiritual part correspond with and duplicate therein the alterations in the material part.

He states:

Those Effluvioms sent out from Bodies, have the very Natures of those Bodies in them or rather are themselves Lesser Bodies of the Self-same Nature, (as the smallest imperceptible parts of Bread and Flesh, are truly Bread and Flesh) which are cut off by Natural Agents from the great Lump; and, therefore, by Application of themselves, they imprint the very Body it self, or a Body of that Nature, on that material part which is the Seat of Knowledge. Whence the Soul being, at the same time, affected after her manner (or knowingly) as that part was affected, she has also the very Nature of that Body (as far as the Sense exhibits it) put in her by that confirmable Impression, when she has a Notion of it. (Solid Philosophy Asserted, Prelim., 4, section 20, p. 69)

Whether or not Sergeant is successful in his attempt to explain how corporeal things are transformed into spiritual notions, need not be decided here.⁸ Locke himself satirically comments on Sergeant's attempt. When Sergeant completes his long and laboured account (Ibid., sections 6-12, pp. 63-76), Locke marginally comments thus:

And now let the reader consider whether by reading what he finds from # 6 whether he has not got a

perfect clear knowledge how material things get into the immaterial soule.

(Marginal Comment: no. 24, p. 76)

Sergeant's whole enterprise is based on the assumption that only what is like mind can be present to it and be known by it. According to him, this transformation is necessary since the corporeal body by itself cannot in any manner affect the spiritual soul which knows. He agrees that all "corporeal agents work by Local Motion" and that their actions are "all successive and quantitative" (Ibid., sections 3 & 4, pp. 59-60). He also thinks "Local Motion" cannot take place in a "Soul which has no parts" (Ibid.). That which could affect the Soul has to be like the Soul. Hence, he attempts to transform the corporeal things into spiritual Notions.

The Notions which so occur in the "seat of knowledge" are explicated in terms of "form" and here he resorts to metaphysics rather than to physiology. But his whole enterprise is based on the underlying assumption that what is like mind can only be known by the Mind. We will discuss his explication of Notion in terms of "form" and "meaning" in section 3:3.

Conclusion

For Sergeant, when some one claims that he knows, he has to know something. This "something" has to be "real (i. e. be not "nothing"), be "present to the mind" and be "like mind". Then and only

then would Sergeant accept that there is substance in the said claim.

In his view, Notion unlike Idea meets these requirements.

The next section deals with his reasons.

3:3 Sergeant's Formalism at the level of Simple Apprehension:

The reasons for Sergeant's claim that Notion and not Idea is the legitimate "object" of knowledge are revealed in his characterization of Notion in terms of the Aristotelian-Thomistic theory of Form. Such a theory provides him with the theoretical basis for presenting Notion as the "object" of knowledge fulfilling the "reality", "presence to the mind" and "like mind" requirements mentioned in the previous section.

"Form" is here interpreted as what makes a thing to be what it is. The various facets of such a characterization and their involvement in the justificatory explication of Notion as the "object" of knowledge will be dealt with in this section.

In the Appendix to Method to Science, Sergeant defends the Peripatetic theory of Formal Composition and Mutation. An examination of some sections of this defence is helpful to get at Sergeant's employment of "form" in his explication of Notion. So as to distinguish the main facets of his defence, I have divided the following passages into six sections. He argues thus:

1. It must be granted that we cannot have Science of any Thing but by means of Discourse; that the most Exact and most Evident Discourses are those we call Syllogisms; that, Syllogisms are resolved into Propositions; and Propositions into Two Terms and a Copula that connects them: that all we can say of these parts of a Proposition is, that they are Notions or Meanings of the Words that express them: that therefore all Discourse is built on the Right putting together of these Notions: and can be built on nothing else or made on any other fashion.
2. That no Discourse can be solid but what is grounded on the Notions or the Things themselves, without which they must necessarily be Alery and Chimerical, and impossible to beget knowledge: that for this reason, our Notions, which ground all our Discourse and Knowledge are the very Natures of the Things, without us, existing Spiritually in our Understanding.
3. That our operations of Apprehending, Judging, and Discoursing of the Natures of Things being Immanent or Performed and Perfected within us, the objects of these operations or the very Natures of the Things must be likewise within us.
4. That 'tis evident by experience that we do make Diverse Conceptions or Notions of the same thing i. e. , all the operations of our Mind are built on those Partial and Inadequate Notions of the Thing about which we are to Discourse. That we can frame a great number of these abstracted or partial notions of the Same Thing, and many of them Intrinsical Ones. That therefore, the Thing must have in it what corresponds to those several Notions; which we call Formal Composition.

5. That hence, there is a Divisibility in the Thing as grounding one of these Notions from the same Thing as grounding another of them, by reason that Natural Causes are apt to work upon the Thing according to that in it (or what part of it, as it were) which is thus conceived, and yet not work upon it according to what in it is otherwise conceived, or what grounds a different Notion. Whence they make account is inferred this Grand conclusion that therefore there is Formal Mutation in regard it can be wrought upon according to that in it which corresponds to the Notion of Form and not to that in it, which answers to the notion of Matter; Whence follows unavoidably, that there is Formal Composition and Formal Mutation as is above explained.
6. Which Conclusion must necessarily follow, if they allow (as they must) this Method of Discoursing; each part of which has been made good in the foregoing Treatise.

(Method to Science: Appendix: The Grand Controversy concerning Formal Mutation decided in favour of the Peripatetick School, pp. 381-83.)

In the first section, Sergeant claims that the Syllogistic method of discourse is indispensable to the attainment of knowledge. Syllogistic discourse is reducible to Terms, which are for him, Notions. Hence Notions play an important role in such a discourse. For an effective method to knowledge, Notions as "objects" of knowledge, have to meet certain requirements. Sergeant claims that they do. By being the "very natures of things" they fulfill the "reality" requirement; by "existing in our Understanding" or "within us" they meet the "presence to the mind" requirement; and by being "spiritual" or "intellectual"

they meet the "like mind" requirement. In sections two and three he re-affirms these claims. So as to enable Notions to meet the said requirements, he resorts to the theory of "formal composition and mutation" and he indicates this in sections four and five. He realizes that there could be diverse and changing notions of the same thing. If these Notions are to be legitimate "objects" of knowledge, they have to fulfill the "reality" requirement; they have to be "things themselves". But, how could a single thing have more than one notion? If the thing does not have in it what corresponds to these diverse notions, they too become "airy" and "chimerical" like Ideas, which he criticizes. The theory of Formal Composition and Mutation provides the theoretical basis to relieve Notions of this subjectivity. For him, such a theory guarantees their "reality" and the "solidity" of the knowledge constructed out of them.

The theory of Formal Composition and Mutation is a part of a more comprehensive theory - that of Form and Matter - and has to be understood in the light of Sergeant's views of Form and Matter in relation to Substance. According to Aaron, there were two main views of substance current then, and they were not distinguished from one another with sufficient care.⁹ He states that "in the first place, substance is ens, real existence (or, sometimes, the essence, the "true nature" of a real existence). In the second place, it is that which supports, per se subsistens et substans accidentibus".¹⁰ Sergeant's

view may be associated with the former. He alternates "substance" with "thing" and usually calls it "Ens". Created substances are defined as having the "capacity to exist" (Solid Philosophy Asserted, Prelim., section 4, pp. 90-91; Reflexion 13, sections 3 & 4, pp. 239-241). For him substance is nothing more than accidents taken collectively - a "complexion" or "composition of properties" (Ibid., Reflexion 13, sections 4-7, pp. 241-46; Prelim., 5, sections 5, 7, 8, 10 & 12, pp. 91-9). He denies that substance as "supporter of accidents" is the primary sense of the term, although he recognizes this as one of the senses then prevalent. He criticizes Locke for taking the word "substance" in its secondary sense, as "supporter of accidents" rather than in its primary sense, as "complexion of accidents" (Ibid., Reflexion 13, section 4, pp. 240-41). The controversy between Locke and Sergeant over "substance" is not dealt with in this dissertation.¹¹ Here it is sufficient merely to note in what sense Sergeant takes "substance" and how he relates it to his views on Matter and Form.

For him, Matter is a "power to be a thing", an "indifferent and indeterminate potency" (Method to Science, Book III, Lesson 7; Solid Philosophy Asserted, Prelim., 5, section 6, pp. 90-91). Form is what determines and actuates the indeterminate Matter and makes it "capable of existing" or "disposed to exist" (Ibid., sections 4-7, pp. 90-93; Cf. Method to Science, Book III, Lesson 7). In the light

of the matter-form dichotomy, the particular is what is differentiated or determined to be a this or that. The process of actuation by which a "potency to exist" becomes what is "capable of existing" involves also a process of particularising and individuation. In Sergeant's context a created substance or thing (Ens) is "capable of existing". Since existence is not a part of its essence it may or may not exist; existence is a gift to it from God (Solid Philosophy Asserted, prelim. , 2, section 22, p. 38; Prelim. , 5, 4, pp. 90-91). "Form" is already involved in such an Ens or thing. On the other hand, what has a "potency to exist" is still to be acted upon by "form" - it is still indeterminate or indifferent. Form is taken to be the principle of actuation and individuation; individuation implies actuation as the following passage indicates:

To show literally what's meant by this saying, that Matter and Form constitute the complete Ens, or make the Subject capable of Existing, I discourse thus. Nothing as 'tis Indeterminate or Common to more can be ultimately capable to be: v. g, neither a Man in Common, nor a Horse in Common, can possibly exist, but This Man or This Horse: whatever therefore does determine the Potentiality, or Indifferency of the Subject as it is Matter, or, which is the same, a Power to be of such or such a Nature, (which is what we call to have such a Form in it) does make it This or That, and, consequently, disposes it for Existence. Wherefore since the particular Complexion of the several Modes and Accidents do determine the Power or Matter, so as to make it Distinct from all others, it does by Consequence determine it to be This, and, so, makes it capable of Existing; that is an Ens or Thing.

(Solid Philosophy Asserted, Preliminary 5, section 7, pp. 92-93; Cf. Method to Science, p. 380)

The "form" which actuates and individuates a thing is intrinsic to it but is not to be confused with its physical constitution. He makes this explicit when he describes Formal Composition. He also calls the latter "Metaphysical Composition" and differentiates it from physical and artificial composition imposed extrinsically on a thing (Solid Philosophy Asserted, Prelim., 5, section 9, p. 95). The compounding of many ingredients into a pill by an Apothecary or fixing diverse materials into a house by a Carpenter are acts of Physical Composition extrinsically imposed but do not qualify to be Metaphysical or Formal Composition (Ibid., p. 95). He grants that a thing is composed of minute particles which are not further divisible, but, with the Peripatetics, he claims that there is also a "formal composition" which is intrinsic and non-physical. Such a "composition", according to him,

is no more, but that there is found in the Thing (though Physically and Entitatively one, and uncompounded) what grounds those distinct Notions. (Ibid., p. 95).

Such a "formal composition" provides the ontological basis for having diverse notions of the same thing and for considering them all as equally "real". For Sergeant diverse notions are the "formal composites" of a physically "uncompounded" thing "spiritually" or "intellectually existing in our Understanding". Formal Mutation is the change of a thing, according to its form, as that of wood into fire (Method to

Science, Appendix, p. 379). Such a transformation provides the ontological basis for our changing our notions of a thing. He claims that Formal Composition and Mutation may be "essential" or "accidental". This is related to his distinction between "substantial" and "accidental" forms. This distinction in turn is made on the assumption that "thing" or "substance" is "complexion" or "composition" of separable and inseparable properties" (Ibid., Prelim., 5, 12, pp. 98-9).

According to him, the "substantial form" of a thing is intrinsic to the thing and does not have a separate existence as a distinct entity (Solid Philosophy Asserted, Prelim., 5, Corollary to Section 8, p. 95).

It is that "complexion of properties" of a thing which is "found in the first instance of its being". It is inseparable from the thing and constitutes its very essence and hence "Essential Form" is another name for it. By virtue of the "substantial" or "essential" form, a thing is said to have a specific nature or is considered as being of a certain kind (Ibid., pp. 93-4). This confirms what he says in Method to Science - that "Essence is the Form that constitutes an Ens or makes it Formally a Thing" (Method to Science, Appendix, p. 379).

The Accidental Form of a thing is also a "complexion of properties". But, these properties are not essential to the thing in that they are not found in it at its first instance of existence; they are subsequently accrued and are separable from the thing. But, both Substantial and Accidental Forms are intrinsic to the thing (Solid

Philosophy Asserted, Prelim. , 5, section 12, pp. 98-9).

Substantial Form is the most fundamental principle of Individuation of a thing (Ibid. , section 9, p. 96), but the Accidental Forms also help subsequently in individuating and determining a thing to be a specific "this" or "that" distinct from the other members of its kind; to be "wood" of a specific colour, hardness, weight, etc. (Method to Science, Appendix, p. 380). He states:

Wherefore the complexion of those Accidents which constitutes them of such or such a Nature and nothing else, is (as the Schools phrased it) their Substantial or Essential Form. And, if we go yet lower, there will need still a greater complexion, or a Decomposition of Accidents for the same reason; and so still more till we come to an Individual Thing; which only in proper is a Thing, because it only is Capable of Existing.
(ibid.)

Both the Substantial and Accidental Forms are involved in the process of individuation and thereby in that of actuation.¹² For Sergeant individuation implies actuation.

Sergeant usually takes "nature of thing" to be the "essential" or "substantial" "complexion of properties", which constitutes a thing from its first instance and is inseparable from it. Definitions express such "natures" and, when Notions are taken as "meanings", they usually stand for the "essential" natures of things.¹³ But in some places he seems to include the "complexion of accidental properties" in the "nature of a thing". According to him, the "roundness of a

"pillar" is accidental to the pillar but may be taken as a "part of its nature" (Faith Vindicated from Possibility of Falsehood, pp. 123-4). Since he considers "accidental" properties as also being intrinsic to the thing, though not essential to it, he thinks that he is justified in taking these properties too as belonging to their "nature" (Ibid., p. 124). Just as he takes "thing" in a stricter and looser sense (Solid Philosophy Asserted, Prelim., 2, section 5, p. 19), he takes "nature of thing" in a stricter and a looser sense. As "thing" in the stricter sense signifies "substance", the "nature of thing" in the stricter sense stands for "substantial or essential form". Just as "thing" in the looser sense includes Accidents and Modes of things, the "nature of thing" in the looser sense stands for "Accidental Properties".

There is also a Platonic-Augustinian element in Sergeant's characterization of Notion. One of the characteristics of Notion is what he calls their Metaphysical Verity; that things are what they are. Identical Propositions express this metaphysical verity and we will discuss this aspect in Chapter IV. Here it is sufficient for us to note that he finds it proper to associate "metaphysical verity", which properly belongs to ontological entities, with Notions, since he takes them to be "things themselves"; even though Notions are "present to the mind" they retain their ontologicity. It is significant to note that Sergeant connects the "metaphysical verity" of Notions with the "Divine Understanding".¹⁴ According to Sergeant, Notions partake

in this metaphysical verity by being in the "Divine Understanding" from which they are said to flow; they are taken to be unchangeable (Method to Science, Book I, Lesson 1, p. 5; Solid Philosophy Asserted, The Epistle Dedicatory, p. 6; Prelim., 2, section 24, pp. 40-41). He also acknowledges that he would accept Locke's "Ideas" if they are interpreted as "natures or essences of things having their source in the Divine Understanding" (Solid Philosophy Asserted, Prelim., 2, section 24, pp. 40-41). In Sergeant's theory we detect Aristotelian, Platonic, and Thomistic features, which indicate his resort to metaphysical modes of explanations. They help him in his basic contention that Notions as "objects" of knowledge have to retain the "ontologicity" of things, in order to meet the "reality" requirement. For him,

We have no knowledge of a Nothing formally as such; therefore, all our knowledge must be either of Res or Modus Rei; or (as the Schools express it) of Substances and Accidents; for other Notions we cannot have.

(Ibid., Reflexion 13, section 3, p. 239)

Since "things" only can exist independently of the Mind, and since a "nothing" is "not a thing", a "nothing" cannot exist independently of the Mind. For him, to know a thing "formally" is to know it as it exists independently of the knowing Mind.¹⁵ A "nothing", since it cannot exist independently of the Mind, cannot be known "formally".

When Sergeant claims that Notion is "thing itself" he means the form of the "thing" and not the "thing" taken literally. This "form"

may be Substantial or Accidental or both as in "Total Form" (Solid Philosophy Asserted, Prelim., 5, section 5, p. 91). Since "form" by definition is for Sergeant "intrinsic" to the "thing", Notion whether it be Substantial or Accidental Form is still the "thing itself", and not something other than it. His resort to the characterization of Notion in terms of "form" enables him to claim that Notion fulfills the "reality" requirement, which he associates with the "object" of knowledge.

As early as 1671, in Faith Vindicated from Possibility of Falsehood he writes thus:

We will begin our explication with noting that our Understanding has two Operations (omitting the third, Discourse as not pertinent to our purpose) viz. Simple Apprehension and Judgement. The result or effect of the first is Notion concerning which Philosophers discuss thus: that when I apprehend what is meant by the word, Man or have the Notion in me, Man's Nature is both in the Thing and in Conception; for 'tis impossible (my Conception being an Immanent Act) I should conceive what is not in my Conception, or that my Act of Conceiving should be intrinsically determined to be this but by what is intrinsical or in it. What is that meant by Word (Man) has two states: one in the Thing as existent out of me; the other in the Thing as existent in me as the self-same figure is in the Seal and the Wax. Yet neither of these diverse states enters into the Notion, I have of Man, but merely what is what to the Definition; for both Man, taken as in himself is a Rational Creature; and also what I conceive or mean by the Word (Man) is a Rational Creature, though the Words (Rational Creature) express neither the being in my Mind nor out of it but abstract from either. By this Means my Mind conceiving Man gains an Unity of Form with the Thing out of it; or Conformity to it;...

(Answer to Objection II: pp. 119-21)

This passage is in response to an objection that when he describes Notion as the "thing itself" he confounds "objective" with "formal existence". In the Seventeenth Century context, "formal existence" means the existence of a thing as it is unrelated to the Mind which may think about it. "Objective existence" is the existence of a thing as it is found in the mind, which thinks about it.¹⁶ In the above passage "Rational creature" as the Notion of Man, is compared to the "figure" in the Seal and Wax. This comparison is indicative of his general interpretative strategy to characterize notions in terms of "form". He claims that such a characterization does not confuse "formal" with "objective" existence. Just as "figure" in the Seal is the same as the one in the Wax, "Rational Creature" is the same in the Man as he exists independently of the mind which thinks about him (i. e. as he exists "formally"), and in him as he exists in the mind, when it is involved in thinking about him (i. e. as he exists "objectively"). Sergeant acknowledges that these two modes of existence ("formal" and "objective") are distinct, but what he emphasizes is that the Notion is still the "thing itself". The rationale behind such a claim is his doctrine that modes of existence are extrinsic to Notion as they are to "Form". His characterization of Notion as "meaning" too highlights such a view. He claims that since Notions are "meanings", just as the latter "do not include" existence, Notions are indifferent to the modes of existence (Solid Philosophy Asserted,

Prelim., 2, section 22, p. 39).

In the passage quoted above Sergeant also states that "Man" must be "in my conception" for conceiving him. Here he confirms the necessity of the "presence to the mind" requirement which we have examined in 3:2. But, for this requirement to be met, "Man" need not be physically transferred into the mind that conceives him. What is intrinsic to him is transferred. We have already noted that Sergeant regards "form" (whether accidental or essential) to be intrinsic to the thing. We have also noted that the "formal composition" of a thing is not physical in character. In the passage quoted above "Rational Creature" may be taken as the "essential formal composition" (or "substantial form") of the thing called "Man". When one has the notion of him (as "Rational Creature"), since what is intrinsic to him, (in this case what is essentially intrinsic) is "present to the mind", it may be claimed that one conceives "Man" himself.

When "Man" is transferred to the Mind that conceives him, "Rational Creature" becomes the contents of the act of conception; it becomes a "conception" or "considerability" in the mind. But, it does not thereby become subjective. It does not become a mere mental product dependent on the Mind for its character and existence. Although now, as "contents", it is mental in its mode of existence, it is still the "nature" of Man or "Man itself". The losing of the corporeal mode of existence and the gaining of the spiritual mode of existence

does not in any manner change "Rational Creature". It being "form" does not get affected by the change in the mode of existence, just as the "figure" in the seal does not change when it gets imprinted on the wax. In Method to Science Sergeant gives a similar analogy, which also suggests that he takes Notion as the form of the thing known. He claims that Notions are "Prints" or "stamps" which the "Understanding receives" when it is involved in the act of knowing. These "Prints" or "stamps" are the "very natures" of the things and in his view do not duplicate the things. (Method to Science, Book I, lesson 1, p. 2).

In the act of conceiving, there is a "unity" that is effected between what is conceived as it is outside the Mind and the Mind that conceives it, and this for Sergeant, as the passage quoted above indicates, is a "unity of form".

Sergeant's presentation of the act of knowing in terms of "unity of form" falls within the Aristotelian-Thomistic theory of cognition, according to which the cognitive agent becomes what is cognised.¹⁷ Sergeant states:

Wherefore, when the Soul knows any thing in Nature she must be that thing as it is Another thing distinct from her; so that in a word, to know is Esse aluid ut aluid. . . .

(Solid Philosophy Asserted, Prelim., 2, section 26, p. 43)

In the Aristotelian context such an identity is not corporeal or literal but one that is made possible through the "form" of the thing.¹⁸

Sergeant too advocates such a manner of identification, when he claims that there is a "unity of form" between the knower and the known in the act of knowing. This form, which "actuates the Knowing Power" and determines it to be that which it knows (Solid Philosophy Asserted, Prelim. , 2, section 2, pp. 26-67), is not a mere mental construct of the knower but what is intrinsic to the "thing".

Underlying the claim, that the cognitive agent directly cognizes the thing by virtue of the reception of its form is the Aristotelian tenet that "form" is what makes a thing to be what it is - the constitutive (or intrinsic) individuating and actuating principle of a thing.¹⁹ In his explication of "Formal Composition" Sergeant reveals his affiliation with the above view. The "formal composition" of a thing, whether "substantial" or "accidental" individuates and determines a thing. "Substantial Form" makes a thing to have a certain nature or to be a certain kind of a thing as a metal, animal or plant. Accidental Form determines the thing further so that it becomes a specific thing different from the other members of its kind.²⁰ But, since both these kinds of form are intrinsic to the thing, when there is "unity of form" between the cognitive agent and what is cognised, the "thing itself" is cognised whether the form be "Substantial" or "Accidental".

Sergeant acknowledges his adoption of Aristotle's theory of cognition, when he states:

Now, if our Soul, when it knows any Thing has the very Nature of that Thing in it, and therefore is intellectually that thing (for to be such a thing is nothing but to have the Nature of such a thing in it) it follows that, considering her precisely as knowing a Stone, a Tree, Fire, &c she is that Stone, Tree and Fire intellectually, whence we may discover how Rational, and how necessary and important a truth that saying of Aristotle is, that Anima intelligendo fit Omnia. In a word, 'tis due to the Nature of our Soul, as it is Spiritual, and to the Eminency of her Essence, to comprehend after the manner the whole Inferiour Nature of Bodies, (and much more) or to be an Intellectual World as soon as she is her self, and depur'd from her dull Material Compart, as is shown in my Method. (Solid Philosophy Asserted, Prelim. , 2, section 23, p. 39; Cf. Method to Science, Book III, Lesson 4, p. 14)

The consideration of Notion as "form" also enables it to meet the "like mind" requirement. Here also Sergeant's view falls within the Aristotelian-Thomistic contention that in any act of cognition the "form" of what is cognised is received without "matter".²¹ When Sergeant repeatedly emphasizes that Notions are "things themselves" "spiritually or intellectually existing in our Understanding", he affirms his belief that the "object" of knowledge has to be received by the Mind "under conditions of immateriality". When he attempts to drain off all corporeality from the "objects" of knowledge (Notions) and present them as "meanings" or "spiritual objects" or "conceptions" he is trying to express the view that "form" alone and not matter enters the Mind in cognition (Solid Philosophy Asserted, Preface, sections 20-25, pp. 27-33).²² He calls Notions "Meanings",

.. because they affect the Mind, which only can intend or mean; or else, in relation to the Words whose Meanings they are.

(Method to Science, Book I, Lesson 1, pp. 3-4)

In relation to things Notions are the very "things themselves". He states:

Now the Meanings of Words being the same with Notions, which as has been demonstrated, are the Things themselves...

(Solid Philosophy Asserted, Reflexion 17, section 17, p. 388)

"Things" are able to be "present to the mind" since they are "incorporeal" and "mind-like" when they are so present; they are meanings of words.

Sergeant's criticism of Locke's Idea also reveals the assumption that what is known has to be like-mind. Sergeant states that, if Ideas are,

Corporeal, they cannot be in the Mind; as Accidents or Modes of it; the Mind being of a Spiritual Nature. (Solid Philosophy Asserted, Prelim., First, section 13, p. 18)

In the same Preliminary, Sergeant criticizes Locke for using the term "Idea" without first distinguishing it from "Phantasm", which for Sergeant is the "immediate object" of Fancy, and is sensible in nature; it is merely a material representation (Ibid.). Hence, it cannot be "present to the Understanding" as its "immediate object" (Ibid., section 17, pp. 22-23). The corollary which Sergeant gives at the end of this Preliminary reveals his conviction - that the "object" of knowledge

must be "present to the Mind" and be "like it". He states:

From this whole Discourse collected into a Summary, I deduce this Corollary, that, since the word IDEA, according to this Author, signifies a Resemblance, Similitude or Image, and, consequently is indifferent to Corporeal and Spiritual Resemblances, that is, to what's in the Mind, and what's only in the Fancy; and that, only that which is in the Mind can be the proper Material of all our Knowledges; hence that word is most improper to be used in Philosophy, which is the Study of Knowledge. Also, that as taken thus undistinguisht, it does in another regard highly prejudice all true Knowledge of Things or Science; in regard it confounds Corporeal and Spiritual Natures, which contain the two General Objects of all our Knowledges; and are besides, most vastly disparate. (Solid Philosophy Asserted, Prelim., 1, Corollary, p. 23)

What is cognized by the Mind has to be "like the Mind" (i. e. be spiritual in nature). In this sense it is the "object" of the Mind in its act of knowing. At the same time this "object" is the same as the "object external to the Mind" and the latter may be corporeal. For Sergeant, "Notion" as "form" can be identical with "thing" and at the same time be "like the mind" and be "present to the Mind". 23

Conclusion:

For Sergeant, when Notions are interpreted in terms of "form", they are able to fulfill the requirements he stipulates for a legitimate "object" of knowledge-- the "reality", the "presence of the mind" and the "like mind" requirements. As Yolton observes, for Sergeant the Notion is the "epistemological object" in the sense that it is the

"ontological object translated into intelligible terms".²⁴ For Sergeant, the "ontological object" (i. e. the "thing" taken in the accommodative sense) has to be "present to the mind" and be "like mind" for it to be translated into intelligible terms. In his view, when Notions are interpreted as "forms" they are able to retain their "thingship" (Solid Philosophy Asserted, Reflexion 13, p. 239) or ontologicity when they are translated into intelligible terms. It is the ontological feature of the "epistemological object" that becomes the main point of controversy between him and Locke.

3:4 Locke's attack:

Locke's anti-formalism at the level of Simple Apprehension is revealed in the manner he characterizes Idea in his analysis of the method to knowledge.

Sergeant observes that Locke too regards Idea "objectively" (Cf. Solid Philosophy Asserted, Prelim., 11, section 2, pp. 26-27). But, he criticizes Locke for not characterizing it in the same way as Sergeant characterizes Notion in its role as "object" of knowledge. An examination of some aspects of Locke's characterization of Idea indicates the undermining effect such a characterization has on the position upheld by Sergeant. We will also understand why Sergeant was so critical in his response to Locke's doctrine of ideas.

Locke usually characterizes Idea as "object" or "immediate

"object". The following features stand out in his characterization:

1. Idea as "object" is distinguishable but not separable from the "act".
2. Idea as "object" is not identified with the thing but instead taken as its sign.
3. Idea as "object" is regarded as being "present to the mind" but such a "presence" does not have any ontological overtones.
4. Idea as "object" is described as mind-like but it is not a mental ontological entity.

These features highlight a characterization of Idea, which goes against a cluster of views which Sergeant's presentation of Notion exemplifies. As early as 1705, an anonymous writer wrote A Philosophick Essay concerning Ideas, which indicates how controversial the topic of Ideas was during Locke's day. He states:

There is hardly any Topick we shall meet with that the Learned have differed more about than this of Ideas; like Men blundering in the dark, they feel after them to find them; some catch at them under one Appearance, some under another; some make them to be Material; others Spiritual; some will have them to be Effluvia from the Bodies they Represent, others totally Distinct Essences; some hold them to be Modes, other Substances; some assert them All to be Innate, others None; so that one would think there must needs be a very great Intricacy in that which has given Rise, not only to such a Variety, but also such a Contradiction of Opinions. 25

Locke's doctrine of Ideas as "objects" added fuel to the controversy that was raging.

Let us examine the four features in greater detail and determine how they go against the cluster of views which Sergeant represents.

Act and Object

In this section we will examine the manner in which Locke relates "object" and "act", when he characterizes Idea as "object" or "immediate object".

In the Introductory Chapter of the Essay Locke writes:

But, before I proceed on to what I have thought on this Subject, I must here in the Entrance beg pardon of my Reader, for the frequent use of the word Idea, which he will find in the following Treatise. It being that Term, which, I think, serves best to stand for whatsoever is the Object of the Understanding when a Man thinks, I have used it to express whatever is meant by Phantaam, Notion, Species, or whatever it is, which the Mind can be employed about in thinking; and I could not avoid frequently using it.

(I:1:8)

For Locke, thinking is an act of the Mind (II:1:10; II:XIV:4; II:IX:10).

He usually uses "thinking" in an accommodative sense to cover acts such as Reasoning, Perceiving, Remembering, Contemplating, and even Reverie and Dreaming (II:XIX:1-4). He calls them "modes of thinking" (Ibid.). Thinking is a conscious activity even though there

may be degrees of consciousness (II:I:1; II:I:10, 12, 19). Even Dreaming qualifies to be a mode of thinking because, unlike Deep Sleep, we are semi-conscious when we dream (II:XIX:1). Thinking becomes more complex, involving a greater activity of the Mind, in propositioning (joining or separating ideas) or in reasoning (perceiving the connection of ideas through other intermediate idea or ideas), but at the initial level "thinking is passive (II:XIX:1). At this level, "thinking" involves apprehending or what was then popularly called, "Simple Apprehension". Perception may be also another name for it (II:XIX:1, 15). When Locke describes "Idea" as the "object" of the "Understanding" in thinking, he means by the latter "Simple Apprehension". We shall note later that his use of "object" may be reasonably extended to cover the "contents" of acts where the connections of ideas are perceived as in propositioning and reasoning. At this juncture it is sufficient to note that Locke takes Idea as the "object" of the initial act of thinking commonly known as "Simple Apprehension".

The term "object" when taken as "what is present to the mind in any of its acts" may be also described as the contents of an act. When Locke describes Ideas as those which the "Mind is employed about whilst thinking" (II:I:1; I:I:3 & 8; Conduct of the Understanding, section 5; Works, Vol. III, p. 216; section 9, p. 228) he is merely stating in another way that Ideas are "objects" of the Mind in "thinking".

He sometimes describes Ideas as "Immediate Objects". In

some contexts he is prepared to call things which operate on our senses "objects" (II:VIII:2; Marginal Comment, No. 29, p. 137). Usually he uses adjectives like "external", "sensible", "visible", "corporeal", "remote", to identify such "Objects" (II:I:2 & 3, 4 & 5; II:VIII:4; Conduct of the Understanding, section 9, Works, Vol. III, p. 227; An examination of P. Malebranche, Works, Vol. IX, section 14, p. 218). Hence, to differentiate Ideas from such "objects" he usually employs the term, "Immediate Object".

Let me cite some places where he describes Ideas as "Immediate Objects". In the Essay he states:

Whatsoever the Mind perceives in it self, or is the immediate object of Perception, Thought or Understanding, that I call Idea.
(II:VIII:8)

He further states:

Since the Mind, in all its thoughts and reasonings, hath no other immediate object but its own Ideas, which it alone does or can contemplate, it is evident, that our knowledge is only conversant about them.
(IV:I:1)

He makes it clear to Stillingfleet that Ideas signify "immediate objects" when he replies to the Bishop thus:

But since the Word Idea has the ill luck to be so constantly opposed by your lordship to reason, permit me, if you please, instead of it, to put what I mean by it, viz. the immediate objects of the mind in-thinking (for that is it which I would signify by the word ideas). . . .
(Locke's Second Reply to the Bishop of Worcester, May 4, 1698; Works, Vol. IV, p. 233)

In several other places in his correspondence with Stillingfleet he mentions Ideas as "Immediate Objects" (Locke's First Reply to the Bishop of Worcester, June 29, 1697, Works, Vol. IV, pp. 132-33, 134, 144 & 145; Locke's Second Reply, pp. 233, 357, 362). He even claims that "Ideas are nothing but the Immediate Objects of our Minds in thinking" (Ibid.). When responding to Norris, Locke informs that he has "no design to consider them (Ideas) any further than as Immediate Objects of Perception".²⁶ When Sergeant contrasts his method to knowledge with that of the Ideists and Locke in particular, and alleges that they ground their method on Ideas which are for him mere "Fancies" or "Aery Bubbles", Locke marginally comments thus:

That is as Mr Locke expresses it is the Immediate Object of the Mind in thinking.
(Marginal Comment No. 3, Preface, p. 8)

Locke acknowledges that he grounds his method to knowledge on Ideas, taken as "Immediate Objects". Here the marginal comment serves to confirm what he had already stated in the Essay.

Locke needed a comprehensive or neutral term to signify the "object" or "immediate object" of any act of Simple Apprehension and found "Idea" most suitable.²⁷ He informed Stillingfleet:

I would for the satisfaction of your lordship, change the term of Idea for a better, if your lordship could help me to it. For that, Notion will not so well stand for every immediate object of the mind in thinking, as Idea does, I have (as I guess) somewhere given a reason in my book; by showing that

the term Notion is more peculiarly appropriated to a certain sort of those objects, which I call mixed-modes; and, I think, it would not sound altogether so well, to say the Notion of red and the notion of a horse, as the idea of red, and the idea of a horse. But, if any one thinks it well, I contend not; for I have no fondness for, nor antipathy to, any particular sounds; nor do I think there is any spell or fascination in any of them.

(Locke's reply to the Bishop of Worcester's Answer, London, 29th June, 1697, Works, Vol. IV, pp. 132-133)

Locke uses Notions to describe Mixed-Modes (II:XXII:2), which are for him Complex Ideas consisting of several Simple Ideas of different kinds (Ibid.). Since he takes "thinking" in an accommodative sense, Ideas as "objects" are for him more appropriate than Notions, because the former are more comprehensive than the latter.

When we take into consideration the manner in which the term "object" was generally understood in 17th Century philosophical circles, Locke's characterization of Idea as "object" and "immediate object" may be taken as signifying the "cognitive contents" of an act of the Mind - as what is present to the Mind in any of its acts. In a context where the acts of thinking including knowing were taken to be intentional in character, acts were considered to be dependent on the "content". In Sergeant's terms, the "content" determines and actuates the potentiality of the "Knowing Power" and specifies its acts. Even though he accepted the dependency of the act on the content he did not think that the content should be dependent on the act. According

to him, such a dependency leads to Subjectivism and the lack of "solidity" in knowledge; the "object" of knowledge becomes a mere mental construct dependent on the Mind and its acts. Here, he resorts to "form" to characterize the "object" of knowledge as the "thing itself" "spiritually existing in our Understanding". This, according to him, makes the "object" of knowledge independent of the act of knowing and thereby guarantees the grounding necessary for knowledge.

But Locke goes further and makes it a point to emphasize that there is a two-way dependency between act and content. This does not mean that he does not intend his method to knowledge to be well-grounded nor Idea as "object" of knowledge to meet the "reality requirement". He did not resort to "form"; but rather to the "sign" theory. We shall have occasion to discuss his Theory of Signs later in this chapter. Here we have to note how he attempts to show that there is a two-way dependency between act and content; how he characterizes Idea as "object" (content) that is inseparable from the act.

Locke not only regards acts of thinking as having contents (II: I:1; I:1:3 & 8; Conduct of the Understanding, sections 5 & 9, Works, Vol. IV, pp. 216 & 228) but also thinks that it is impossible to deal with "thinking" without thereby considering its "contents" which is for him Idea described as "immediate object" (Locke's Reply to the Bishop of Worcester, London, June 29, 1697, Works, Vol. IV, p. 134). The

reason for such an impossibility is traced to the dependency of the act on the content of "thinking". He writes to Stillingfleet thus:

But you will say, that Descartes built his system of philosophy upon Ideas; and so I say does your lordship too, and every one else as much as he, that has any system of that or any other part of knowledge. For Ideas are nothing but the immediate objects of our minds in thinking; and your lordship, I conclude, in building your system of any part of knowledge thinks on something; and therefore you can no more build, or have any system of knowledge without Ideas, than you can think without some immediate objects of thinking. (Locke's Second Reply to the Bishop of Worcester, May 4, 1698, Works, Vol. IV, p. 362)

He makes it quite clear to the Bishop that one cannot think without "Immediate Objects", which are the contents (Ibid., pp. 233, 357).

According to him not only the act needs an "object" but also the "object" needs an act.

In his case against Innate Principles, Locke states:

... it seeming to me near a contradiction, to say, that there are Truths imprinted on the Soul, which it perceives or Understands not; imprinting, if it signify any thing, being nothing else, but the making certain Truths to be perceived. For to imprint any thing in the Mind without the Mind's perceiving it, seems to me hardly intelligible... (I:II:5)

With regard to Notions he makes a similar emphasis:

To say a Notion is imprinted on the Mind, and yet at the same time to say that the mind is ignorant of it, and never yet took notice of it, is to make this impression nothing... So that to be in the Understanding, and, not to be understood; to be in the

Mind, and, never to be perceived, is all one, as to say, anything is, and is not, in the Mind or Understanding.

(I:II:5)

As noted earlier, "Idea" for Locke signifies "whatever is in the Mind when a Man thinks". The above claim then applies to Ideas. Ideas as "objects" cannot exist unperceived.

The dependency of the act on the "object" is also made explicit in Locke's discussion of Memory. In his first edition of the Essay, Locke described Ideas as "being laid away out of sight in a Repository to be later revived". But, perhaps as a result of Norris's criticism and particularly in response to his question as to what happens to Ideas when they are laid aside in the "Repository",²⁸ Locke adds the following section in the second edition of the Essay:

But our Ideas being nothing, but actual Perceptions in the Mind, which cease to be anything, when there is no perception of them, this laying up of our Ideas in the Repository of the Memory has a Power, in many cases, to revive Perceptions, which it has once had, with this additional Perception annexed to them, that it has had them before. And in this sense it is, that our Ideas are said to be in our Memories, when indeed, they are actually no where, but only there is an ability in the Mind, when it will, to revive them again; and as it were paint them anew on itself, though some with more, some with less difficulty; some more lively and others more obscurely.

(II:X:2)

Idea as an "unperceived entity" unlike a thing, does not exist. Its "existence" in the "repository of our Memory" has no ontological

overtones, since the "idea" that is "laid up" is not a thing. It may be helpful to introduce here Sergeant's query about Locke's account of Memory.²⁹ Sergeant comments that the "laying up ideas in the Repository of his Memory, signifies no more, but that the Mind has in many Cases a Power to Revive Perceptions, with a Connotate annex, of having had them before"³⁰ is certainly,

peculiar to himself, and contrary to the sentiments of all mankind; who..... would I believe, unanimously declare that by laying up a thing in Memory, they meant, (as the words naturally impart) the retaining something which has its being yet within us, and may be brought into play again upon occasion. Can the Memory be said to retain what is not? Or can there be a repository of nothing?
(Solid Philosophy Asserted, Reflexion 5, section 1, p. 143)

In both Sergeant's and Norris's query there is an underlying presupposition that the "object" of Memory has to be a "thing" or having the quality of "thingship". When not perceived it has to be retained some where in the manner a "thing" can be, when we do not think about it or be aware of it. If not such an "object" cannot be revived.

Sergeant's presupposition becomes manifest, when he goes on to state:

I must not omit here to remark, that when Mr Locke says, that Ideas fade in the Memory; or, (as he ingeniously expresses it) that (the Pictures drawn in our Minds are laid in fading colours) he most evidently discovers that by Ideas here he means Spiritual Objects of our Understandings, Notions. For there is no doubt that Phantasms, they being Imperceptible Particles, of the same Nature with the

Corporeal Agents whence they are sent, do follow, (and that very easily) the Fate of their Originals; and are liable to be defaced, altered or corrupted, as these are; Whereas it is impossible, that Ideas or Notions, which have a Spiritual Being in our Mind, should be liable to any such Decay, Corruption or Mutation. . . . The Corporeal Instruments which brought our Notions thither may perish; but when they are once in her they are as Immutable and Immortal as her self.
 (Solid Philosophy Asserted, Reflexion 5, section 2, p. 161)

This passage clearly indicates that in Sergeant's view Notions, even though not innate, have an ontological status. They are spiritual beings or entities which can exist independent of the mind's thought about or awareness of them. As we have already noted (3:2 & 3), Sergeant considers Notion as the "form" of the thing, which is present in the spiritual part of the "seat of knowledge" as a result of the impact of the effluvioms on its corporeal part. As the passage quoted above indicates, the corporeal causative factors of Notions may decay but, Notion as "spiritual being" does not. It is in light of such a claim that Locke marginally comments thus:

Were Ideas as he makes his Notions (63-76) adventitious effluvioms lodged in your brains, we might be said to have these Ideas when we do not perceive them.

(Marginal Comment, No. 27. p. 121)

The ontological feature of the Notion (i. e. its capacity to exist independently of our thoughts about or awareness of it) becomes manifest in Sergeant's criticism of Locke's account of Memory.

The question as to what happens to the Idea when it is forgotten and then recollected looms large in a context where Ideas are taken to be "real" (ontological entities). In a context where Ideas are not so taken but are regarded as merely "cognitive contents" dependent on the act of cognition, the question itself appears improper. When they are not perceived there is no sense in which we could be concerned about their existence. The Anonymous writer on Ideas, whom we have already cited observes thus:

Now if it should be askt here, What becomes of those Ideas when they go out of the mind? I must confess it would be a proper Question amongst those who hold them to be Real Beings; for there seems a Necessity that there should be some Repository for them in some Mind; and considering the Infinite Number of Ideas that may be formed of all things that are; and are possible to be, it seems impossible that there should be any proper and suitable Receptory for them but in an Infinite Mind, which is God; and those Ingenious Persons, who advance this Notion, do always suppose them to have their Residence there, and we come to the Knowledge of them only so far as God is pleased to Exhibit them to us.

But this Question can be nowise proper for those who make Thought and Idea to be the same; for according to this Notion they are not Real Beings, but only Modifications of the Mind, or so many several Modes of Thinking upon the several Objects presented to the Mind; or if you please, it is the Mind it self operating after such and such Manner.

... 'Tis plain they are lost and vanisht; and tho' the Mind has a Power of Reflection, that is, of Proceeding from the Knowledge of one thing to the Knowledge of another, till it comes to the same Objects, and so Recollects the same Thoughts and Ideas again,

yet 'tis evident these Ideas exist no longer than the Thoughts do, and when those Thoughts cease, the Ideas by consequence are lost and are for the present as if they had never been, that is, they have no Being. 31

Here the Anonymous writer understands by "thoughts" the acts of thinking. 32 In his emphasis that Ideas cease when there are no "thoughts" about them he expresses Locke's sentiments. Such an explanation of "forgotten ideas" will not satisfy philosophers like Sergeant. I do not claim that Locke has solved the problem of Memory. What is to be noted here is that Locke's discussion of Memory indicates his emphasis that Idea as "object" or "content" is dependent on the act. The Anonymous writer points out that, when "Idea" and "thought" (act of thinking) are taken to be interdependent, two corollaries follow:

1. That there cannot be "thought" without some "idea".
2. That there can be no Idea actually in the Mind but what is actually thought. 33

The Anonymous writer associates Locke with such a view. 34 As we shall see in due course, Locke interprets the "presence of the idea" in the mind during an act of cognition cognitively, without any ontological overtones.

Locke's characterization of Idea in terms of "Perception" also confirms his basic contention that "Idea" as "object" is inseparable from the "act".

"Perception" is Locke's term for awareness, particularly as the first act of the Mind (II:IX:1, 2-4, 15). It is taken to be the

First step and degree towards Knowledge, and the inlet of all the materials of it... Perception is the first Operation of all our intellectual faculties, and the inlet of all Knowledge into our Minds... (II:IX:15)

The "object" of Perception is the Idea. In some places "perception" taken as "perceptual act" is considered as correlative to "idea" (II:IX:1, 2-4, 15).

In the chapter on "Perception" after describing "Perception" as an act or operation of the Mind (II:IX:1-4) he concludes thus:

A sufficient impulse there may be on the Organ; but it not reaching the observation of the Mind, there follows no perception: And though the Motion, that uses to produce the Idea of Sound, be made in the Ear, yet no sound is heard. Want of Sensation in this case, is not through any defect in the Organ, or that the Man's Ears are less effected, than at other times, when he does hear: but that which uses to produce the Idea, though conveyed in by the usual Organ, not being taken notice of in the Understanding, and so imprinting no Idea on the Mind, there follows no Sensation. So that where-ever there is Sense, or Perception, there some Idea is actually produced, and present in the Understanding. (II:IX:4)

According to this comment, whenever there is a "perceptual act" there has to be some Idea as its "object". This correlation is further confirmed when he says:

To ask, at what time a Man has first any Ideas, is to ask, when he begins to perceive; having Ideas and the Perception being the same thing. . . (II:I:9)

Locke wants us to notice a child from its birth. He thinks that we will find "as the Mind by the senses comes more and more to be furnished by Ideas, it comes to be more and more awake; thinks more, the more it has matter to think on" (II:I:22 & 23).

Locke thinks that the Mind is passive when it perceives (II:IX: 1). But that does not mean that when the Mind perceives, the Idea is in the Mind without the latter being aware of the former. Such a possibility entails that some Ideas are separable from the acts and exist independently. This would in turn strengthen the case for Innate Ideas, which he challenges. For him, in "perception" the Mind is passive but such a "passivity" is also a state of awareness; in such a state the Mind cannot avoid perceiving what it perceives (II:IX:1; II:I:25; II: XII:1).

For Locke, being aware and having Ideas are simultaneous conditions;³⁵ when there is a perceptual act (i. e. when the Mind is aware) the Mind has an Idea and vice versa. When he argues that "whatever Idea was never perceived by the Mind, was never in the Mind" he emphasizes in negative terms his basic contention that Idea as "contents" is correlative to the Perceptual act (I:IV:20).

In certain other passages Locke identifies "Perceptions" with

"Ideas" or uses them interchangeably. He states that "our Ideas are nothing but Actual Perceptions in the Mind, which cease to be any thing, when there is no perception of them" (II:X:2). In his An Examination of P. Malebranche's Opinion of seeing all Things in God, he tells Malebranche:

One who thinks ideas are nothing but perceptions of the mind annexed to certain motions of the body by the will of God, who hath ordered such perceptions always to accompany such motions, though we know not how they are produced; does in effect conceive those ideas or perceptions to be only passions of the mind, when produced in it, whether we will or no, by external objects.
(Section 14, Works, Vol. IX, p. 218)

The use of "perceptions" interchangeably with or as alternative to "ideas" may be found both in the Essay and in his response to Malebranche (I:IV:21; II:I:3, 5; II:VIII:7 & 8, 24; IV:IV:4; II:XXI:14; An Examination of Malebranche, sections 8, 15, 18, 42, 50).

Locke identifies "perceptions" with "ideas" in a context where Ideas are taken to be "things" having an ontological status. His critical response to Malebranche indicates that he follows Arnauld rather than Malebranche in interpreting Ideas. By emphasizing that they are Perceptions, Arnauld questions Malebranche's claim that Ideas are not mind dependent but have an ontological status in the Mind of God.³⁶ Locke makes a similar interpretative strategy with a similar motivation.

Locke's emphasis need not be construed as indicative of a

tension in his views concerning Ideas - that his use of "Ideas" interchangeably with "Perceptions" contradicts his view of Ideas as "objects" (as contents of perceptual acts). If he had taken "contents" to be separable from "acts", then his identification of Ideas with "Perceptions" creates a tension in his views. But, as we have already noted, he repeatedly insists that Ideas as "contents" are inseparable from and correlative to their corresponding acts.

Moreover, when he identifies "Perceptions" with "Ideas" it should not be taken that in all cases he takes the former to mean "Perceptual Acts", even though he defines "Perception" as the initial act of the Mind (II:IX:1, 2, & 15).³⁷ In certain places he seems to take perception as "contents" rather than "act" (II:I:3; II:VIII:7 & 24; II:XXXII:16).³⁸ But, even in the passages he identifies Ideas with Perceptual acts (II:X:2; An Examination of P. Malebranche, section 14), he does not through such an identification eliminate one of the two and stick to one at the expense of the other. If, by the claim, "ideas are nothing but perceptions", Locke means that Ideas are perceptions per se, i. e. contentless acts, then he goes against his belief in the "intentionality" of perceptual acts, which he shares with Sergeant. If, on the other hand, Locke means that Ideas are actless contents, then he goes against his overall contention that they are not "things". When he identifies Ideas with Perceptions, he seems to assert that there is no distinct kind of existence called perceptual

act but that this is only the presence in the mind of a particular content or that there is no distinct kind of existence called perceptual contents but what is involved in an act and presented in and through it. Such an identification is then a reformulation of the "inseparability" thesis,³⁹ intended to combat the tendency to take Ideas as "things".

Both the views of Locke (i. e. Idea as contents or "object" and Idea as "perception" taking the latter as either perceptual act or content) may be thus taken as highlighting his overall contention that Idea is not an ontological entity existing independently of any perceptual or any other act of thinking, as a "thing" does. This takes us to his discussion of Idea with specific reference to "thing".

Object and Thing:

Locke's presentation of Idea as inseparable from the act deontologizes the Idea, for it cannot be said to exist independent of the mind and its acts as any other ontological entity.

Locke goes further and makes it quite explicit that he does not take Idea as a "thing" in the sense in which this term was generally understood in the philosophical context in which Locke presented his theory of Ideas.⁴⁰

The critical response to Locke is itself an indication of how Locke's characterization of Idea went against those who insisted that the "object" of knowledge has to be "real". The demand to know what

kind of things Ideas are, along with the condemnation that if the Idea cannot be categorized as Substance, Mode or Accident, then it is not a legitimate "object" of knowledge is based on the assumption that for knowledge to be reality-based, the objects of knowledge have to be "real". Norris initiated such a mode of criticism, when he demanded:

I would know what kind of things he makes these ideas to be as to their Essence or nature... 41

He goes on to ask whether Locke's ideas are "real" or not; if they are "real" whether they are Substances or "Modifications of Substances" and whether they are Material or Spiritual.

Sergeant's response too manifests a similar reaction. He states:

To proceed, and persue my Theme more closely; I would be glad to know, at least in Common, what kind of things, in this Author's opinion, those (Ideas) are. Are they Corporeal, or are they Spiritual, or under what Head shall we rank them? (Solid Philosophy Asserted, Prelim., I, section 13, p. 18)

Such a query contains a condemnation - that, if the Ideas cannot be classified into the traditional categories of substance, mode and accident, then they cannot be "real" and hence do not qualify to be "objects" of knowledge. Sergeant finds that the Ideas,

... being most evidently, neither the Things known, nor any Mode or Accident of those Objects; and, consequently, nothing at all of the Thing in any sort, were manifestly convinced not to be the Productions of Creative Wisdom, in which he had imprinted all

Natural Truths, but mere Fancies, coined by their
Imagination.

(Solid Philosophy Asserted, The Epistle Dedicatory,
p. 6)

We have already noted that Sergeant's ontology is made up of Substances and their Modes and Accidents. He attempts to classify Notions into the Aristotelian Categories which he calls the "Ten Common Heads" (Method to Science, Book I, Lesson 11). Such an attempt is founded on the assumption that Notions as "objects" of knowledge may be placed in categories which are differentiated on the basis of ontological distinctions. His question - under what head shall we rank Ideas - is based on such an assumption. His dismissal of Ideas as "nothing" since they are neither Substances nor their Modes and Accidents (Solid Philosophy Asserted, The Epistle Dedicatory, p. 6) is based on the same assumption. According to him,

Wherefore those who have only in their Minds Similitudes or Ideas, do only Connect or Discourse of them, which Ideas are not the Thing, nor conceived to it either in whole, or in part, are convinced to build their Discourses (thus grounded) Upon Nothing. Therefore they have no Solid Knowledge of any Thing.

(Solid Philosophy Asserted, The Preface, section 24, p. 32)

It is not Locke's failure to define Idea that bothered critics like Norris and Sergeant, but his reluctance to characterize it in the way they thought the object of knowledge must be characterized. Locke's presentation of Idea was not according

to their taste. They wanted to locate the Idea on the ontological scale, which they usually described as the "scale of being". If they could not do so they concluded that knowledge by way of ideas was impossible.

Locké's reply to Norris indicates the manner in which he responded to those who insisted that for knowledge to be "real" the "object" of knowledge has to be a "thing". He replies thus:

Indeed he condemns me in this same p 3, that I have not given him an account of the nature of ideas If you once mention Ideas you must be presently called to account what kind of things you make these same ideas to be though perhaps you have no design to consider them any further than as the immediate objects of perception or if you have, you find they are a sort of sullen things which will only show them what, but will not tell you whence they came nor wither they go nor what they are made of and yet you must be examined to all those particulars - whether they be real being or no, in the next place, whether be substances or modifications of substances and further whether they are material or immaterial substances and then upon their being material you must answer to an hundred solid questions. I must confess it a mark of my poverty not to be provided with ragousts to entertain him according to his relish on all these subjects for there is not I perceive a leg or wing of any of those dotteral (stupid) ideas that imitate every-thing whether you would lash them up as material effluvias or serve immaterial as to their substance or immaterial as to their representation but managed by good cookery might make (sic) a considerable dish as you may see pp 21-31, where out of his abundant liberality and in consideration of my unprovided kitchen has furnished out to himself (has furnished out to himself) (sic) a large entertainment according to his palate and thither I send anyone who has a mind to feast himself upon Ideas. 42

Locke is determined not to entertain Norris according to his taste by providing him with an explication of Idea as a "thing". Locke's response is applicable to Sergeant too, since he too insists that Locke should present the Idea as a "thing", or more exactly as the "thing itself". Sergeant thinks that "real knowledge of the Things in Nature" cannot be had "according to the Principles of the Ideists", who according to him substitute "Empty Resemblances or Fancies, for the Things themselves" (Solid Philosophy Asserted, Reflexion 18, section 1, pp. 338-339). After stating that the "object" of knowledge has to be the "thing itself" and that it should be "present to the Mind" to be known (Ibid., sections 2-4, pp. 339-343), Sergeant alleges:

Now this seems to me a strange way of proving the Reality of our Knowledge, by Ideas, to affirm that we are not to regard the Things, but as conformable to our Ideas. Is not this to make Philosophy not the Knowledge of Things, but of the Ideas only; and to pretend, that the Thing must only be held True, if it be Conformable to our Ideas? He might as well have said Fancies; for, he expressly says, these Complex Ideas are made by the Mind, and not taken from the Thing, nor like it: And, whatever is neither the Res, nor so much as like it, can neither have Reality nor Shew of Reality; and therefore, must be a mere Fancy.

(Solid Philosophy Asserted, Reflexion 18, 4, pp. 343-344)

Locke's marginal comment to the above passage has to be taken note of and it runs thus:

Things are truly what they are whether we have any Idea of them or noe. But they cannot belong

to any one specific name, unless they agree to his specific Idea.

(Marginal Comment No. 66, p. 343)

When Locke comments that "things" are what they are whether or not we have any Idea of them, he not only makes explicit his view on "things" but also emphasizes that contrary to Sergeant's allegation, "things" are not tailored to conform to Ideas. Since names (words) are signs of Ideas for Locke, to name a "thing" we have to first have an "idea" of it. We have already noted that for Locke "having an Idea" of anything and "perceiving" it are equivalent. Hence, when he comments that "things" could exist independently of us "having Ideas" about them, it means that they are able to exist independently of our acts of perceiving them; that things are independent of the acts of the Mind. This is the way Sergeant interprets "reality" and the "things" which constitute it. There is really no difference of opinion between Sergeant and Locke on the question of the independence of the "thing" from the Mind. Both accept the existence of an extra-mental reality. But for Sergeant, for knowledge to be had of "things", the "object" of knowledge has to be the "thing itself" translated into intelligible terms (through meeting the requirements of "mind-like" and "presence to the mind"), without thereby losing any of its ontologicity. The change is only in the mode of existence and for him, existence is extrinsic to the nature of the "thing". But for Locke, we know "things" through the "intervention of ideas" (IV:IV:III) and not by the translation of the

"thing" to the Mind through the mechanics of "form. To know "X" or more accommodatively to be aware of "X", we have to have the idea of "X" as the contents of our act of knowing or awareness. But this "contents" does not have the ontologicity characteristic of Sergeant's Notion. Locke does not place the "Idea" into the traditional ontological categories. He specifically states that it is not a "substance" (Remarks upon Mr. Norris's Books etc. . . , section 17, in Works X, p. 256). Locke also makes it a point to distinguish between Ideas [as "Perceptions in the Mind"] and "Qualities in the Subjects" or "External Objects".⁴³ He acknowledges that sometimes he speaks of Ideas as if they are qualities, but he insists that the reader should be careful to make the necessary distinction (IV:VIII:7 & 8). The distinction that Locke attempts to make here is one between the ontological and the cognitive. Things and their qualities belong to the ontological while their ideas belong to the cognitive. Qualities, whether they be Primary or be Powers which are causal to Secondary Qualities (Ibid. , 9 & 10) belong to the ontological dimension, while Ideas belong to the cognitive - for they indicate the manner of being aware of the qualities. Ideas are "real" not because they are qualities and powers themselves, but because they "answer and agree to those powers of things", which "produce them in our mind" (II:XXX:2). The Ideas of Whiteness and Sweetness of Sugar are "in our Minds" while the "powers" which produce these ideas are in "sugar itself"

(II:XXXI:2). We shall see the cognitive interpretation he gives to "presence to the mind" in the subsequent sub-section. But what we have to note here is that he attempts to distinguish between qualities and ideas. Whether he has always been successful in making this distinction clear need not be decided here. Throughout Book II, he frequently talks of Ideas of motion, space, time, and substance as if they are properties, qualities and things (II:XII, XIII, XIV, XV). But, his account here has to be examined through the adoption of the interpretative apparatus which he gives before commencing such a discussion - that of distinguishing ideas from qualities (IV:VIII:7 & 8). When we do not take this into account, we are naturally led into problems concerning the status of ideas.⁴⁴

Locke's attempt to present Idea as "object" or "immediate object" inseparable from the act and his insistence that Idea does not fall into any of the traditional ontological categories of Substance, Modes or Accident, deontologizes it.⁴⁵ We have already noted that for Sergeant the ontologicity of the "object" of knowledge [Notion] is made possible through characterizing it in terms of "form". In a context where "form" was understood as what makes a thing to be what it is, "formalization" of the "object" of knowledge meant its ontologization. Locke's attempt to deontologize the "object" of knowledge may thus be interpreted as an attempt to "deformalize" it. Herein lies the anti-formalism of Locke at the level of Simple

Apprehension.

When the "object" of knowledge is not taken to be an ontological entity, its "presence to the mind" and its being "like mind" receive a different interpretation. We shall next examine these interpretations, which in turn highlight Locke's attempt to deontologize and thereby deformatize the "object" of Knowledge.

Object and Presence:

Locke acknowledges that Ideas as "objects" are present to the Mind. In several places he states that Ideas are in the Mind (II:I:1; I:I:8; I:II:5; II:I:5; II:VII:7, 8, 9, 12; II:X:2; II:XXX:2; II:XXXI:2; II:XXXII:3, 15). He seems to attribute existence to Ideas when he states:

When Ideas are in our Minds, we consider them as being actually there, as well as we consider things to be actually without us; which is, that they exist, or have Existence.
(II:VII:7)

But this "existence" or "presence to the mind" of Ideas in the Lockean context has a cognitive connotation, without the ontologicity characteristic of the existence of "Notions in the Understanding". For Locke "to be in the Understanding" means "to be understood". He criticizes the view that Innate Ideas could be in the mind without being perceived, on the basis of such an interpretation he gives to "presence" of Ideas in the Mind. He states:

He therefore that talks of innate Notions in the Understanding, cannot (if he intend thereby any distinct sort of Truths) mean such Truths to be in the Understanding, as it never perceived, and is yet wholly ignorant of. For if these words (to be in the Understanding) have any propriety, they signify to be understood. So that, to be in the Understanding, and, not to be understood; to be in the Mind, and, never to be perceived, is all one, as to say, any thing is, and is not, in the Mind or Understanding.

(I:II:5)

For Locke, "X" is in the Understanding means that "X" is understood. In the Lockean context Ideas signify something other than themselves or sometimes themselves. We will deal with this subsequently in this Chapter. What has to be noted here is that in the light of the signifi- catory role assigned to Ideas, if "X" is in Understanding, what "X" signifies is understood by the Mind. Locke resorts to the notion of "objective existence" to make his point clear.⁴⁶ Such a notion was in vogue then.⁴⁷ In the notes on logic, written during his undergraduate days (cited in 2:2) he mentions that ideas are "objectively in the mind". In the fourth edition of the Essay he adds a section in the Epistle to the Reader, where he informs the reader that he prefers terms "de- termined" or "determinate" to "clear and distinct" ideas.⁴⁸ He states:

By those denominations, I mean some object in the Mind, and consequently determined, i. e. such as it is there seen and perceived to be. This I think may fitly be called a determinate or deter- mined Idea, when such as it is at any time objec- tively in the mind and so determined there, it is annexed, and without variation determined to a

name or articulate sound, which is to be steadily the sign of that very same object of the Mind, or determinate Idea.

(Essay, The Epistle to the Reader, p. 13)

The annexation of name in itself does not make an idea "determined" or "determinate". First of all the ideas to which names are subsequently annexed have to be "objectively in the mind". We have also noted that for Locke, if anything is said to be in the mind it means that it is perceived or understood. For him, ideas are conscious contents. But he goes further in the above passage and emphasizes that some of the ideas may be taken as "determined", when they are "objectively in the mind". Such an emphasis does not mean that "undetermined" ideas are not "in the mind". All Ideas are Objects in the mind and hence conscious contents. But certain Ideas may be better "understood" and when such Ideas are given steady names they are called "determined" or "determinate". In a context where "to be in the Understanding" is taken as "to be understood", the degrees of existence of the objects in the mind (ideas) are based purely on cognitive considerations on the degrees of understanding by the Mind.

In a marginal comment Locke makes it explicit that "presence to the mind" is assessed on cognitive considerations only. When Sergeant criticizes Locke's theory of Ideas as "objects", Locke comments thus:

His arguing here is to prove that the minde cannot have two objects at once which if true the minde

can never have any knowledge which is had only by the comparing 2 Ideas or Notions which are two Objects. The eye sees and consequently the mind perceives an hundred objects at once though some more and some less clearly and distinctly.

(Marginal Comment No. 28, p. 123)

Locke acknowledges the possibility of having more than one Idea in the mind as its "objects", which in his terms amounts to the claim that one can understand more than one thing at a time. But he also acknowledges that certain ideas may be understood or "perceived more clearly and distinctly" than others. This is equivalent to the claim that these ideas are more "objectively in the mind" than the others. In the Fourth edition he calls such ideas "determined" or "determinate". "Objective existence" or the "presence to the Mind" for Locke is taken cognitively without any ontological overtones.

The "objective existence" of "X" is "X" so far as it is a "content" of an act of being aware of "X" (i. e. knowing, thinking, perceiving, remembering, etc.). What "objectively exists" is "X" and not the Idea of "X". This does not mean that there are two modes of existence of a thing. "X"'s existence is really its "formal existence", i. e. as it is independent of the act of knowing. "Objective existence" is "X" so far as it is known, thought, perceived, etc. ⁴⁹

Such a cognitive interpretation of the "presence to the mind" requirement goes against the view which Sergeant represents; where the Notion as the "form" of the thing exists in the mind "spiritually"

Object and mind-likeness:

Locke thinks that "since the Things, the Mind contemplates, are none of them, besides it self, present to the Understanding", 'tis necessary that something else, as Sign, or Representation of the thing it considers, should be present to it" (IV:XXI:4). These are for him Ideas. It is evident from the manner he introduces Ideas as signs, that he accepts in a way the "present to the mind" and the "like-mind" requirements. His presentation of Ideas as mind-like objects signifying "things" makes him controversial. Sergeant thinks that in whatever way one interprets Ideas there are bound to be problems. He recognizes the possibility of interpreting Idea as "not a thing" (nothing) which, according to him, makes knowledge impossible. He also finds:

1. That Ideas may be taken as "something other" than "things". This entails Scepticism, for, if Ideas even if spiritual are not the "things themselves" knowledge through Ideas will not be knowledge of "things". (Solid Philosophy Asserted, The Preface, sections 12-13, pp. 15-16)
2. That Locke's use of Ideas indifferently to cover both corporeal and spiritual entities also makes knowledge impossible. For if Ideas are corporeal they cannot be present to the mind. (Solid Philosophy Asserted, Prelim. , 1, p. 23)

Sergeant thinks that Locke takes Ideas to be "similitudes" (Solid Philosophy Asserted, The Epistle Dedicatory, p. 6). But Locke marginally comments thus:

Where is it Mr Locke says Ideas are the similitudes of things he expressly says most of them are not similitudes?

(Marginal Comment No. 1, p. 6)

When Sergeant claims that the Word Idea, signifies a Resemblance, Similitude, or Image and consequently "is indifferent to what's in the mind, and what's only in the Fancy", Locke introduces in the margin the questioning word, "Where?" (Locke: Marginal Comment No. 8, p. 23). Again, when Sergeant discusses Secondary Qualities and asks Locke "why the ideas of secondary qualities should have nothing existing like bodies", Locke is careful to point out that he does not give a blanket definition for Idea as "resemblance". He marginally comments thus:

Blewenesse (sic.) or heat in the minde are the Ideas there whether they be like anything in the object or noe. But he will have Mr Locke to mean resemblances by Ideas, though Mr. L. says expressly that he does not.

(Marginal Comment No. 31, p. 137)

These marginal comments make it clear that Locke does not want Sergeant to take Ideas as similitudes or resemblances in an unqualified manner. Sergeant associates "corporeality" with resemblances and thinks that, if an Idea is a resemblance or similitude, it is a "Phantasm" or "Material Representation". As we have already noted, for

him, a Phantasm has an ontological status; it belongs to the class of corporeal things. That is why he makes it a point to distinguish Notion from Phantasm (Solid Philosophy Asserted, The Preface, sections 19-25, pp. 26-32). In his view, Locke's Ideas are "Similitudes" and hence "Phantasms" or Material Representations. As the said marginal comments indicate, Locke denies such an interpretation. He no doubt indicates in marginal comments (I) that he regards some ideas as "similitudes", but that does not mean that they are materially representing things, in the order of "Phantasms".⁵⁰ He describes Ideas of Primary Qualities as "resemblances" (II:VIII:15), but such a description follows his emphasis that Qualities have to be distinguished from Ideas - that Ideas in the mind are not qualities in the things (II:VIII:7 & 8). In such a context, Ideas of Primary Qualities, even though resemblances, are not themselves resembling corporeal things. Hence, Sergeant's enterprise to distinguish Notions from Phantasms and involve Locke's Ideas with "similitudes" giving the latter a corporeal ontological status is really irrelevant to Locke and does not affect his position (Solid Philosophy Asserted, The Preface, sections 19-25, pp. 26-32).

Locke takes Idea to be mental but not as a mental ontological entity nor "spiritual thing". As we have already noted, his interpretation of Idea as "object" inseparable from the act deontologizes the Idea. That is why he does not place it in any of the traditional

ontological categories. His characterization of it as like mind (IV: XXI:4) has to be taken then as qualifying a deontologized entity. Idea is not a thing in the first place for it to be spiritual thing. Whether his interpretation of Idea as a mental "object" inseparable from the act could still be considered as causing epistemological problems traditionally associated with the Representative Theory of Perception need not be decided here. What has to be noted here is that for him, Idea is not a thing and hence not the thing itself; it is sometimes a resemblance but never a corporeal thing resembling something else; it is mental but not a spiritual thing. Hence, when Idea is said to be "present to the mind" there is no ontological feature associated with such a presence; what is associated with the presence of a "thing". Such a characterization goes against Sergeant's theory. For Sergeant Notion has an ontological character about it on account of it being the "form" of the thing (3:3). Hence the presence of the Notion in the mind of the knower has an ontologicity associated with it, even though it is not a spatial or corporeal presence. Locke's presentation of Idea as "object", as given in the Essay and confirmed by the marginal comments already cited in this section (3:4), goes against Sergeant's theory. There are certain other marginal comments which more explicitly attack Sergeant's position that in the act of knowing the "form" of the thing exists in the mind and that there is "unity of form" between the knower and the known.

When Sergeant claims that in the event of knowing a corporeal thing, Notion as the "form" or "nature of the thing" is "in our Soul Spiritually, though out of it Corporeally" (Solid Philosophy Asserted, Prelim., section 3, p. 59), Locke marginally comments:

What is it for a material thing to exist spiritually?
(Marginal Comment No. 17, p. 59)

When Sergeant claims that in the act of knowing the knower becomes the known and that the "Soul of Man" is "capable of knowledge infinitely higher, viz. the beautifying Sight of God" (Ibid., Prelim., 2, section 23, p. 40), Locke claims:

It should have been inferred according to what J. S. says in this by which the Soul becomes God.
(Marginal Comment No. 14, p. 40)

Sergeant claims that, when "the Soul knows anything in Nature she must be that thing as it is Another distinct from her; So that in a Word, to Know is Esse aliud ut aliud; to be another thing as it is another" (Ibid., Prelim., 2, section 26, pp. 42-3). Then he cites the example of knowing the Bell in the Steeple. According to him to know the Bell in the Steeple, the Soul must have the Bell in the Steeple in her as it is out of her (Ibid.). Locke's marginal comment runs thus:

i. e. must be that thing as not being that thing.
(Marginal Comment No. 15, p. 43)

In his correspondence with Stillingfleet, Locke cites Sergeant as saying, "that notions are the materials of our knowledge; and that

a notion is the very thing itself existing in the understanding" (Solid Philosophy Asserted, pp. 24 & 27 as given by Locke). Then Locke asks Stillingfleet:

Not thinking your lordship therefore yet so perfect a convert of Mr. J. S. 's that you are persuaded, that as often as you think of your cathedral church, or of Descartes's vortices, that the very cathedral church at Worcester, or the motion of those vortices, itself exists in your understanding; when one of them never existed but in that one place at Worcester, and the other never existed anywhare in rerum nature. I conclude, your lordship has immediate objects of your mind, which are not the very things themselves existing in your understanding; which is, with the academics, you will please to call representations, as I suppose you will, rather than with me, Ideas, it will make no difference.

(Works IV, pp. 390-91)

When we view these comments to Stillingfleet and the marginal comments to Sergeant apart from the context in which they were made and consider them as Locke's condemnation of Direct Realism of every sort (i. e., of any theory of knowledge or perception that claims that we could have direct knowledge or perception of things), then they appear to be naive. Locke was here criticising a type of Direct Realism according to which we could have direct knowledge of things because the intrinsic "forms" of things are not altered in any way when they become spiritual in their mode of existence in the mind of the knower; that in the act of knowing there is an identity between the knower and the known made possible through a "unity

of form". Locke criticizes such a type of Direct Realism, which Sergeant represents. Locke's marginal comments (No. 's 17, 14, 15) are helpful here since they reveal what is not explicit in the Essay.

For Locke the Idea as "object" is distinguishable but never separable from the act, and is not a "thing" in the sense of being able to have an existence independent of the act of the mind, as those which belong to the traditional ontological categories of Substance, Modes and Accidents are supposed to have. Even though the Idea is taken to be mental it is not a mental ontological entity. In his attempt to deontologize the Idea he goes against the formalistic characterization of the "object" of knowledge, which Sergeant represents through his characterization of Notion. One of the motivations for him to characterize the Notion in terms of "form" is to enable his method to knowledge to be well-grounded and the knowledge thereby obtained to be "solid". Locke's dismissal of the characterization of the "object" of knowledge in terms of "form" should not be taken to mean that he questions the reality requirement. He too believes that knowledge must be reality-based but instead of the formalistic characterization he resorts to the consideration of Ideas as signs. Ideas are for Locke "objects" but they are "signs" and not "forms" of things. The next task will be to examine his Theory of Idea-Signs.

Ideas as Signs:

Locke assigns a signficatory role to Ideas.⁵¹ Commencing from his Abstract⁵² the doctrine of signs has continuously found a place in the various editions of the Essay. Except for certain minor verbal changes the final chapter of the Essay (IV:XXI) has been intact since its first edition. When we consider his theory of signs in the light of his theory that ideas are "objects" we will better appreciate the place his sign theory has in his analysis of the method to knowledge by "way of ideas". We will also be able to assess the extent to which his theory of ideas undermines the "formalistic" interpretation of the method to knowledge that was prevalent then, and which Sergeant represents.

Locke takes Ideas and Words as signs (IV:XXI:4; II:XXXII:19; III:III:6 & 11; IV:V:2; IV:XVII:3; II:XXX:2; IV:IV:5). Locke's use of phrases like "stand for" (IV:V:4; II:XXXII:19; IV:V:5-8; III:IX:6; III:II:2, 3, 6; III:III:10) and "mark of" (III:II:1, 2, 4; II:XXX:2; IV:V:4) in relation to Ideas and Words also indicates his consideration of them as signs. Locke presents them as signs in an epistemological context. Idea-Signs are employed to obtain knowledge while Word-Signs are to communicate it (IV:XXI:1). Ideas are signs which the "mind makes use of for the understanding of things", while words are signs for conveying what has been understood (IV:XXI:4). Both are taken to be the Great instruments of knowledge (IV:XXI:4; Cf. ; II:

XXXIII:19). We will be concerned with only Idea-Signs.

Locke assigns a signficatory role to Ideas taking the latter as "objects" or "immediate objects". By "object" or "immediate object" Locke means the cognitive contents of any act of awareness. He treats this contents, which is inseparable though distinguishable from the act, as "sign".⁵³ Idea as "object" is not an ontological entity and its presence does not have any ontological connotations. Hence, when such an "object" is taken to be a "sign" it is not a "thing", signifying something. When he describes Idea as "standing for" something (II:XXXII:19) it does not "stand in" for what it signifies, as a person represents someone at a meeting.⁵⁴ Idea is not a kind of "instrumental sign" which one has to first know before he knows what it signifies.⁵⁵ It is not like smoke signifying fire. Being aware of "X" and being aware of the "Idea of "X"" are not separate successive acts of awareness. When one claims that he is aware of "X" in the Lockean context it means that the idea of "X" is present to his mind (i. e. he has the Idea of "X") as the inseparable content of his act of awareness and that this content in turn signifies "X". This "X" may be something external to the mind and independent of its acts as in Ideas of external corporeal or spiritual things and in qualities (II:VIII) or an operation of the mind as in Ideas of Reflexion (II:VI:VII) or may be the idea itself as in complex ideas which are their own archetypes (II:XII; XXII; XXIII). But, in none of these cases has the Idea of "X" any ontological status.

It is merely a deontologized mental content. Yolton observes that Locke does not elaborate on the sign theory of Ideas but that he "clearly takes Ideas as Signs and not as entities".⁵⁶ When we take into account Yolton's repeated emphasis that Locke deontologizes the Idea, the term "entities" here should mean ontological entities or "things".⁵⁷ For Locke Ideas are then deontologized signs.

When he deontologizes the Idea he also psychologizes it,⁵⁸ for when he takes Idea to be "Object" and takes the latter as "inseparable contents" of an act of the mind, he makes Idea dependent on the person and his psychological makeup. Any act of awareness being a mental event is tied up with the psychology of the person involved in the act. Hence, when the content is taken as a sign, the latter cannot be considered separate from the psychological factors that go to make up the act. Idea-Sign for Locke is essentially an epistemic sign. Through it one is said to know what is signified by it. Such an epistemic sign is closely tied up with the psychological factors associated with the act. Hence the Idea-Sign for Locke is not an impersonal symbol, which could be manipulated in the manufacture of Knowledge. As Yolton puts it, the "psychology of awareness was linked up with the theory of signs".⁵⁹ There is a close link between the psychological and the logico-epistemological in his characterization of Idea as "sign".

Locke sometimes uses "sign" and "representation" or

"representative" interchangeably (II:XXI:4; II:XXXI:4; II:XXXII:19). Signs may be representations but they do not have the corporeal ontology usually associated with Phantasms. Locke explicitly denies Sergeant's allegation that Ideas are taken as "material representation" (Marginal Comment No. 1, p. 6 The Epistle Dedicatory). He informs Sergeant that for the most part Ideas are not "resemblances" (Marginal Comment No. 31, p. 137) and even if they are so, as in Ideas of Primary Qualities, they are not resembling things. In the act the Idea may be an exact resemblance of a thing but apart from the act such a resemblance does not have any status. For Locke, since the Idea as "object" does not have a status independent of the act, even Ideas which resemble things do not exist independent of the act.

Sometimes he likens Ideas to visions, pictures, or paintings, or to "shapes imprinted on the mind", but here he seems to speak in analogical rather than in literal terms. He describes their nature in terms drawn from the vocabulary of seeing and talks of their being "kept in sight", "in view", etc. (II:I:2, 8, 25; II:IX:4; II:X:2, 5, 7, 11; II:XXIX: 2, 3, 8; III:XI:21; IV:XI:21). Such descriptions may be taken as instances of his explicatory strategy to describe the "Perception of the Mind ... by Words relating to the Sight" (II:XXIX:2).⁶⁰

Hence, in most cases, Ideas are, for Locke, non-resembling signs and even when, in some cases, they resemble what they signify, they

are not "things" resembling others.

When Locke considers Ideas as deontologized mental contents ("Objects"), assigns them a significatory role, and claims that we have the knowledge of things "only by the intervention of Ideas" (IV: IV:3), he provides a mode of analysis of the initial act of knowing (Simple Apprehension) which goes against the "formalistic" account that Sergeant attempts. The Doctrine of Signs is Locke's way of characterizing the manner in which we apprehend "things". I do not claim that Locke's account is free from problems and ambiguity. Nevertheless, it may be taken as an alternative mode of analysis to Sergeant's - where the act of knowing is explicated through the identification of the Knower and the Known through the "object" considered as the "form" of the thing, transferred to the Mind of the Knower. For Sergeant since the Notion is the "form" of the thing known and since "form" is intrinsic to it, Notion can never be the sign. It can only be the signified (Solid Philosophy Asserted, Prelim., 11, section 25, pp. 40-41). For him, Locke's characterization of Logic as a doctrine of signs is inexplicable and knowledge through such a logic is impossible (Ibid., Reflexion 22, section 19, pp. 454-5). According to Locke, if Ideas and Words are "distinctly weighed and duly considered" as signs, "they would afford us another sort of Logick and Critick, than what we have been hitherto acquainted with" (IV:XII: 4). The logic "hitherto acquainted with" explicates the "object" of

simple apprehension in terms of "form". Hence the Logic of Signs, which presents the "object" as deontologized sign rather than "form" was anti-formalistic.⁶¹

Conclusion:

In his characterization of Idea as "object" Locke deontologizes and deformalizes it. At the same time, he claims that through such an "object" one can attain knowledge at the level of Simple Apprehension. Here he resorts to the theory of signs. For a formalist like Sergeant, a deformed "object" like Idea cannot be the legitimate "object" of knowledge. He acknowledges that Locke is better versed in Mathematics than in Metaphysics, since he thinks that Locke fails to make use of the metaphysical mechanics of "form" to explicate how things get transferred into the mind and there be its "object" in its act of knowing (Solid Philosophy Asserted, The Epistle Dedicatory, p. 5). Locke's characterization of Idea as "object", as mainly found in the Essay, goes against the "formalistic" interpretation that characterizes Sergeant's presentation of Notion. Some of Locke's marginal comments confirm his characterization and help us to better appreciate the anti-formalism entrenched in it (Marginal Comments No. 's 3, 27, 28). Some of the comments indicate explicitly that he does not advocate the explication of the knowing in terms of the "unity of form" between the knower and the known (Marginal Comments No. 's 13, 14, 15, 16, 17,

24). The Idea-Notion controversy brings out Locke's "anti-formalism" and Sergeant's "Formalism".

CHAPTER III--Notes and References

1. J. W. Yolton gives some of the formulations of these requirements - the Aristotelian, Thomistic, Cartesian and those of Arnauld, Malebranche, and Locke (*On Being Present to the Mind: A Sketch for the History of an Idea, Dialogue*, Sept., 1975, pp. 373-88, *Ideas and Knowledge in Seventeenth-Century Philosophy, J.H.I.*, Vol. 13, 1975, No. 2, pp. 145-65). M. Ginsberg gives some of these requirements, when he discusses the Malebranche-Arnauld Controversy (*Dialogues on Metaphysics and on Religion*, London, 1921, pp. 38-42).
2. For this meaning of "Intention" see: John of St. Thomas, *Entia Rationis and Second Intentions*, tr. by J. Glanville, G. D. Hollenhorst & Y. R. Simon, *The New Scholasticism*, Vol. 23, No. 4, Oct. 1949, p. 407; Gilbert Ryle, *Are there Propositions?*, *Proc. Arist. Soc.*, Feb. 1930, pp. 91-111; A. R. Greenberg, *Sir William Hamilton and the Interpretation of Reid's Realism*, *The Modern Schoolman*, Vol. LIV, Nov., 1976, p. 15.
3. Baldwin, J.M., *Dictionary of Philosophy and Psychology*, 1901, Vol. I, pp. 636-7.
Oxford English Dictionary, points 4 & 6 of "object" and points 1 & 2 of "objective" (Vol. IV, pp. 14-15).
 Krauth, C. P., *Vocabulary of Philosophy*, New York, 1878, pp. 354-55, 492-3.
4. There is a similarity between Sergeant's views on Phantasm and the Aristotelian-Thomistic view. When I relate Sergeant to the Aristotelian-Thomistic doctrinal position I do not claim that he strictly followed Aristotle and Aquinas. For instance see Aristotle: *De Anima*, III, chapters 7 & 8 (translated by J. A. Smith and given in McKeon, ed.); Aquinas, T., *In De Anima*, III, Lessons 12 & 13; *Summa Theologica*, Q, 8 art. 7 Cf.

5. Aristotle, Metaphysics, Book IX, 8, 1050b 2, p. 830; Book VII, 10, 1035b 30-35, p. 799; Book (V), 8, 1017b 15-16, p. 761; Book Z (VII), 17, 1041b 7-28, p. 811; Book H (VIII), 2, 1043a 2-26, p. 814 (tr. by W. D. Ross, McKeon ed., 1941).

Cardinal Mercier presents the Aristotelian-Thomistic position on "form" thus:

Form is "an intrinsic perfective principle" (Gen. Met. 113) "Per Formam significatur perfectio uniuscujusque rei" (De Ente et Ess., C 7). "Est actus dans esse rei" (John of St. Thomas, Nat. Phil., I, q. 4, a. 1). (Manual of Modern Scholastic Philosophy, 1962, Vol. II, p. 513)

Back of it lies the overall Aristotelian tenet that form is the cause of being. It is the Form that makes a thing be, no matter in which category. When the form is received immaterially, in cognition, it still exercises its overall function of making the recipient be something. But now it does not give substantial being to the reception nor does it modify or alter him. Cognitive reception of a form makes the recipient be the thing of which it is the form, just as physical reception of a form makes the matter a particular kind of thing, each in its respective order (Aristotle, Cognition of a Way of Being, Can. J. of Phil., Vol. VI, No. 1, March 1976, p. 7).

6. J. Baldwin states that "the real ontological being belongs to objects in so far as they are not mere entia-rationis (beings of reason); but either exists or may exist outside of the mind" (op. cit., p. 362).

Cf. Krauth, C. P., op. cit., p. 363; Burthogge, R., Organum Vetus et Novum, 1678, sections 9 & 10, pp. 12-13.

7. J. W. Yolton, On being Present to the Mind: A Sketch for the History of an Idea, Dialogue, 1975, Sept., p. 380.
8. J. W. Yolton is of the opinion that Sergeant does not succeed in his attempt (Locke and the Way of Ideas, 1968, p. 106).
9. Aaron, R., John Locke, third ed., 1971, p. 173.

10. Ibid.
11. Yolton, J. W., Locke's Unpublished Marginal Replies to John Sergeant, J. H. I., Vol. 12, 1951, pp. 555-58.
12. The determining function of both Substantial and Accidental Forms is stated by Cardinal Mercier thus:

A Substantial Form is one of the constitutive elements of a substance, namely that which makes it a specific being and differentiates it from all other substances (Introd. 5: Cos. 44). "Forma substantialis facit esse simpliciter" (Summa Theol., I, q. 77, a. 6).

An Accidental Form is one determining a substance already constituted (Introd. 5: Gen. Met. 113). "Forma accidentalis non facit esse simpliciter sed esse tale tantum aut aliquo modo se habens" (Summa Theol., I, q. 77, a. 6).

Mercier, C., op. cit., p. 513.

13. Sergeant, J., Solid Philosophy Asserted, Reflexion 19, section 17, p. 388.
14. Kneale and Kneale observe:

In the middle ages, the word Idea was still reserved for a form as that what was understood in the Christian Platonism of St. Augustine, i. e. for an archetypal concept in the mind of God. Thus St. Thomas asks in his Summa Theologica, I. XV. 1, Utrum ideae sint, and replies Necesse est ponere in mente divina ideas. At that time forms which were supposed to exist in Human Minds were described as species or intentiones, and there were debates between philosophers who followed Aristotle in thinking that species intelligibles were all derived by abstraction from species sensibles

and others who followed St. Augustine in thinking that species intelligibiles could be acquired only by Divine illumination. (Kneale and Kneale, op. cit., p. 310)

They observe that such a medieval tendency was prevalent during the 16th and 17th centuries too (Ibid., pp. 310-11). Sergeant's theory of Notions here exhibits the Augustinian-Thomistic view.

Cf. Odegard, D., Essences and Discovery: Plato, Locke and Leibniz, Dialogue, III, 1964-65, p. 220.

15. J. Baldwin notes that in later Scholasticism "formal existence" or "formal being" was associated with the "real" or with the "existent being" as it exists independent and outside the Mind, which may be aware of it (op. cit., p. 638).
 16. The distinction between "formal" and "objective" existence was prevalent during the 17th century. Descartes popularised it. "Formal" and "objective reality" were also used. (Krauth, C. P., op. cit., p. 355).
- Cf. Webster's Dictionary.
Yolton, J. W., Ideas and Knowledge in Seventeenth Century Knowledge, J. Hist. Phil., April 1975, pp. 146-7, 148-53.
17. Aristotle states "Actual knowledge is identical with its object" (De Anima, 431a 1, tr. by J. A. Smith, Mckean, ed., p. 593); "In every case the mind which is actively thinking is the objects which it thinks" (Ibid., 431b 17-18, p. 595).
 18. Aristotle states "Within the Soul the faculties of Knowledge and sensation are potentially these objects, the one what is knowable, the other what is sensible. They must be either the things themselves or their forms. The former alternative is of course impossible; it is not the stone which is present in the soul but its form" (De Anima, 431b 26-30, p. 595).
 19. See footnote 5 for references from Aristotle.

Cf. Owens, J., op. cit., p. 201.
Cardinal Mercier, op. cit. p. 513.

Georgiadis, C., Two Conceptions of substance in Aristotle, New Scholasticism, Vol. 47, 1973, pp. 22-37. The Individual and its Properties in Aristotle, Dialectics and Humanism, No. 4, 1977, p. 157.

Georgiadis notes that the "archological concept of substance according to which substance is the principle (arche) of the individual thing that makes it to be what it is" is "form" (Ibid., p. 158).

20. The intrinsic aspect of accident in Aristotle is noted by C. Georgiadis, Ibid., pp. 166-67.
21. Aristotle states "By a 'sense' is meant what has the power of receiving into itself the sensible forms without the matter. This must be conceived of taking place in the way a piece of wax takes the impress of a signet-ring without the iron or gold" (De Anima, II, 424a 18-20, tr. by J. A. Smith, Mckeon, ed., p. 580).

Aquinas, Summa Theologica, Q. 84, Art. 1, as cited by Yolton, J. W., Locke's Unpublished Marginal Replies..., J. H. I., Vol. 12, 1951, pp. 551-2.

22. Yolton, J. W., Ibid., p. 552.
23. Baldwin, J., op. cit., p. 637.
24. Yolton, J. W., op. cit., p. 553.
25. A Philosophick Essay concerning Ideas - According to Dr. Sherlock's Principles wherein his Notion of them is stated and his Reasonings thereupon Examined - In a Letter to a Friend. Printed and Sold by B. Bragg in Ave-Mary Lane near Ludgate, London, 1705, p. 4.

This Essay is of use to this dissertation for the following reasons:-

1. It is the earliest literature that I am aware of deals with the views concerning Ideas during the Seventeenth Century.
2. It reveals how controversial the topic of Ideas was during this period (see the passage cited in the body of this dissertation).

3. It is a critical exposition of the views which were prevalent during this period. The Anonymous Author indicates that there are two defects in most of the theories about Ideas prevalent then - the tendency to describe Ideas in terms of Matter. According to him what pertains to Mind should not be characterized in terms of Matter (as "seeds of Thought", Impressions and Images), and the defect of not clearly defining the nature of "Ideas" (p. 5).
4. The Author attempts to present an account of Ideas free of these defects; he cites Locke as one who subscribed to the account presented in the Essay (p. 8).

We shall note in due course the points of similarities between the said presentation and Locke's account of Ideas.

26. Locke's reply to J. Norris, *The Locke Newsletter*; Cf. Draft, B., section 3, p. 19 (Rand's ed. 1931).
27. Krauth, C. P. *op. cit.*, p. 225. Here Krauth notes the use of "idea" to "signify all mental representations" after Descartes.

The following note the comprehensive use of "Idea" by Locke:

Aaron, R., *op. cit.*, pp. 99-100.

Alexander, S., *Locke*, Kennikat Press, N. Y. London, 1908, pp. 28-9.

Yolton, J. W., *Ideas and Knowledge in the Seventeenth Century Philosophy, J. H. I.*, Vol. 13, April 1975, No. 2, p. 146 footnote 2.

28. Norris, J., *Cursory Reflexions...*, 1690; p. 9.
29. Sergeant presents his criticisms of Locke's account of Memory immediately after emphasizing that Locke should have differentiated the "object" from the "act" of perceiving it. According to Sergeant the "object" is the "thing" (*Solid Philosophy Asserted*, Reflexion 5, section 1, p. 142). Such a "thing", for him, cannot decay or corrupt (*Ibid.*).
30. Sergeant, J., *Ibid.*, p. 144.
31. Anonymous Writer, *op. cit.*, Corollary III, pp. 11-14.

- 32. Ibid. , Corollary I, p. 8.
- 33. Ibid. , Corollary I & II, pp. 9 & 10.
- 34. Ibid. , Corollary I, p. 8.
- 35. Yolton, J. W. , Locke's Concept of Experience, in Locke and Berkeley, ed. by Armstrong, D. M. & Martin, C. B. , 1968, p. 43.
- 36. Arnauld, A. Des Vraies et Fausses Ideas, 1683, pp. 155-88, 198-207.

As Yolton notes "What is important for Arnauld is that 'Idea' and 'perception' do not mark two different entities, they refer to only one modification of the Mind" (Ideas and Knowledge in Seventeenth Century Philosophy, 1975, pp. 153-54).

- 37. Asplin, G. , Idea and Perception in Locke's Essay, in Locke on Human Understanding, ed. I. C. Tipton, Oxford, 1977, pp. 50-51.
- 38. Locke, J. , An Examination of Malebranche, Works, Vol. IX, sections 8, 15, 18, 42, 50, pp. 215; 218, 220, 239, 250.
- Cf. Webb, T. E. , The Intellectualism of Locke, 1857, reprinted 1973, pp. 20-38.
- Greenlee, D. , Locke's Idea of Idea, in Locke on Human Understanding, ed. I. C. Tipton, 1977, pp. 44-7.
- Yolton, J. W. , The Locke Reader, Cambridge, 1977, Chapter 2, section entitled 'Two Concepts of Ideas', pp. 109-111.

39. J. W. Yolton states:

"Perception" was Locke's term for awareness. It is the first faculty and the first act of the Mind exercised about its ideas. 'Idea', of course is a conscious mental content. Despite his remark in II, 2 that Ideas are nothing 'but actual perceptions in the mind', his more careful statements keep act and content distinct. Without the act there can be no content, and, conversely, without a content there can be no act.

('Locke's Concept of Experience' in Locke and Berkeley - A collection of Critical Essays, ed. by Armstrong and Martin, 1968, pp. 42-43)

40. The terms "ontological entity" and "thing" here are interpreted as signifying what can exist independent of the mind which may or may not be aware of it. See: Baldwin, J., op. cit., pp. 637-38.
41. Norris, J., op. cit., pp. 22-23.
42. Locke's First Reply to John Norris as reprinted in The Locke Newsletter, No. 2, pp. 7-11.
43. Even as early as in the Abstract of the Essay, the French version of which was published by Le Clerc (1688), Locke insists that Ideas and Qualities are not to be confused with one another; he writes:

Whatsoever immediate object, whatsoever perception, be in the Mind when it thinks, that I call Idea; and the power to produce any Idea in the Mind, I call Quality of the Subject wherein that power is. Thus whiteness, coldness, roundness, as they are sensations or perceptions in the Understanding, I call Ideas; as they are in a snow-ball, which has the power to produce these Ideas in the Understanding, I call them Qualities. (P. King in The Life and Letters of John Locke, 1884, reprinted 1972, p. 368)

44. J. D. Mabbott confuses Ideas with qualities when he discusses Complex Ideas. (John Locke, 1973, pp. 19, 46). J. W. Yolton makes this observation in his review of J. D. Mabbott's John Locke in Can. J. of Phil., Vol. IV, No. 2, pp. 334-36.
45. See C. B. Martin's introduction (p. 4) to Locke and Berkeley, ed. by Armstrong, D. M. & Martin, C. B., 1968.
46. Yolton, J. W., Ideas and Knowledge in the Seventeenth Century Philosophy; J. H. I., 1975, p. 146.

47. See J. W. Yolton's "Ideas and Knowledge in the Seventeenth Century..." for instances where Arnauld in criticizing Malebranche, distinguishes between "formal" and "objective" existence (J. H. I., pp. 153-157).
48. Locke, J., The Epistle to the Reader, (27), p. 12 - (14), p. 14 - addition to the Fourth edition of the Essay.
49. The cognitive interpretation Locke gives to "presence in the mind" is another instance where his account is free from the defect which the Anonymous Writer (1705) finds in the theories of Ideas prevalent then - that of characterizing Ideas in terms appropriate to describe what pertains to Matter (A Philosophick Essay..., p. 5). Locke's "cognitive presence" is discussed by Yolton (Ideas and Knowledge in the Seventeenth Century..., pp. 148-161; On being present to the Mind..., pp. 374-389).
50. Locke cites Phantasm when he defines Idea (I:1:8). But that is indicative of the comprehensiveness which he wants to give "Idea" and not make it into a "Corporeal thing".
51. Locke's theory of Ideas as signs has received attention among Lockean Scholars.

J. Gibson notices that Locke employs Ideas as Signs. He also notes that Locke hoped to "afford us another sort of Logic and Critic than what we have been hitherto acquainted with". He states that he would give a "fuller consideration later on" of Locke's theory of Ideas as Signs, but he never does so (Locke's theory of Knowledge and its Historical Relations, Cambridge, 1917, pp. 12-13).

G. Ryle merely recognizes Locke's use of Ideas as Signs (John Locke on the Human Understanding as in Locke and Berkeley, ed. by Martin, C. B. and Armstrong, D. M., 1968, pp. 18-19).

J. W. Yolton has done considerable research on Locke's theory of Ideas as Signs (see: John Locke and the Seventeenth Century Logic of Ideas, J. H. I., Vol. 16, 1955; Locke and the Compass of Human Understanding, Cambridge, 1970, Introduction and Chapter IX entitled 'Signs and Significations'; Ideas and Knowledge in Seventeenth-Century Philosophy, J. H. I., Vol. XIII, April 1975; On Being Present to the Mind..., Dialogue, Sept. 1975; The Locke Reader, Cambridge, 1977, Part II, 'The Doctrine of Signs', pp. 109-168).

R. L. Armstrong discusses the anti-metaphysical import of Locke's Theory of Ideas as Signs. According to Armstrong the Metaphysics that Locke attacks is best represented by Sergeant (John Locke's 'Doctrine of Signs': A New Metaphysics, J.H.I., Vol. 26, 1965).

52. Locke, J., Abstract of the Essay as found in P. King's Life and Letters of John Locke, p. 393.
53. Yolton notes Descartes's use of the cognitive contents of perception as signs. He cites from Descartes's Le Monde, Ch. I, pp. 315-23 and Le Dioptrique, I, pp. 684-85, F. Alquié's edition: Oeuvres philosophiques, Vol. 1963, (Ideas and Knowledge in Seventeenth-Century Philosophy, J. Hist. Phil., April 1975, p. 163 footnote).
54. Yolton, J. W., Locke and the Compass of Human Understanding, Cambridge, 1970, p. 205.
55. Veatch distinguishes between "Instrumental" and "formal" Signs. He states:

By an Instrumental sign is meant one which signifies its significatum to a knowing power only by being first apprehended itself. That is to say, one must first apprehend the sign and only then does one apprehend the significatum. Taking smoke as a sign of fire, for instance, it is obvious that through this sign relationship one can become aware of the fire only by first becoming aware of the smoke. Or again, an artificial sign such as 'dog', this sign will never represent its significatum to a knowing power unless the sign first be apprehended itself. . . or one can only come to know what the guide-post on the road means or signifies by first becoming aware of the guide-post.

(Veatch, H. B., Intentional Logic, 1970, p. 13)

He differentiates "formal signs" from the above when he continues thus:

Now suppose we contrast with signs of this sort, a sign of the order of a concept or a

proposition, or an argument. Thus, in order to know what a concept signifies do we first have to know the concept? Notice that we are not here speaking of the words or artificial signs by which the concept is expressed, but of the concept itself. As for this concept itself, it can hardly be said that we are obliged to know it, as such and as a concept before we come to know what it is a concept of. (Ibid., p. 13)

Locke's ideas may be compared to Veatch's "Formal Signs".

56. Yolton, J. W., On Being Present to the Mind... , Dialogue, September 1975, p. 386.
57. Ibid., pp. 382-384.
58. As Yolton observes:

In equating perceiving with having ideas, and in glossing "present to the mind" as "understood by the mind", Arnauld and Locke were de-ontologizing the way of ideas. To de-ontologize in this way is to psychologize: they took themselves to be describing awareness and how it comes about via understanding and meaning. The psychology of awareness was linked with theory of signs, especially by Locke. (Ibid., p. 384)

He further states:

Arnauld (and Locke following Arnauld) tried to give an analysis of knowledge and perception without the spatial metaphors, an analysis which would capture some of the psychological and cognitive details. (Ibid., p. 383)

59. Ibid., p. 384.
60. It may appear that in adopting such a strategy Locke also is making the mistake of characterizing what pertains to the

Mind in terms of what pertains to Matter (Anonymous Author, A Philosophick Essay... , 1703, p. 5). But, it has to be noted that Locke is here using terms of "sight" only analogically and not literally.

61. Armstrong notes that:

The "other sort of Logic or critic" is, I submit, the sort of traditional metaphysics defended by John Sergeant and it should be clear that Locke intends his doctrine of Signs to replace it.

(John Locke's 'Doctrine of Signs': A New Metaphysics, J. H. I., 1965, p. 379)

The "Metaphysics" which Armstrong criticizes as Locke's target interestingly contains many of the features of "formalism" that are discussed in this dissertation.

CHAPTER IV

LOCKE'S ANTI-FORMALISM AT THE PROPOSITIONAL LEVEL

4:1 Introduction:

The controversy between Locke and Sergeant over Identical Propositions reveals their respective "anti-formalistic" and "formalistic" positions at the propositional level. Their controversy is foreshadowed by that between Sergeant and John Tillotson. In a series of polemical exchanges with Tillotson, Sergeant made explicit the role he assigned Identical Propositions. Locke had in his possession most of Tillotson's works,¹ commended his clarity of expression,² and had frequent consultations with him.³ Locke owned Method to Arrive at Satisfaction in Religion, where Sergeant uses Identical Propositions to establish some of his theological claims.⁴ It is most probable that Locke was aware of the Sergeant-Tillotson controversy.

Sergeant continued the controversy over Identical Propositions with the Idealists, and considered Locke as one of them.⁵ His stand on Identical Propositions is first formulated in his polemical exchanges with Tillotson, particularly in A letter of Thanks from the Author of Sure Footing to his Answerer, Mr. J. T. (1666), The Method to Arrive

at Satisfaction in Religion (1671), Reason against Raillery (1671), and Error Non-Plust; or Dr. Stillingfleet shown to be the Man of No Principles (1673). In Method to Science (1698) he presents his views on Identical Propositions in an elaborate manner within a philosophical context. His criticisms of the views of the Idealists, in particular those of Locke, are given in Non-Ultra or A Letter to a Learned Cartesian Settling the Rule of Truth, and First Principles Upon their Deepest Grounds (1698). His response to Locke's criticisms of Identical Propositions is also given in Solid Philosophy Asserted (1697). He confirms his views on Identical Propositions in Transnatural Philosophy... (1700).

Locke's stand on Identical Propositions is found in the chapters entitled, "Of Trifling Propositions" (IV:VIII), "Of Maxims" (IV:VII), and "Of the Improvement of our Knowledge" (IV:XII) in the Essay. In his correspondence with Stillingfleet, Locke clarifies his position. The marginal comments in Solid Philosophy Asserted also confirm and in some cases anticipate his additions to the fourth edition of the Essay, where he further elaborates his views.

4:2 Sergeant's Formalism at the Propositional Level:

Sergeant adopts the subject-copula-predicate analysis of propositional structure. He states:

I meant no more by the word (Proposition) but a Speech that affirms or denies: I added that

therefore, such speeches if Affirmative (and the same *Mutatis Mutandis* is to be said of negative ones), must consist of something that is affirmed, something of which it is affirmed, and some word which affirms or expresses the affirmation, which three parts of a proposition, Logicians agree to call Predicate, Subject and Copula.
 (Non-Ultra, section 4, p. 595)

Earlier in Method to Science he makes it clear that he considers the Proposition as a mental entity but verbally expressible. The subject-copula-predicate structure pertains to the proposition whether it be verbally expressed or not. He claims:

Tho' even taking them as in our Understanding, they have, even there, their Subject, Copula, and Predicate, as well as when they are pronounced or put in Words...
 (Method to Science, Book II, Lesson 1, p. 117)

For him, propositions may be true or false. As one interested in constructing a method to knowledge, he is interested only in true propositions. False propositions may be well-formed, but they are useless for knowledge purposes. He cites the School Boy's construction of the Latin sentence meaning "Virtue and Vice are both laudable". Sergeant points out that such a sentence may be grammatically proper but, since it is false, it is useless for knowledge purposes (Method to Science, Book II, Lesson 1, p. 113). Hence, he needs a way to differentiate true from false propositions (Ibid.); a criterion of truth.

He stresses the importance of distinguishing false from true

propositions, and of the necessity of the truth of First Principles, in his Method to Science thus:

Since, as was said, Judgments or Propositions may be True or False, and in laying the Method of Science we can have no occasion to speak of False Judgments, but in order to the avoiding of them, which is easily done, if we settle the knowledge of the true one; hence, that which concerns us, is to treat of True Judgments or Truths; and, in the first place, of those Propositions or Judgments that are the First Truths which we call the First Principles. Again, since all propositions are either evident or inevident, and inevident or obscure ones cannot avail us in our quest of Science, it follows, that only evident propositions are to be treated of, or made use of those who aim at Scientifical knowledge. Wherefore, since all propositions or judgments that are evident must be self-evident or made evident, which is done by way of proof, and these latter must depend on the former for their evidence, we are therefore to begin with the former which are self-evident.

(Method to Science, Book-II, Lesson 11, p. 130)

Since Sergeant works within a context where deduction is taken to be the appropriate method to knowledge, not only has he to establish a satisfactory means to differentiate true from false propositions but also, by that means, guarantee the truth of first principles. In this connection, he employs the term "Rule of Truth" or "Ratio-Cognoscendi-Veritatem" or "Rule of Knowing Truths" (Non-Ultra sections 6-19, 30, 37, 38, 48, pp. 596-623). He assigns two roles to it - as criterion or "test" of truth (ibid., section 6, p. 596) and as First Principle or Maxim or "First Rule of Knowing" or "First Truth" or "Rule of Knowing all Truths" (ibid., section XI,

p. 599; section 10, p. 598; section 18, p. 603). There is an analogy between the way he employs "Rule of Truth" and "Rule of Faith". In his discussion of "satisfaction in religion" (Method to Arrive at Satisfaction in Religion), Sergeant states:

Wherefore, he who sincerely aims at Satisfaction in Religion ought first of all find out and establish some assured means or Rule by which he may be secure which is True Faith: For till this be done he cannot be secure either of Scripture, Church, Council or Fathers... Hence the necessity for the Rule of Faith.
(p. 243)

He assigns two roles to the "Rule of Faith":

1. It provides the "assured means" by which one may differentiate true from false doctrine. According to him the "Rule of Faith" must be the means to assure us infallibly what Christ taught" (Ibid. , pp. 243-245).
2. It acts as the First Principle providing the necessary foundation for Christian Faith. He states:

Since all superstructures must needs be weak whose Foundation is not surely laid; He who desires to be satisfied in Religion ought to begin with searching out and establishing the ground on which Religion is built, that is the First Principle into which several points of faith are resolved and on which their certainty depends... Hence, the necessity for the Rule of Faith.
(Ibid. , pp. 241-242).

Just as the "Rule of Faith" acts both as "criterion of faith" and as "first principle", Sergeant takes the "Rule of Truth" both as

"criterion of truth" and as "first principle". But, as we shall see subsequently, a "first principle" has to function also as a "criterion of truth", in addition to meeting certain other requirements. X may be a "criterion of truth" without functioning as a "first principle" but, if X is a "first principle" it functions as a "criterion for truth" as well. He claims that the Identical Proposition is the legitimate "Rule of Truth" both in its role as "criterion of truth" and as "first principle". Locke's controversy with Sergeant centers around this question.

Sergeant classifies Identical Propositions into (a) Materially and (b) Formally Identical Propositions.

A Materially Identical Proposition is one in which the Subject and Predicate Notions are of the same thing but as Notions they are not the same (Reason against Raillery, section 3, p. 11). In all Materially Identical Propositions "what corresponds to both their notions must be found in the same thing" (Ibid., section 4, p. 14). In such a proposition, "what is meant by the two terms, exists in the same thing" (Method to Science, Book II, Lesson 11, p. 137). "A Stone is hard" and "Socrates is Wise" are some of the examples he cites. Sergeant characterizes Notions in terms of form (Chapter III). In such a context, in a Materially Identical Proposition, the Notions are "forms" of things "spiritually existing in our Understanding" but, as "forms", they are not the same. For instance,

"A stone is hard" is a Materially Identical Proposition for it means: It is the same thing which is "Stone" (or which is informed by "stone-ness") and which is "hard" (or, which is informed by "hardness"), (Ibid., p. 137). "Socrates is Wise" is materially identical, for "that which answers to 'Socrates' and 'wisdom' are found in the same thing", though they are themselves not identical to one another (Solid Philosophy Asserted, Reflexion 17, section 4, p. 320). Sergeant's description here resembles the Thomistic account of Materially Identical Propositions. ⁶

A Formally Identical Proposition is one in which the Subject and Predicate Notions are not only of the same thing but also as Notions they are the same, i. e. they are the same forms of the same thing (Method to Science, Book II, Lesson 11, pp. 131-136; Reason against Raillery, Discourse II, section 9, p. 14). Such a proposition is also called "perfectly", "supremely", "manifestly", "exactly" or "directly" identical (Method to Arrive at Satisfaction in Religion, pp. 259-60; Method to Science, Book II, Lesson 11, pp. 131-149; Solid Philosophy Asserted, Reflexions 17 & 19; Reason against Raillery, Discourses II & III; Non-Ultra...). It is ideally formulated when the same manner of expression is used. Then it is called "formally identical in expression" or "identical in every regard". "A Tree is a Tree", "Man is Man", "Yellow is Yellow", "Existence is Existence", "Self-Existence is Self-Existence" are some examples

cited (ibid.). But, even when expressions differ, there can be formal identity, as in "The Whole is greater than a Part". This is formally identical in sense. It may be reduced to one which is formally identical in expression as "That which is more than a Part is more than a Part" (Reason against Raillery, Discourse III, pp. 23-24; Non-Ultra, section 24, p. 607). Definitional Propositions, like "Man is a Rational Creature" are also formally identical in sense though not in expression (Method to Science, Book II, Lesson 11, p. 132). For Sergeant, a definition is of a thing and brings out its essence or essential form, which is that quality or set of qualities that makes a thing what it is from the first instance of its being and is inseparable from it. He adopts the genus-et-differentia mode of definition (Method to Science, Book II, Lesson 11, pp. 131-32; Solid Philosophy Asserted, Reflexion 19, section 9, pp. 371-72). In a definition like "Man is a Rational Creature" not only what is informed by "humanity" and "rationality cum creature-hood" is the same but also what is called "humanity" is identical with what is called "rationality cum creature-hood". The latter stands for the essence or essential form and differs from the former only in expression. According to Sergeant, such a definitional proposition may be converted into "Man is Man", which is formally identical in expression too (Method to Science, Book II, Lesson 11, p. 132). The latter is free from equivocation and this is one reason why he

prefers the latter (Ibid.).

On the basis of the extension of the subject term, Formally Identical Propositions may be further classified into Universal and Particular Identicals (Solid Philosophy Asserted, Reflexion 19, pp. 354-68). "Everything is what it is" or "Existence is Existence" is for him a Formally Identical Universal Proposition because of the extension of "Existence" or "Everything that is" (Ibid.). On the other hand, "Yellow is Yellow", "A Tree is a Tree" or "Man is Man" are Formally Identical Particular Propositions because the notions "tree", "yellow" and "Man" fall within the extension of "existence" or "everything that is". Particular Identicals are instances of Universal Identicals (Ibid.). "Self-existence is Self-existence" is a transcendental Formally Identical Proposition. It refers to God's existence (Method to Science, Book II, Lesson 11, Corollary III, pp. 137-38, pp. 145-46; Reason against Rallery, Discourse III, section 21, p. 41).

But in all Formally Identical Propositions (Particular, Universal and Transcendental), the pattern of relationship between the Subject and Predicate Notions is the same. It is one in which the Notions are not only of the same thing but also, as Notions, they are identical to one another. In a Materially Identical Proposition there is a possibility of having an instance of one notion without thereby having an instance of the other. One may have a notion of

"humanity" without thereby having an instance of "whiteness" and vice-versa, as in "Man is White". These notions are in Sergeant's terminology "disparate forms". But, in a Formally Identical Proposition, since the notions are themselves identical to one another, there is no possibility of having an instance of one without thereby having an instance of the other notion, unless one is not sure of the meaning of the words he employs to express the notions concerned. For instance, if one does not know the meaning of either "Man" or "rational creature", there is a possibility of having an instance of one of these notions without thereby having an instance of the other. But, when one knows the meanings of the words which express these notions, there is no such possibility. In a Proposition which is formally identical in expression, such as "Man is Man", when both the words (i. e. "Man" as subject and "Man" as predicate) are employed in the same sense, there is absolutely no possibility of having an instance of one without thereby having an instance of the other notion. In this dissertation, the pattern of relationship between the Notions in a Formally Identical Proposition is called its "formal schema" and is symbolized as "N = N", "N" standing for Notion and "=" standing for "Formal Identity". The "formal schema" of a Materially Identical Proposition is symbolized as "N - N", "-" standing for "Material Identity".

The other features of these types of propositions and the way

they are inter-related become clearer, when we examine Sergeant's claims concerning them.

For Sergeant, Formally Identical Proposition is the legitimate "Rule of Truth" both as "Criterion" or "Test" of truth and as "First Principle".

Formally Identical Proposition as Criterion of Truth:

Sergeant acknowledges that truth and falsity properly belong to propositions (Non-Ultra..., section 4, p. 595). He also acknowledges that a true proposition, unlike a false one, corresponds with reality; that there is a "conformity" between a true proposition and the state of affairs to which it refers (Method to Science, Book II, Lesson 11, Corollary III, pp. 138-39; Book III, Lesson III, section 16, p. 258; Reason Against Raillery, Discourse II, sections III & IX, pp. 10-11, 14-15). He states:

I know it will run in the Objecter's Fancy, that we can connect Notions which our selves have coined; but he may easily correct these Misconceits, by Reflecting that this Proposition is True; and that truth must not be grounded on our Atery Fancies, but on the Solid Nature of the Thing to which it is a Conformity. I know he will Fancy that the Copula (IS) has an office of merely connecting without any Reference to the Existence of the thing, which is its proper signification;... we cannot with truth conjoyn Notions in our Minds that are not conjoynd before hand in the Thing; and that when Notions are of Positive Being, or such as are not Chimerical and Contradictory, the Copula (IS) must signify Existence, and does but say in our Mind what is in the Thing if the saying be true.

(Method to Science, Book II, Lesson II, p. 140)

The Copula in a true proposition not only predicates but also asserts that the relation really is in the world outside.⁷ For him, a Materially Identical Proposition is capable of being true. It is true when, in some way, the subject and predicate notions are of the same thing in reality, though not the same as notions. For instance, if the proposition "Socrates is Wise" is true, it means that there is in reality something which is both "Socrates" and "Wise" and that the relation between what is called "Socrates" and what is called "Wise" really is as indicated by the copula in the proposition. There is a correspondence between the true proposition and the state of affairs to which it refers. But, according to Sergeant, there is a deeper level of investigation which is open to the "Acute Logician" through the employment of Artificial Logic. Sergeant is preoccupied with analyzing the "criterion of truth" at this level. He presents the Formally Identical Proposition as the "criterion of truth" which underlies the characterization of truth in terms of correspondence and does not refute it; the "correspondence" criterion of truth presupposes the "identity" criterion.

According to him, a criterion of truth must be objective and be able to show that it itself is true without the aid of any other criterion.

According to the "objectivity" requirement, what makes a proposition true must not be a subjective factor. Sergeant

acknowledges that when a Proposition is known to be true, the act that is involved in knowing the truth of the proposition may be one of clear and distinct perception. But he insists that the truth of the proposition must not be placed in the perceptual act, which is a subjective factor. In his view, the Cartesian theory of Truth presents such a subjective criterion of truth. One of the reasons for Sergeant's publishing Non-Ultra... is to attack the theory of truth of the "Ideists" (Non-Ultra... , section 6, p. 596). Locke is identified as one of them. On the assumption that "one cannot see or know what is not" (Ibid.), Sergeant claims that "clear and distinct perception" which pertains to the act cannot take place until and unless something other than the act "determines and specifies" it. This is part of his overall thesis that what specifies and determines an act has to be independent of it. He is convinced that the Ideists subjectify the criterion of truth when they propound "clear and distinct perception". He asks:

The only question is whether this be a Rule of Truth. In order to the clearing of which, I ask: Was it True before you saw Clearly and Distinctly it was true? Or, Did it become True by your seeing it (as you phrase it) Clearly and Distinctly to be True? If it were before you thus saw it to be True; then 'tis unavoidable, there was Another Rule, or Reason, for that Truth which anteceded your seeing it to be such; and therefore, your Clear and Distinct Perception could not be the Rule of knowing that Truth, being Subsequent to it. And, if you say, it became True by your Seeing it Clearly and Distinctly, then it was

not True before; and then, you saw that to be True, which was not True; that is, you saw it be otherwise, than in Effect and Reality, it was. And, consequently, that Pretended Sight or Perception is so far from being a Rule of Truth, that it is a palpable Error and Mistake; and therefore, all judgments issuing from it must be False. Which, instead of constituting it a Rule of Truth, would make it, indeed a Rule of Falsehood.

(Ibid., section 7, pp. 597-8)

In the section which follows he makes explicit his thesis that the "object" which "specifies and determines" the "act" has to be separate from the "act" (Ibid., section 8, p. 598). According to him, the placing of the "criterion of truth" in the act also indicates a confusion between what makes a proposition true and the manner of knowing its truth. He states:

In constituting this Perception to be your Rule, you begin at the wrong end; for, seeing this Perception is an Act, and that the Object specifies every Act. And makes it such as it is; and, by being in it self True, it thence makes our Judgment (when we rightly conceive it) to be True also. This Distinction, then, in our present case, is altogether Frivolous; and the alledging it, Preposterous. To Perceive, is an Act of Understanding, and the same as to know; and to Perceive Clearly and Distinctly is the same as to Know Perfectly. Whence follows, that to say, (I know that to be true, which I Clearly and Distinctly Perceive to be so,) is the very self-same sense as to say (What I know to be True, I know to be True;) or, (I know what I know;) which is a good Confident saying; and, moreover True too. But, nothing can be more ridiculous, than to make Knowing the Rule of Knowing or a Rule to make a thing true to us. To say (A thing is, because it is) or (I know it because I know;) is more like

Woman's Reason, when she is fixed and wilful;
 than a Rational Man's or a Philosopher's.
 (Non-Ultra . . . , section 38, p. 616)

Sergeant claims that he differentiates the "Rule of Knowing Truths" from the manner of knowing truths. For him, knowing depends on and is subsequent to the "rule"; the "rule of knowing" pertains to the "object" while "knowing the rule" pertains to the "act". According to him, the Idealists confuse these two and present "clear and distinct" perception as the "Rule of Knowing" instead of taking it as a manner of knowing. Sergeant claims that his presentation of the "Rule of Truth" is free from such confusion.

To guarantee the "objectivity" of the "rule of knowing" and free it from subjective factors (i. e. those pertaining to the act of perceiving or knowing the truth), Sergeant makes it reside in something which is separated from the act. Here he resorts to a religio-metaphysical explanation.⁸ He turns to the "Metaphysical Verity" of things, whereby he means the truth that things are what they are. Metaphysical Verity is descriptive of an ontological state of affairs; it is about things. But, since Sergeant considers Notions as "things themselves", he finds it proper to characterize them in terms of Metaphysical Verity. He connects this aspect of Notions ultimately to God, asserting that they "partake" their "verity" from the "Ideas in the Divine Understanding from which they inerringly flow, and which are essentially unchangeable" (Method to Science, Book I,

Lesson 1, p. 5). He makes the "God of Truth" the "sole author of the truth in us" (ibid.). He states:

The Ideas, or Essences of each Piece of the World's Fabrick were in the Mind of the Divine Architect, ere they were made. Again; since he did not make them by Hand of some Bungling Journey-Man, who might, perhaps, deviate from his Pattern or Model; but immediately by his own Infinite Wisdom and Power, it cannot be doubted but that each Part of the Creation was framed exactly according to the Archetypes of those Unchangeable Ideas; and therefore, was perfectly Established in its respective Essence, or Nature, as those Original Ideas were, that is, they were fix'd to be what they are, by an Inerrable Hand, in which consists that which we call their Metaphysical Verity.
(Non-Ultra..., section 10, p. 599)

In tracing the essences of things to Ideas in God's Mind, Sergeant is more Thomistic than Aristotelian. Things are what they are because God fixed them to be so. But such a state of affairs in itself is of no use to help one determine the truth of propositions. The Metaphysical Verity of things has to be translated into something that can be related to propositions, since

... all our Discourses are made up of Propositions; nor can a Rule or Principle be expressed, but by such Forms of Speech... Hence, we become forced to put the Nature of the Thing, or its Metaphysical Verity, into such a Frame of Speaking; so to fit it for Discourse: which 'tis Impossible to do, but that Speech, or Proposition, whether we will or no, must be an Identical one.

(Non-Ultra..., section 13, p. 601; Cf. Solid Philosophy Asserted, Reflexion 18, section 11, p. 355)

Sergeant claims that the Identical Proposition translates a

theologically justified ontological state of affairs - that things are what they are fixed by Divine Providence - into a propositional form so that it could be related to propositions in discourse (Cf. Reason against Raillery, Discourse II, section I, p. 16). Formally Identical Proposition expresses the Metaphysical Verity of things. The transcendental Identical Proposition, "I am what I am" or "Self-existence is Self-existence" expresses the verity of God's existence; the Universal Identical Proposition, "Existence is Existence" expresses the Metaphysical Verity of things, which are created by God, in a general manner; the Particular Identicals, like "Man is Man", or "A Tree is a Tree" express the metaphysical verity of instances of things. The Formally Identical Proposition, as the expression of metaphysical verity receives an epistemological importance. It is able to meet the "objectivity" requirement of the "criterion of truth" and thus to be free from Cartesian subjectivism.

In Sergeant's view, the "Rule of Knowing Truths" must show in the first instance that it itself is true. If not, another rule will be required and this may lead to an infinite regress (Non-Ultra..., section 7, p. 597). He claims that the Formally Identical Proposition, whether it be Transcendental, Universal or Particular, is able to show its own truth without the aid of anything extraneous to it because of the "formal schema" that it manifests. He claims that Formally Identical Propositions,

have all the requisites that can be imagined for a Ratio-Cognoscendi-Veritatem or a Rule of Truth, since they self-evidently manifest to us their own truth and by it give us light to know all others.

(Ibid. , section 9, p. 598)

He classifies true propositions into those which are self-evident and those which are made-evident (Method to Science, Book II, Lesson II, p. 130). Self-evident ones are capable of showing their own truth, and their capacity is dependent on the "form" they manifest - " $N = N$ ".

In his Letter of Thanks (1666) to Tillotson in response to the latter's criticisms of Identical Propositions, Sergeant gives his first account of the reasons for his claim that Identical Propositions are First Principles (sections 5-7, pp. 9-14). For Sergeant, the First Principle has to function in the first instance, as a "criterion of truth", fulfilling the requirements stipulated for the latter. We will deal with this aspect, when we discuss the role of Formally-Identical Propositions as First Principles in the subsequent sub-section. Here we may note that he asserts that First Principles have to be self-evident and claims the Formally Identical Propositions meet this requirement on account of the "formal schema" (" $N = N$ ") they manifest. He states:

Wherefore, since they cannot be evidenced by any thing out of themselves and yet must be Evident, else nothing could be evident by them, it follows they must be Evident of themselves or Self-Evident. And in what consists this Self-Evidence?

merely in this that no medium, middle Term or Argument can come between the Notions of their Subject and Predicate; which devolves finally into this, that the Subject and Predicate are perfectly the same notion (sic.).

(Ibid., section 5, p. 11)

He repeatedly emphasizes the importance of the "formal schema" in enabling the propositions manifesting it capable of showing their own truth without the aid of anything "out of themselves" (cf. Reason against Raillery, Discourse II, section 3, p. 11; section 8, p. 14; Non-Ultra..., section 19, p. 604; section 48, p. 622).

According to him,

The more remote the terms of a proposition are from formal identity, the less evident they are, and the more proof they require; as also they still grow nearer and nearer to evidence, according to the degree of their approach toward the said Identity.

(Reason against Raillery, Discourse II, section 8, p. 14)

For Sergeant, self-evident propositions are expressed only through the "formal schema" of formal identity (Solid Philosophy Asserted, Reflexion 17, section 9, p. 325).

There cannot be greater clearness nor evidence than "self-evidence" (Non-Ultra..., section 6, p. 597). Such self-evidence is associated with Intuition. According to him, Intuition guarantees truth and the intuitive act is "clear and distinct", but he does not place the truth obtained thereby on the clarity or distinctness of the act. For him, any act has to be specified and determined by the

"object". The "formal schema" of the Formally Identical Proposition expressing Metaphysical Verity determines and specifies the act of Intuition. Sergeant is unable to understand Locke when he gives such an important place to Intuition and thinks that it is involved in every step of Demonstration (IV:II:1, 7), but is so reluctant to use Identical Propositions (Solid Philosophy Asserted, Reflexion 17, section 9, p. 325). Sergeant claims that, since self-evidence can be expressed only through Identical Propositions, and since Intuition is determined and specified only through the "formal schema" that the Formally Identical Propositions manifest, it is impossible to give a satisfactory account of Intuition and Self-evidence without introducing Identical Propositions (Solid Philosophy Asserted, Reflexion 17, section 7, p. 323; section 9, pp. 325-6). According to him, the "contradiction is formally and intrinsically the greatest or first of falsehoods". He finds that it "is impossible to assign any truth opposite to a contradiction but an Identical Proposition". He concludes that it has to be "the greatest and the first truth" (Reason against Raillery, Discourse II, section 5, p. 12).

The Formally Identical Proposition, on account of the "formal schema" ("N = N") it manifests, is able to fulfill both the requirements Sergeant stipulates for the "criterion of truth"; it meets the "objectivity" requirement because it expresses the metaphysical

verity of things; it is able to show that it itself is true on account of its "formal identity". Hence, it is the legitimate "Rule of Truth" in its role as "criterion of truth".

This leads Sergeant to make a sweeping claim that every true proposition is reducible to a Formally Identical Proposition and every false proposition to a Contradiction (Method to Science, Book III, Lessons 3 & 4; Reason against Raillery, Discourses-II & III; Letter to Locke of May 10, 1696). But he does not expect everyone to reduce every proposition to an Identity. The correspondence criterion is sufficient for differentiating true from false propositions in most cases. But to get at the "deepest grounds" of the truth of propositions one has to resort to the "Identity" criterion. According to him, the Acute and Speculative Logician is sensitive to the "deepest grounds" of their truth - i. e. can be reduced to an "identity". In a Formally Identical Proposition, which manifests the "identity" ("N = N"), the ground of its truth is explicit. But any other proposition which is capable of truth can be reduced to a Formally Identical Proposition. When this is effected, the "deepest grounds" of the truth of the proposition which is reduced become known (Ibid., p. 257).

Sergeant considers propositions which are explicitly Identical as "Supreme Truths", while those which can be reduced to such Identities as "Inferiour Truths" (Method to Science, Book III, Lesson IV, p. 361). He claims:

For, since the Reducing Inferiour truths in any subject to those which are Supreme or Identical is performed by way of Discourse or Drawing Consequences; and it is evident that those Propositions which are Inferiour Truths, and the Supreme ones cannot be the same Formally and Expressly: it follows that they can only be the same Virtually, or as one Truth included in another. Wherefore, as Deducing is nothing but deriving downwards the verity which was in some Higher Truths to the Inferiour ones; so Reducing is the Carrying Upwards or Reducing those Inferiour Truths into those Higher ones on which they depend, and the showing them to be by Consequence the Same: or that the Inferiour Thesis must needs be True, if the Identical or Supreme one is so; and that the verity of the Supreme Truth does by Consequence stand engaged in the Patronage of the Inferiour one. (sic.)
 (Method to Science, Book III, Lesson Iv, p. 361)

For him, Reduction and Deduction differ only in their directions; both are parts of discourse or the process of drawing consequences. He then goes on to give some methods of reducing truths to Identical Propositions. Here is another instance of his oscillation between epistemological and metaphysical modes of analysis.

He commences with what he calls a "Lema" in which he asserts that an "Ens" or "thing" is what is "capable of existing" and the "capacity for existence" is the "Essence" of the "Ens"; and that an "essence" cannot be composed of contradictory qualities, for a "contradiction" cannot constitute that which exists or is capable of existing (Ibid., Lema, p. 362).

The "subject" of propositional discourse is, for him, the

"thing" or "Ens". Hence, he finds his metaphysical explication of "thing" relevant to the presentation of a method of reducing propositions to Identical Propositions. On the basis of the above stated "Lema", he gives the following method of reduction:

Hence an easy way is chalkt out how to Reduce any Truth to an Identical Proposition or any Errour to a Contradiction. For, let but the Subject of the Discourse (Homo for e. g.) be defined, and two parts of its definition be defined likewise and so forwards: We shall have gained a clear and distinct Notion of the Subject and of all its Essential Parts. If then the Discourse be about the Nature or Essence of Homo. . . that Discourse must either evidently close with and contradict some one of those Essential Parts; or agree to them all. If it contradicts any one of them, then, since Essences consist in an Indivisible, it does by Consequence destroy the whole Essence of the Subject and make Homo not to be Homo: And if, it agrees with all its Parts, then, since all the Parts are evidently the Whole 'tis by Consequence, as Certain as it is that Homo is Homo. Since, to say that Homo is an Ens, and such an Ens as is Corpus, and such a Corpus as is Compounded, and such a Compounded Body as is Viveins, and such a Viveins as is Sensitive or an Animal, and such an Animal as can have Notions in it, and can compare one Notion to another, and two to a Third, is evidently to say in Equivalent Terms Homo is Homo.
(Ibid. , p. 362-3)

Here he commences with "Homo is an Ens" and arrives, through defining the "Ens" called "Homo", at "Homo is one who can compare one Notion to another, and two to a Third", i. e. one who can syllogistically reason. As we shall see in Chapter V, Sergeant identifies syllogistic reasoning with the "rationality" unique to Man (i. e. his

essence). On account of this identity he takes the last proposition as equivalent to "Homo is Homo".

Another method of reduction, is to "define the Subject and Predicate and to pursue their definitions till some Notion that is perfectly Identical appears in both" (Ibid., p. 363). For instance, "Virtue is Laudable" may be resolved into the Formally Identical Proposition, "What is according to Right is according to Right" through definitional substitution (Method to Science, Book III, Lesson III, p. 257).⁹

Sergeant acknowledges that he had received some hints upon the subject of "Reducing to Identities", from Albius, whom he describes as the "Second Aristotle" (Non-Ultra..., section 19, p. 603).¹⁰ Sergeant had seriously applied himself for about twenty years "to dig very deep into this subject to find out the Immovable centre of all Truth" (Ibid.). He had intended publishing a separate book on how to reduce every truth to an Identical Proposition but had shelved it (Ibid.). He had made use of some of this material in Method to Science and hoped that some "Speculator" would do further research on the subject (Ibid., p. 603; Cf. Solid Philosophy Asserted, Reflexion 19, section 14, p. 383). Hence, for him, "Reducing to Identities" is a serious enterprise. It is based on the assumption that any proposition that is capable of truth is ultimately or "virtually" identical in form, i. e. having the form "N = N"; and that "Nothing

can be known to be true or be Evident, but by having recourse finally to Identical Propositions" (Solid Philosophy Asserted, Reflexion 19, section 14, p. 383). Herein lies the "Formalism" in Sergeant's account of the "criterion of truth".

He claims that a Materially Identical Proposition is capable either of being true or of being proved (Reason against Raillery; sections 3-9, pp. 10-15). But, this does not mean that it does not depend on "Formal Identity" for its truth. For instance, if the notions "Socrates" and "Wise" are of the same thing, "Socrates is Wise" is true. Here correspondence may be employed to decide its truth. But, according to him, the truth of such propositions ultimately depends on "Formal Identity". The Logician is able to get at it while the "Vulgar" are satisfied with "correspondence" (Solid Philosophy Asserted, Reflexion 19, section 4, p. 363). "Socrates is Socrates" is the Formally Identical Proposition that is involved here. It expresses the Metaphysical Verity of what is called "Socrates", and about whom the proposition "Socrates is Wise" is made (Ibid., p. 380). If "Socrates is Socrates" is denied, all propositions about Socrates become false on the basis of the criterion of correspondence. For, if Socrates is not Socrates, there is no possibility for a correspondence between a proposition like "Socrates is Wise" and the state of affairs to which the proposition refers, i. e. to a state of affairs concerning what is called "Socrates", for without Socrates there cannot be a

state of affairs concerning him (Ibid., pp. 380-81). Here, Sergeant seems to take the Formally Identical Proposition as a condition of truth. In several other places, Sergeant describes "Identity" as the "deepest and firmest grounds", "foundation", "bottom" on which truths are "built" (Cf. Method to Science, Book III, Lessons 3 & 4; Preface; Reason against Raillery, Discourses II & III; Letter to Locke of May 10, 1696; Solid Philosophy Asserted, Reflexions 17 & 19). There is a correspondence between the above descriptions and his characterization of Identical Propositions as "presuppositions" in their role as "First Principles". We will deal with the latter in the subsequent sub-section. What has to be noted here, is that even though he regards "Formal Identity" as a "condition" of truth, he does not stop with this. He makes the further claim of "reducibility". If the Formally Identical Proposition, as the expression of the metaphysical verity of a thing, is taken to be merely a condition of truth, then it is not necessary for the Materially Identical Proposition to have the said schema. Propositions like, "Socrates is Wise" may be true even though they are not implicitly formally identical, and known to be true without making manifest the "formal identity". But for him, all true propositions, and this includes Materially Identical Propositions, are reducible to "formal identity". We have already noted that the requirements pertinent to the Materially Identical Proposition are not so stringent as those of the Formally Identical

Proposition. If the Notions are of the same thing, a proposition is materially identical but for it to be Formally Identical, the Notions themselves have to be identical with one another. When Sergeant demands that for a Materially Identical Proposition to be true, it has to implicitly contain the formal schema, and for it to be known to be true this schema has to be made explicit, he is in fact demanding of the weaker proposition ("N - N") the requirements pertaining to the stronger proposition (N = N). The whole enterprise of reduction is based on a confusion concerning the respective requirements of the Materially and Formally Identical Propositions.

Sergeant makes explicit his "reducibility" thesis in the following letter to Locke, sent along with a copy of Method to Science:

Much honoured Sir,

After I had written and almost printed this book I here send you, (I mean all of it but the Preface and Appendix) I was favoured by a friend with a sight of your Essay Concerning Human Understanding; to which, till then, my circumstances had made me a stranger. . . . But, the haste, I was in, (the Printer having almost overtaken mee) did allow mee no more leasure than onely to take a cursory view of it here and there as it light. Yet that little I saw of it (ex ungue Leonem) enabled mee to make a fair Estimate of the whole. The most Substantiall Difference between us (as far as I yet observe) is about the Necessity and Usefulness of Identical Propositions, on which I mainly build; and to which (in my judgment) all Truths must either be reduced or they will, if scanned by Speculative and Acute Logicians, be left destitute of their Deepest and Firmest Ground. For since you have so solidly confuted Innate Ideas, it must follow of course that Truths must be taken from the Things without us; and consequently, must be first built on, and finally resolved into their

Metaphysical Verity or their being what they are, which is an Identicall Proposition, and can be nothing else; nor can we speak or say anything of their Natures of Essences as such (or staying there) or express them at all but by such an Identicall Speech, as upon triall you will find. Again we must either come at last to Self-evidence, or no Dispute can ever come to an end; nor can any Propositions, but such as these, possibly lay claim to self-evidence since all else can bear Explicating or the making them plainer, and clearer, which these cannot. These onely being Evident from themselves, or from the very Terms without the assistance of any other Light, I do grant, indeed, that they look at first sight, till attentive reflexion comes to discover the usefulness of them, dry, insignificant and in a manner foolish and ridiculous. I grant too that there are many Principles exprest more handsomely and with a better grace, which seem to force every man, who has a good mother-wit, to assent to them, without putting them into such an odd and nice form of words; but I must deny that there are any deserving the name of first principles or self-evident but because they do virtually include an Identicall; as I have exemplified in (A whole is more than a Part). Besides Sir, we have a scepticall world to deal with, who will question even the verdict of our senses and quarrell the meaning of every word, pretend it ambiguous and then distinguish it; and nothing can hamper such men but Identicalls, which put them past their Distinguishing. Add that all Truths consist in the connexion of the terms in the Proposition that expresses it; and the terms of no proposition are self-connected (to which we must either come at length or never make an end) but those of Identicall Propositions. (sic.)

(Letter to Locke, May 10, 1696; B. L. Ms Locke C. 16, F. F. 134-5) 11

For him, the Formally Identical Proposition, on account of the "formal schema" it manifests, is the legitimate "criterion of

truth", at the level of logico-metaphysical analysis.

The above letter also presents Formally Identical Propositions as First Principles.

Formally Identical Propositions as First Principles:

In the first known defence of Identical Propositions as First Principles, Sergeant writes thus to Tillotson:

So that all Science about any thing is finally resolved into the nature or Essence of that thing, that is into that things being what it is, or which is all one it's being the same with its self, which your great Learning laughs at. Hence, what is, is; or Every thing is what it is, as plain and course (sic.) as it looks, is the last resort of all Evidence in the world; and, in particular Sciences, that the Subject of that Science is what it is; as that Man is a Man, Quantity is Quantity, and so, a Rule is a Rule, Faith is Faith, must Principle all that can be solidly concluded either about Man, Quantity, Rule or Faith (sic). (Letter of Thanks, section 5, p. 11)

The distinction Sergeant makes here between Formally Identical Propositions like "What is, is" and others of the same kind, like "Quantity is Quantity" is maintained in his subsequent writings. He considers the former kind of Identicals: "First Principles of all Knowledge"; the latter as pertaining to particular sciences (see also Reason against Raillery, Discourse II, section 7, p. 13; Solid Philosophy Asserted, Reflexion 19, section 4, pp. 364-5; Non-Ultra..., sections 19 & 48, pp. 604 & 622). Propositions like "Everything is What it is", and "Existence is Existence" are for him "General" or

"Universal" Identical Propositions. He distinguishes them from the First Principles of particular sciences. Propositions like "An Equal is equal to itself", "A Whole is greater than a Part" and "Quantity is Quantity" are some examples cited here. Identical Propositions like "Yellow is Yellow", and "A tree is a tree" are taken as "First Principles" in a restrictive sense; they pertain to specific subjects in various disciplines.¹² He takes Formally Identical Propositions other than "Universal" or "General" Identicals as "Particular" Identicals (Solid Philosophy Asserted, Reflexion 19, section 4, pp. 364-5; Reason against Raillery, Discourse III, pp. 26, 34-38, 41-42; Non-Ultra..., sections 12, 18 & 19, pp. 600, 603 & 604). He gives priority to the "Universal" over the "Particular" Identicals, when considering them as "First Principles". The reason for this becomes clear when we examine, later in this section, his comparative analysis of these kinds of Identicals.

In the course of presenting Formally Identical Propositions as First Principles Sergeant makes explicit certain requirements, which he thinks that a legitimate First Principle must meet. They may be stated as follows:

1. The First Principle must, in the first instance, be a satisfactory "criterion of truth". The twin roles he assigns to the "Rule of Truth" (i. e. as "criterion of truth" and as "first principle") are closely interrelated. This is made

explicit particularly in Non-Ultra...

2. It must have an "influence" over other self-evident propositions.
3. It must provide the necessary "grounding" for the structure of knowledge "built on" it.
4. It must be "presupposed" or "foregranted" and universally acceptable, and even "foreknown" in a qualified sense.

Sergeant claims that Formally Identical Propositions fulfill the said requirements and that the "Universal" Identicals fulfill some of these requirements in a more adequate manner.

He claims that Formally Identical Propositions, both Universal and Particular, meet the requirements of the "criterion of truth", on account of the "formal identity" (" $N = N$ ") they manifest. They "have all the requisites that can be imagined for a Ratio-Cognoscendi-Veritatem, or a "Rule of Truth"; since they self-evidently manifest to us their own truth and by it give light to know all others" (Non-Ultra... , section 9, p. 598). If First Principles are not self-evident they will need some other Proposition to make them evident and hence they cease to be "First Principles". According to Sergeant self-evidence can only be expressed through Identical Propositions. Hence, they qualify as first principles. They are to be the Test or Touchstone of Truth and Falsehood (Reason against Raillery, section

11, p: 31).

The relation between Metaphysical Verity and Formal Identity has already been noted. The Formally Identical Proposition, as the expression of Metaphysical Verity, not only meets the "objectivity" requirement of the "Criterion of Truth" but also provides the necessary grounding for knowledge that is built on it and thereby qualifies as legitimate "first principles". According to Sergeant, if Formally Identical Propositions, as the expression of Metaphysical Verity, are not accommodated as "First Principles", knowledge lacks "solid grounding"; it becomes grounded on "visionary" and "unproved suppositions" (Solid Philosophy Asserted, The Preface, section 5, pp. 6-7; section 7, pp. 9-10).

According to Sergeant, Formally Identical Propositions are not only self-evident and well-grounded but have an "influence" over other propositions. This is one of the main reasons for considering them as Maxims or First Principles. He claims:

For a First Rule, or First Principle, requires another Quality, peculiar to it self, to compleat its Notion, besides its being thus Solidly Grounded, and thus Supreamly Evident; which is that all other Truths, or Knowledges must be Ruled or Principl'd by it; It must have an Universal influence over all other Knowledges, and impart its Light to them.

(Non-Ultra..., section 12, p. 600)

He speaks often of First Principles as having a "Universal Influence over all other truths", as "principling all that can be solidly

concluded", as "guiding all our Thoughts steadily, nay, all our Actions" (Cf. Non-Ultra..., section 48, p. 622; Letter of Thanks, section 5, p. 11; Solid Philosophy Asserted, Reflexion 19, section 7, p. 369). Before we examine the nature of this "influence" we have to note that Sergeant acknowledges that not all men are aware of the "influence" of the First Principles over other truths. He states:

The Former Qualities (i. e. that of being Solidly Grounded and Supreamly Evident) will, I believe, be granted to Identical Propositions, by every Attentive Considerer, who knows what belongs to Logick, or Reason reflecting on it self; and is, withall, but meanly vers'd in Metaphysicks. This latter Qualification (i. e. that of "Universal Influence") will be deny'd by many, perhaps by most; nay, will be fancy'd, and abetted by very few. For, every one's genius does not lead him to speculate so deep; and there are scarce any who have proposed this highest and nicest Point, much less handl'd it at large; tho' divers have given the Grounds whence it must follow.
(Non-Ultra..., section 12, p. 600)

He goes on to claim that Universal Identical Propositions possess a "Universal Influence" (Ibid., p. 600).

We have already noted that Sergeant thinks that one best appreciates the value of Identical Proposition as "criterion of truth" at a deeper logico-epistemological level of analysis. Likewise, he thinks that one appreciates the value of the "Universal Influence" of Identical Propositions at such a level of analysis. He claims that there are two spheres of influence of Identical Propositions over other propositions.

Firstly, that Formally Identical Proposition is one of the factors (the other being the syllogistic form of argument) that gives the "force of consequence" to a proposition made "evident" or "proved" or "demonstrated". According to him, such a proposition provides the "Fundamental Ground of the Force of Consequence, which gives the Nerves to every act of True Reasoning, and of the Certainty and Evidence of every conclusion which we rightly inferr" (Method to Science, Preface). He claims:

To conclude is to show evidently that two notions we call the Subject and Predicate are Identify'd or truly connected in the proposition we call the conclusion. To do this we find a Third Notion called a Middle Term to be Identified which those two, and consequently assert the Truth of the Conclusion. But how shall we know that the Third Notion to be truly connected with those two others; that is, how shall we know the major and minor propositions to be true. By finding (if they need proof) another medium connected with the two terms found in each of them and how far must this go on? Endlessly or no? If Endlessly, then since every following connection is proved by some foregoing ones, in case we cannot see some first connection or First Principle, we could conclude or evidence nothing and how must we evidence the connection of the terms in these First Principles? By another antecedent connection of their terms with the third? No: for these are supposed to be first connections; wherefore since they can't be evidenced by anything out of themselves, and yet must be evident else nothing could be evidenced by them, it follows that they must be evident of themselves or self-evident and in what consists this self-evidence? Manifestly in this that no middle term can come between the notions of their Subject and Predicate which devolves finally into this that the Subject and Predicate are the self

same notion or that the Proposition is Identical; and this not only materially or found in the same thing for so are the terms of every Remote conclusion for it to be true; but formally; and this either simply in notion only, as are the Definition and the thing defined but also most formally and in expression also.

(Reason against Raillery, Discourse II, section 3, pp. 10-11; Cf. Letter of Thanks, section 5, p. 10)

His view concerning the contribution of the Formally Identical Proposition to the "force of consequence" of a conclusion may be presented thus. Let "A is B" and "C is A" be the premisses from which

"C is B" is derived through syllogistic deduction:

A is B	A is B
C is A	C is A
	C is B

"C is B" is not self-evident but "made evident" through:

- a) The employment of true premisses, and
- b) the use of a valid form of syllogistic deduction.

The premisses may be either self-evidently true or made evident through a process as given above. If they are not self-evident, they have to be ultimately reduced to self-evidence, i. e. to Identical Propositions. If not, according to him, "C is B" is merely hypothetical (i. e. a conditional truth). For the conclusion to be established unconditionally true, the premisses of the argument have to be traced to self-evidence; i. e. they have to be reduced to Identical Propositions. This is how Identical Propositions give "force of consequence" to the conclusion. This is what he seems to mean by their "influence"

over those propositions which are "concluded" or "shown evidently".

Secondly, he claims that certain Formally Identical Propositions have an "influence" over others of the same class.

He acknowledges that every Particular Identical Proposition like "Yellow is Yellow" is self-evidently true. But, he claims that Universal Identicals have a use which the former do not have. He states:

But, I do not think that any Man living thought those (i. e. Particular Identicals) to have the usefulness of Maxims or Principles, which are always General, or Universal: For, the Notion of (Principles) super-adds to their being Truths, and Self-evident, that they influence many other Truths that are (as it were) under them; which cannot be said, or thought, of those Particular Propositions.

(Solid Philosophy Asserted, Reflexion 19, section 4, p. 364)

There are three reasons which Sergeant gives the the above claim.

Firstly, a Particular Identical cannot provide the reason for another Identical but can be only a "similitude". He says that "White is White and not black" can be only a similitude but not the "reason" for an Identical like "Yellow is Yellow and not Black". The "reason" for the latter, which even a sceptic will accept, is the Universal Identical "Every thing is what it is" (Ibid. , p. 365).

Secondly, he observes that the Universal Proposition, "Every Man is Rational" confirms its instances such as "Peter is Rational"

or "John is Rational". But a Particular Proposition like "Peter is Rational" cannot "confirm" another Particular Proposition like "John is Rational" nor the Universal "Every Man is Rational". From this observation he concludes,

.. that the truth of the Universal engages for the Truth of all Particulars, and not vice-versa; nor one of them for another.
(Ibid. , p. 365)

On the basis of such a conclusion, he claims that the Universal Identical Propositions "engage for all the Particulars under them" (Ibid. , p. 365): i. d. the Universal Identicals "confirm" the truth of the Particular Identicals. Therefore he gives priority to the former over the latter.

Thirdly, the Universal Identicals are for him "more self-evident" than Particular Identicals. Here he takes into consideration the Notions that are involved in the respective propositions. According to him, a Notion is most clear when it is most simple and it is most simple when it is most general. For him, "Existence" is the most general, therefore simplest and therefore most clear (Solid Philosophy Asserted, Prelim. , 5, sections 2 & 3, pp. 88-90). The Universal Identical, which involves the notion of "existence", is therefore more evident than those which involve less general notions like "man" or "yellow". For him, the First Principles have to be most evident. He finds the Universal Identicals better qualified than

Particular Identicals, on account of the clarity of the notion "Existence" employed in the former (Solid Philosophy Asserted, Reflexion 19, section 5, pp. 365-67).

Locke detects the confusions underlying Sergeant's reasons. We will discuss them when we discuss Locke's response to Sergeant. What we have to note here is Sergeant's claim that the Universal Identicals exert an "influence" over propositions, which are "made-evident", as well as over Particular Identicals, which are themselves self-evident. He claims that this "influence" is best appreciated by the acute and speculative logician, who is proficient in Logic and Metaphysics. The Universal Identicals are First Principles of the highest order to such a logician and not to the "vulgar" (Ibid., sections 4-7, pp. 363-70).

There is a recognizable tendency in Sergeant's writings to consider Identical Propositions as exercising their influence in a presuppositional capacity.¹³ Sergeant states that he does not take Identical Propositions as Premises from which one deduces conclusions. He thinks that both Tillotson and Locke have misunderstood him here (Reason against Raillery, Discourse III, section 9, p. 29; Solid Philosophy Asserted, Reflexion 19, section 14, p. 381).

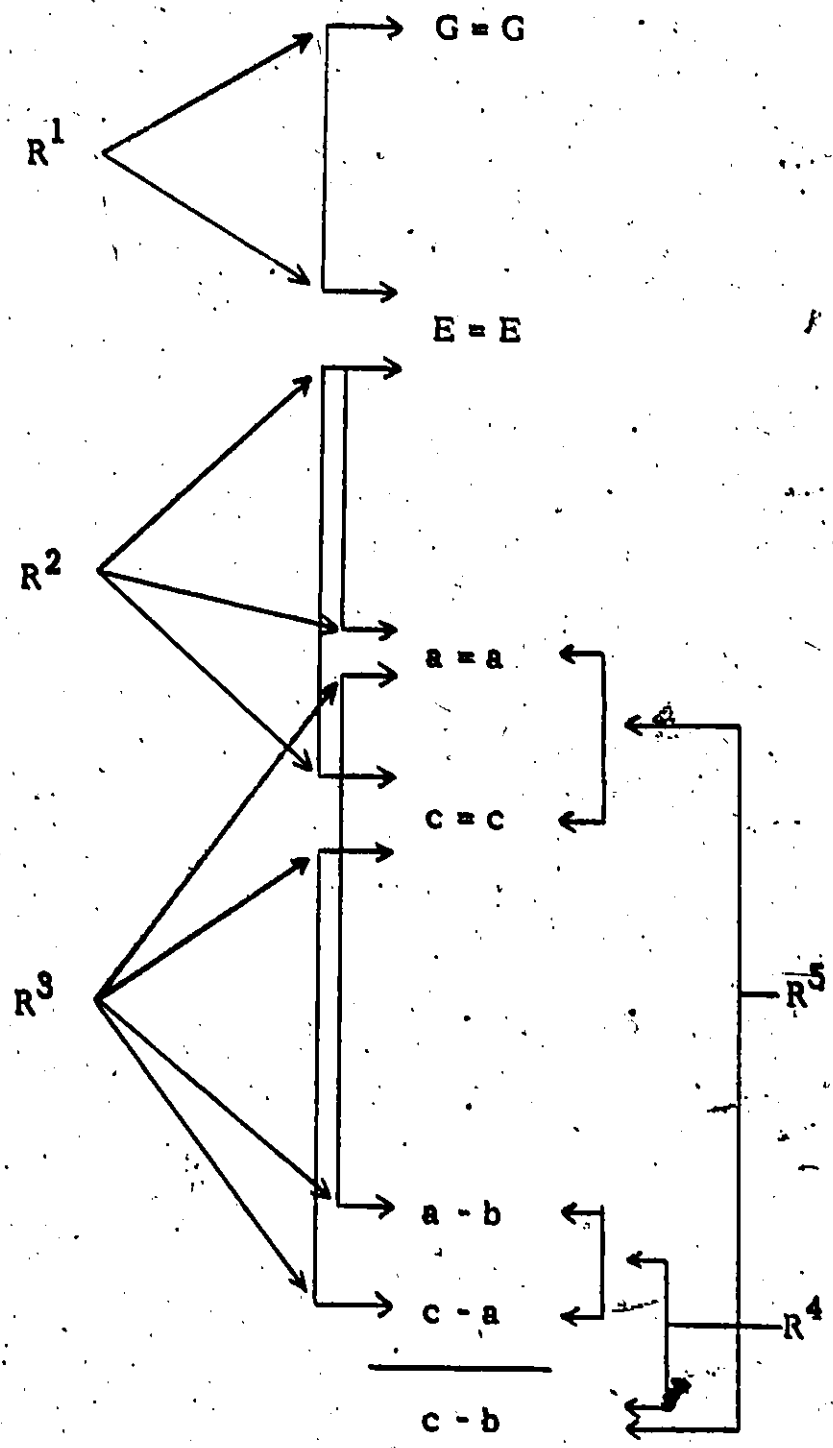
In several places he describes Formally Identical Propositions as being "presupposed" "foregranted"; they "lie retruse in the most Inmost Recesses of our Judging and Intellective Power"; they

are "habitually laid up in the closet of our Minds and govern all our thoughts as occasion presents"; that "they are the First and most evident Truths, fix'd and rivetted by Rational Nature, in our Understanding; at the Bottom of which they lie, perhaps Unseen, and Unreflected on; yet so, that they give perfect light to guide all our Thoughts and Discourses" (Solid Philosophy Asserted, Reflexion 19, p. 381-2, 369; Non-Ultra..., section 17, pp. 602-3, 611). Here he takes Identical Propositions as presuppositions standing behind the scenes of propositional discourse. If he had stopped with such a characterization, there would be no tension in his views concerning them, and Locke's criticisms would not have been applicable. But, Sergeant seems to go further than this. His strategy of "reducibility to identities" and his account of the ways in which Formally Identical Propositions "influence" other propositions, make the former belong to the super-structural level of propositional discourse. They seem to be not only presuppositions but also tacit or hidden or ultimate premisses of propositional discourse. I do not here assume that presuppositions cannot be tacit or ultimate premisses. It is not necessary for me to decide on the precise nature of presuppositions.¹⁴

What I observe here is that Sergeant takes Formally Identical Propositions as not being premisses, when he responds to Tillotson and Locke, but seems to take the propositions concerned as premisses in certain places.

He attempts to present an "A Priori organization of all Science" (Reason against Raillery, Discourse III, section 21, pp. 41-42). Taking such an "organization" as the basis, and keeping in mind his account of "reducing to identities" and "influence" of Universal Identicals the following diagrammatic presentation may be given:

Let $G = G$ stand for the Transcendental Formally Identical Proposition, "Self-Existence is Self-Existence"; $E = E$ for "Everything is what it is" or "Existence is Existence", which is Formally Identical Universal Proposition; $a = a$ and $c = c$ for Formally Particular Identical Propositions; $a - b$ and $c - a$ for premisses of a syllogistic deduction, which gives $c - b$ as conclusion. Let "-" stand for Material Identity and "=" for "Formal Identity". " R^1 " stands for the relationship between the Transcendental Identical and the Universal Identical; " R^2 " between Universal and Particular Identicals; " R^3 " between Formally Identical and the Premisses of the Syllogism; " R^4 " between the Premisses and the Conclusion; " R^5 " between the Particular Identicals and the Conclusion of the Syllogism. The diagram is as follows:



Formally Identical Propositions do not directly feature in the propositional discourse where, from "a - b" and "c - a", "c - b" is deduced. In this sense, they are not premisses as "a - b" and "c - a" are in the said deduction. But, as the diagram indicates, these constituents of propositional discourse (i. e. "a - b", "c - a", and "c - b") are related in different ways to Formally Identical Propositions. Some of the kinds of relationships, namely, R^5 , R^3 , and R^2 tend to make Identical Propositions "Ultimate premisses" in the super-structure of propositional discourse rather than conditions which make a discourse possible. R^5 indicates that the "force of consequence" of "c - b" (i. e. its unconditional truth) is guaranteed by "a = a" and "c = c", which are Sergeant's Formally Identical "Particular" Propositions. For this to be made possible (i. e. for R^5 to be fulfilled) R^3 has to be fulfilled, and this means that "a - b" and "c - a" have to be "reduced" to "a = a" and "c = c". Since, for Sergeant, "Reduction" is the opposite process of Deduction (Method to Science, Book III, Lesson IV, p. 361) the possibility of reducing say x to y implies the possibility of deducing x from y, which means that y becomes the premise for deducing x as conclusion. On account of the possibility of the relationship R^3 (i. e. that of reducing "a - b" and "c - a" to "a = a" and "c = c") "a = a" and "c = c" become the premisses for "a - b" and "c - a" and indirectly for "c - b" (since, "a = a" and "c = c" are premisses for "a - b" and "c - a" and, since

"a - b" and "c - a" are premisses for "c - b", "a = a" and "c = c" become indirectly the premisses for "c - b").

R^2 indicates the relationship between "E = E", which stands for Sergeant's Formally Identical "Universal" Proposition, and "a = a" and "c = c" (his "Particular" Identical Propositions). We have already noted that, according to him, "Universal" or "General" Identicals "confirm" the truth of "Particular" Identicals in the same manner a general proposition like "All Men are Rational" establishes the truth of and an instance of it, like "Peter is Rational". Here, the general proposition acts as the premise for deducing the particular instance, as conclusion. In the same manner, the "Universal" Identical Proposition becomes the premise for "confirming" the truth of "Particular" Identical Propositions. "E = E" becomes the premise for "a = a" and "c = c". We have already noted that "a = a" and "c = c" act as premisses for "a - b" and "c - a", and indirectly for "c - b". Hence, "E = E" becomes the ultimate premise for propositions like "a - b", "c - a" and "c - b".

"G = G" which stands for Sergeant's Transcendental Formally Identical Proposition ("Self-Existence is Self-Existence") may be taken as a condition for the truth of "E = E". Except for "G = G", the other Formally Identical Propositions seem to be very much a part of propositional discourse. ¹⁵

Sergeant no doubt describes such Formally Identical

Propositions as "presuppositions" which are "foregranted" (Solid Philosophy Asserted, Reflexion 19, section 6, p. 369; Non-Ultra..., section 17, pp. 602-603). But, he also states in several places that in addition to their being "foregranted", they have to be also "foreknown" (Non-Ultra..., section 17, pp. 602-603, section 4, p. 622). When he states that they "have to be foreknown or (at least) foregranted" (Solid Philosophy Asserted, Reflexion 19, section 6; p. 369) he seems to take "foreknown" as something more than "foregranted". He demands this "foreknowledge" not from the "vulgar" but from the "Acute Logicians" or the "Men of Art". Just as one senses "formal identity" as the "Criterion of Truth" at the deeper level of logical analysis, one becomes aware of "Formally Identical Universal Propositions" as "ultimate premisses" of propositional discourse. According to him,

For, since we must know all other Truths by It,
its Evidence must be the First Thing to be known;
and therefore, the Knowledge of its Truth must
antecede the Knowledge of all other Truths what-
soever, and be clearer than They.
(Non-Ultra..., section 37, p. 615)

In his example of the musician playing with ease on a Harpsichord, Sergeant makes it quite clear that some time earlier in his career the musician should have consciously learnt the rules of music. He may not be so sensible of them after he becomes an expert. But for Sergeant, the musician should have "foreknown" these rules. The

knowledge of these rules antecedes the capacity to play with ease on the Harpsichord (Solid Philosophy Asserted, section 7, p. 369).

Similarly, in the case of the country butcher, who loses his knife, Sergeant makes it clear that the butcher should have the knowledge of the "General Maxim" (Every particular body in the world must be in some place), for him to get involved in the activity of searching for the knife (Solid Philosophy Asserted, section 8, p. 370). Hence, when his reducibility thesis, his claims conceiving the "influence" of Universal Identicals, and the necessity for them to be "foreknown" are conjunctively taken into account, he seems to take such propositions as tacit or ultimate premisses, and this is what Locke criticizes.

For Sergeant, Formally Identical Propositions are legitimate First Principles or Maxims. In the first instance, they provide the "Criterion of Truth". On account of the generality of their structure, the "General" formally Identical Propositions, particularly the "Universal" Identical Propositions are able to have an influence over those propositions which are "made-evident" and those which are "self-evident" but "less general". As expressions of the Metaphysical Verity of things, the Formally Identical Propositions provide the necessary "grounding" for the structure of knowledge. Where "deducing from principles" is taken as the ideal method to knowledge,¹⁶ Identical Propositions as First Principles play an indispensable role in the advancement of knowledge.

Conclusion:

In Sergeant's view, the Formally Identical Proposition is the legitimate "Rule of Truth", both in its role as "Criterion of Truth" and as "First Principle". The Identical Proposition is one with a particular "form" ("N = N"), where "form" is understood as a "pattern of arrangement of Notions". His presentation of such a "form" as "Criterion of Truth" and "First Principle" reveals his "Formalism" at the propositional level.

4:3 Locke and Identical Propositions:

In the chapter entitled, "Of Trifling Propositions" (IV:VIII), Locke characterizes certain propositions as "trifling". This derogatory description may be taken as his major criticism of Sergeant's claim that Identical Proposition is the criterion of truth. To get at Locke's stand, it is helpful to examine his account of Proposition, find out what propositions he includes in the category of "trifling" propositions, and determine the sense in which he uses "trifling".

The Proposition:

Locke works with the Subject-Copula-Predicate analysis of the propositional structure. The Subject and Predicate terms may be word or idea signs. Proposition is the joining or separating of signs (IV:V:2 & 5). He distinguishes between Mental and Verbal Propositions and deplores the tendency of mistaking mental for verbal

ones (IV:III:30; IV:V:4-6). Since words signify ideas, verbal propositions express mental ones (IV:V:3). But the former should not be taken as a substitute for the latter.

The Copula signifies the action of joining or separating signs, and is expressed by the Particle "is" and negatively by "is not". Such Particles are "general Marks of the Mind, affirming or denying (III:VII:1). His characterization of the Copula is similar to the account given by the Port-Royal Logicians. 17

Even though generically Simple Ideas are the "immediate objects" of the Mind (II:I:2-5; II:VII:10; II:XII:2 & 8) there is a possibility, in the Lockean Context, for describing those with which the other acts of the Mind are concerned, as their "objects" or "immediate objects". Those with which acts like "Composition", "Enlarging", "Abstracting", "Relating", and, as we shall see in Chapter V, even "Demonstrating" are concerned, may be described as their "immediate objects" or "objects" (II:XI:4-6, 10; II:XII:1 & 8). Just as Ideas are the "immediate objects" of the Mind in its first act, the proposition may be taken as the "immediate object" or "object" of the act of joining or separating Ideas. For him, there is a possibility of having more than one "object" in the Mind, when it is in operation. When he discusses Complex Ideas, he states that the "Mind has great power in varying and multiplying the Objects of its Thoughts, infinitely beyond what Sensation and Reflexion furnished

it with", through the acts of repeating and joining together Ideas (II:XII:2). In responding to Sergeant's contention that it is impossible to be conscious, or know we know, without a new act of Reflexion, Locke marginally comments thus:

His arguing here is to prove that the minde cannot have two objects at once which if true the minde can never have any knowledge which is had only by comparing 2 Ideas or Notions which are 2 objects. The eye sees and consequently the minde perceives an hundred objects at once though some more and some less clearly and distinctly.
(Marginal Comment No. 28, p. 123)

In a Proposition two Ideas are involved as "objects". As "immediate object", it is like Idea distinguishable but not separable from the act of joining or separating ideas. Just as he sometimes describes Ideas in terms of the perceptual act, Locke defines the Proposition in terms of the act, as "the joining or separating of Ideas or their Signs, namely words" (IV:V:2 & 5). Such a definition, together with his description of the "Copula" as the expression of the act of affirming or denying one Idea of another, highlights the close and inseparable connection he wants to establish between Proposition as "object" and the "act". In the Lockean context, there is no possibility of the Proposition being independent of the act of joining or separating Ideas. When discussing general propositions concerning abstract Ideas, Locke states:

Many of these are called aeternae veritates, and all of them indeed are so; not from being written

all or any of them in the Minds of all Men, or that they were any of them Propositions in any ones Mind, till he, having got the abstract Ideas, joyned or separated them by affirmation or negation. . . . Such Propositions are therefore called Eternal Truths, not because they are Eternal Propositions actually formed, and antecedent to the Understanding, that at any time makes them; not because they are imprinted on the Mind from any patterns, that are any where of them out of the Mind, and existed before; but because being once made, about abstract Ideas, so as to be true, they will, whenever they can be supposed to be made again at any time past or to come, by a Mind having those Ideas, always actually be true. . . .

(IV:XI:14)

Among other things, Locke makes explicit in the above passage the dependency of the "Proposition" on the "act" of the Mind. Here he goes against Sergeant's views concerning the Proposition. For Sergeant, Proposition as "object" is separate from the "act of judging". As such, the "Proposition" for him has an ontological character, which Locke's "Proposition" does not possess.

For Locke, Propositions may be described as True or False (II:XXXII:1, 3; III:VII:1; IV:V:2 & 5). Truth and falsehood lie always in some affirmation or negation (II:XXXII:3).

Within the context of such an account of Propositions, Locke characterizes some of them as "trifling".

Trifling Propositions:

(a) Purely Identical Propositions:

He considers as "trifling" all Purely Identical Propositions.

A Purely Identical Proposition is one in which "we affirm the same term of itself whether or not it be purely verbal or whether it contains any clear or real idea" (IV:VIII:2). We find this description in the first and every subsequent edition of the Essay, except for the substitution of the word "same" for "said" from the fourth edition. The use of the word "same" is in keeping with his main contention concerning Purely Identical Propositions, which he makes explicit in a substantial addition to the fourth edition (IV:VIII:3 (14) p. 610 - (12) p. 612). This addition commences thus:

I know there are some, who because Identical Propositions are self evident, shew a great concern for them, and think they do great service to Philosophy, by crying them up, as if in them was contained all Knowledge, and the Understanding were led into all Truth by them only.
(IV:VIII:3 (14) - (18) p. 610)

After citing several examples of Purely Identical Propositions Locke concludes this addition thus:

.... by Identical Propositions, I mean only such, wherein the same Term, importing the same Idea, is affirmed of itself: which I take to be the proper signification of Identical Proposition... But if men will call Propositions, Identical, wherein the same term is not affirmed of it self, whether they speak more properly than I, others must judge: This is certain, all that they say of Propositions that are not Identical, in my sense, concerns not me nor what I have said; all that I have said relating to those Propositions, wherein the same term is affirmed of itself... Instances of other kinds, whatever use may be made of them, concern not me, as not being such as I call Identical.

(IV:VIII:3 (32)p. 611 - (12) p. 612)

The following reasons lead me to suggest that Sergeant was one of those whom Locke had in mind, when he made the above addition.

Firstly, the above addition is directed against those who claim that knowledge is contained in Identical Propositions and one is led "into all truth by them only". Sergeant is one of them, when he claims that Identical Propositions are "First Principles" and "Criterion of Truth" (4:2).

Secondly, Locke's two marginal comments on Sergeant's critical response to Locke's criticisms of Identical Propositions, as given in the first three editions of the Essay, definitely anticipate, and are almost verbally transferred to the above addition. The first Marginal Comment is as follows:

An Identical Proposition is the affirming the very same term of itself.

(Marginal Comment No. 92, p. 381)

This definition of Identical Proposition is explicitly stated in the said addition (IV: VIII:3 (10) - (12) p. 611 & (32) p. 611 - (12) p. 612). The substitution of the word 'same' for 'said', which has been already noted, is another instance of the transfer of the above definition to the fourth edition of the Essay (IV: VIII:2).

The second Marginal Comment runs thus:

Knowledge has at its Bottom only in the perception of the agreement or diversity of any two Ideas and is neither founded on nor can be reduced to Identical

Propositions.
(Marginal Comment No. 93, p. 382)

We will discuss this comment in more detail in another context.

What has to be noted here is that this comment is confirmed, when

he makes the following addition:

I grant further, that the foundation of all our Knowledge lies in the Faculty we have of perceiving the same Idea to be the same, and of discerning it from those that are different. . . .
(IV:VIII:3 (19) - (22) p. 610: addition to the fourth edition)

The third reason for my suggestion is that Locke's definition of Identical Proposition, as one in which the same term is affirmed of itself, makes his Purely Identical Propositions very similar to Sergeant's Formally Identical Propositions. The several examples Locke cites for Purely Identical Propositions may be also cited as examples for Sergeant's Formally Identical Propositions. Some of these examples are "the Will is the Will", "A Law is a Law", "Obligation is Obligation", "Right is Right", "Substance is Substance", "Body is Body" and "a Vacuum is a Vacuum" (IV:VIII:3, pp. 610-611). These may be also cited for Sergeant's Particular Identicals. "What is, is", and "What hath Existence hath Existence" are, for Locke, versions of "the received", "great and magnified Maxim" (IV:VIII:2). These are Sergeant's Formally Identical Universal Propositions. Hence, both in description and in exemplification there is a similarity between Locke's account and Sergeant's of Identical Propositions.

The said addition makes this more explicit.

Hence, Sergeant seems to be one of the main persons Locke had in mind, when he made the said addition.

What Sergeant claims as useful in their role of "First Principles" and "Criterion of Truth" Locke describes as "trifling".

(b) Partially Identical Propositions:

The other kinds of propositions called trifling by Locke have been commonly called "Semi" or "Partially" Identical and sometimes "analytical" propositions.¹⁸ Most of them may be compared with some of Sergeant's Materially Identical Propositions and some with those which are Formally Identical in sense.

When a part of a complex idea is predicated of the name of the whole, or when the Genus is predicated of the Species, or more comprehensive of less comprehensive terms, the proposition, for Locke, is "trifling", as Lead is a Metal or Gold is heavy (IV:VIII:13). For Sergeant, such a Proposition is Materially Identical.

General Propositions concerning Substances when certain are for Locke "trifling". They are certain, if the predicate is already contained in the subject idea. For instance, if "malleability" is a part of the complex idea, the word "Gold" stands for, then the Proposition, All Gold is malleable is for him certain, but "trifling" (IV:VIII:9; IV:VI:9). These Propositions are for Sergeant

Materially Identical.

According to Locke, "since no abstract Idea can be the same with any other but itself", when the word which expresses it is affirmed of any other, it only means that the two words signify the same Idea. Locke calls such propositions "barely verbal". The examples cited here are "Parsimony is Frugality" and "Gratitude is Justice" (IV:VIII:12). They are similar to Sergeant's propositions where the Subject and Predicate Notions differ only in expression but may be transformed into ones which are formally identical in expression. He cites "A Whole is more than a Part" (Reason against Raillery, Discourse III, section 2, p. 23).

A Proposition in which a part of the definition is predicated of the term defined, or one in which a simple idea of a complex idea is affirmed of the complex idea is for Locke "trifling". "A triangle hath three sides", "Gold is fusible", "A Palfry is an Ambling horse", and "Saffron is Yellow" are some of the examples cited here (IV:VIII: 5, 6 & 7). For Sergeant, a definitional Proposition is "formally identical in sense". A Partial definition may be reduced to "Formal Identity" through making the definition more exact, usually by providing the differentia (Method to Science, Book II, Lesson II; Book II, Lesson IV, pp. 362-3).

Hence, Locke's Partially Identical Propositions are very similar to some of Sergeant's Materially Identical Propositions and

those which are "Formally Identical in sense".

On account of this similarity between Locke and Sergeant's descriptions of Identical Propositions, Locke's derogatory description of them may be taken as relevant to and undermining Sergeant's claims concerning them. To fully appreciate the undermining influence of Locke's critique we have to first determine the force of his imputation.

Trifling:

The force of his imputation is weaker than it may appear. To characterize propositions as trifling is not to say that they are completely useless. He admits that a Trifling Proposition like, "A Triangle is a three sided plane figure" may be used to teach the signification of the word, "triangle" (IV:VIII:7). The proposition "Lead is a Metal" may be used to explain the signification of the word "Lead" to one who knows the signification of "Metal" but not of "Lead" (IV:VIII:4). He claims that Propositions like "A Palfry is an ambling horse" or a "neighing, ambling Animal" are about the signification of words (IV:VIII:6). But he also points out that one is supposed to understand the meanings of words before he uses them in propositions and the hearer is also supposed to understand these words. According to Locke, one is supposed to have this type of knowledge, i. e. one which concerns the "signification of words"

before one gets involved in making propositions (IV:VIII:7); one should know the meanings of "Saffron" and "Yellow" before stating "Saffron is Yellow". If not, he is involved in mere parrot talk (Ibid.). He may address such a statement to one who does not know the meaning of the word, say, "Yellow". Then, through the proposition, "Saffron is Yellow" one may teach the signification of the word. Then the proposition concerned would record an addition to the "knowledge" of the person to whom it is addressed (Ibid.). Trifling Propositions have such a use.

Trifling Propositions may also be used to uncover latent contradictions and disclose ambiguities (IV:VIII:2 & 5). He admits that they are all equally true, certain and self-evident (IV:VIII:3). Hence, Trifling Propositions have a place in discourse and even in certain aspects of knowledge.

It is noticeable that Locke contrasts "trifling" with "instructive" and considers "trifling propositions" as of no use in the "increase of knowledge". He states that "though they be certainly true, yet they add no light to our Understandings and bring no increase to our Knowledge" (IV:VIII:1); that, although they be equally true, certain, and self-evident, "they cannot but be counted trifling, when made use of as Principles of Instruction and stress laid on them as helps to knowledge" (IV:VIII:3); that they are "without any real knowledge" (IV:VIII:2). One may make a million of such Propositions, and "yet

not know one thing in the world thereby" (IV:VIII:3). One may with assurance assert and infallibly know the truth of propositions like "Right is Right" and "Wrong is Wrong", but yet not be helped by them "in the knowledge of anything necessary and useful" in the field of "Morality" (IV:VIII:3). Propositions like "Substance is Substance" do not give any new light or inlet in the knowledge of things (Ibid.). One does not advance one jot in the knowledge of the truth of things by employing such propositions (IV:VIII:9).

These statements indicate that Locke characterizes "trifling" propositions as uninformative and useless from the standpoint of increasing knowledge.¹⁹ His doctrine of "certainty of knowledge" is of relevance here. He states that using "words loosely and uncertainly" and without the same signification in a Discourse, particularly when it is "argumentative and controversial", is an instance of the "trifling" use of words. He claims that this is the "worst sort of Trifling and which sets us yet farther from the certainty of knowledge we hope to attain by them or find in them" (IV:VIII:11). According to Locke, "certainty of knowledge" is to perceive the agreement or disagreement of ideas as expressed in any proposition; one has "certainty of knowledge" when one knows, or when one is certain of the truth of any proposition (IV:VI:3).²⁰ Using words loosely and without the same signification in a discourse is of no use for the perception of agreement or disagreement of ideas as expressed in the

proposition concerned. Such words are "trifling" because they are of no use in coming to know or in becoming certain of the truth of a proposition. Similarly, a proposition is "trifling" to the man who makes it or to whom it is made, when it is of no use from the standpoint of his coming to know it or his becoming certain of its truth. He admits the truth of "trifling" propositions (IV:VIII:3), but, what he alleges is that such a proposition is redundant as a means of coming to know it or of becoming certain of its truth. When Locke dismisses an Identical Proposition as "trifling", what he denies is either that "it can be used to teach that it itself is true or that we can discover that it itself is true".²¹

The primary reason for Locke's claim is worked out through an argument, which may be called the Oyster Argument.²² The text for it is as follows:

For at this rate, any very ignorant Person, who can but make a Proposition, and knows what he means when he says, Ay, or No, may make a million of Propositions, of whose truth he may be infallibly certain, and yet not know one thing in the World thereby; v. g. what is a Soul, is a Soul; or a Soul is a Soul; a Spirit is a Spirit; a Fetiche is a Fetiche, etc. These all being equivalent to this Proposition, viz. What is, is, i. e. what hath Existence, hath Existence; or, who hath a Soul, hath a Soul. What is this more than trifling with Words? It is but like a Monkey shifting his Oyster from one hand to the other; and had he had but words, might, no doubt, have said, Oyster in right hand is Subject, and Oyster in left hand is Predicate: and so might have made


a self-evident Proposition of Oyster, i. e. Oyster is Oyster; and yet, with all this, not have been one whit the wiser, or more knowing: and that way of handling the matter, would much at one have satisfied the Monkey's Hunger, or a Man's Understanding; and they two would have improved in Knowledge and Bulk together.
(IV: VIII:3).

Relating the reason given above with Locke's statement that an Identical Proposition is one in which the "same" is affirmed of itself (IV: VIII:2 & 3), his contention, that such a proposition is trifling may be spelled out into an analogical argument as follows:

The Oyster Argument

1. An Identical Proposition is one in which the same term is affirmed of itself.
2. Just as the shifting of the Oyster from one of its hands to the other is of no use to the Monkey from the standpoint of increasing its food-supply, a proposition in which the same term is affirmed of itself is "trifling" to the person who makes it or to whom it is made.
3. Therefore, an Identical Proposition is "trifling" to the person who makes it or to whom it is made.
(IV: VIII:2 & 3)

Locke gives this argument with specific reference to Purely Identical Propositions and it attempts to establish that such propositions are "trifling". But since he considers "Partially" Identical Propositions as also "trifling" the question arises as to whether the argument is applicable to these as well. To decide on this, the scope of the argument has to be determined.



The Scope of the Oyster Argument:

Its scope depends on the interpretation one gives to its major premise, namely to,

An Identical Proposition is one in which the same term is affirmed of itself.

The interpretation hinges on the strength one attaches to the adjective 'same' when it qualifies the noun "term".

"Term" in the above premise may signify a mere verbal notation. But words for Locke immediately signify Ideas. The use of words without ideas though conceded as a possibility is taken to be an uninteresting one, if not an abuse of language (III:XI:2). A Fet-iche is a Fetiche is for Locke trifling but uninterestingly so. "Fet-iche" may be taken as a 17th century version of "Abraca-dabra" but of course taken more piously. ²³

A Proposition in which the same idea is affirmed of itself constitutes an interesting case of trifling propositions for Locke. When he emphasizes that an Identical Proposition is one in which the same term importing the same idea is affirmed of itself, it is the affirmation of the idea that is indispensable to such a description. Substituting the word "idea" for "term" we have the following major premise:

An Identical Proposition is one in which the same Idea is affirmed of itself.

This takes us to the force Locke attaches to the adjective 'same'

when it qualifies "idea".

The adjective same may be used in a stronger and a weaker sense. Odegard notes these two senses when he analyses the Oyster Argument with reference to Leibniz's counter-arguments.²⁴ I am using 'same' for the weaker sense and "same" for the stronger sense. The following distinctions between 'same' and "same" may be noted:²⁵

1. If the ideas of x and y are the 'same', then x and y are identical with one another, but the idea of x need not be that of y and vice-versa. If ideas of x and y are the "same" then x must not only be identical with y but also the idea of x must be that of y and vice-versa.
2. If the ideas of x and y are the 'same', then it is possible for someone to have an instance of one without thereby having an instance of the other. If the ideas of x and y are the "same", then it is impossible to have an instance of one without thereby having an instance of the other.
3. X's identity with y is a sufficient condition for the ideas of x and y being the 'same' but not for being the "same".

In Locke's Purely Identical Propositions and Sergeant's Formally Identical Propositions the stronger sense, i. e. "same", is applicable. In Locke's Partially Identical Propositions and Sergeant's Materially Identical Propositions the weaker sense, i. e. 'same' is

applicable.

The Oyster Argument is given with reference to Purely Identical Propositions, which manifest a "formal schema" similar to that of Formally Identical Propositions. In such a context, the major premise of the argument refers to Purely Identical Propositions and it attempts to establish that they are "trifling", i. e. they are of no use to the person who makes them or to whom they are made, from the standpoint of his coming to know them or his becoming certain of their truth. Here, the Oyster Argument will appear somewhat like this:

Formulation A:

1. A Purely Identical Proposition, which manifests a formal schema similar to that of the Formally Identical Proposition, is one in which the "same" idea is affirmed of itself.
2. Just as the shifting of the Oyster is of no use to the Monkey from the standpoint of increasing its food-supply, a Proposition in which the "same" idea is affirmed of itself is of no use to the person who makes it or to whom it is made, from the standpoint of his coming to know it or his becoming certain of its truth (i. e. it is "trifling").
3. Therefore, a Purely Identical Proposition is of no use to the Person who makes it or to whom it is made, from the standpoint of his coming to know it or his becoming certain of its truth (i. e. it is "trifling").

The Argument so formulated establishes the redundancy of the Purely Identical Proposition, from the standpoint of one coming

to know it or becoming certain of its truth. For Locke, a proposition like "White is White" is redundant as a means of coming to know it or of becoming certain of its truth, since we already know it or are certain of its truth once we have the idea signified by "White" (IV:I:4; Cf. IV:II:15). Locke agrees with Sergeant that such a proposition is self-evidently true in the sense that nothing extraneous to it, such as another proposition or idea, is necessary for becoming certain of its truth. But the joining of "White" with "White" which the proposition "White is White" expresses does not help one to come to know it or become certain of its truth. Locke does not label the content but the form of the proposition as "trifling". What is affirmed of itself may be a word like Fetiche, an unreal idea like Unicorn or a distinct and determined idea like Triangle. "A Fetiche is a Fetiche" is equally "trifling" as "A triangle is a triangle". It is not what is affirmed that is "trifling" but the "form" of the affirmation. When anything is affirmed of itself, the formal schema that results may be an effective rhetorical device, but, from the standpoint of one coming to know the proposition concerned or his becoming certain of its truth, the "schema" is redundant; it is merely a verbal elongation. In this sense "trifling" means non-instructive. The idea may be "real" and "distinct" yet the proposition be uninformative and "unreal". 26

For Sergeant, the Formally Identical Proposition, on account

of the "formal schema" it manifests (" $N = N$ "), is able to show that it itself is true. The "form" of the proposition", according to him, is of use from the standpoint of coming to know it or of becoming certain of its truth (4:2). Locke questions this claim, when he establishes through Formulation A of the Oyster Argument, that propositions which manifest such a formal schema (Purely Identical Propositions) are "trifling".

We have already noted that most of those propositions which Sergeant claims as capable of being known to be true on account of their reducibility to Formal Identities are similar to Locke's "Partially" Identical Propositions. We also noted that he dismisses them as "trifling" just as he dismisses the Purely Identical Propositions. Hence, the Oyster Argument may be extended to cover Partially Identical Propositions too. In such a context, the major premise would refer to Partially Identical Propositions and the weaker 'same' is applicable. The argument may be formulated thus:

Formulation B:

1. Either one comes to know, or one becomes certain of the truth of a Partially Identical Proposition in which the 'same' term is affirmed of itself, on account of the Purely Identical Proposition in which the "same" term is affirmed of itself, and to which the former can be "reduced".
2. Just as the shifting of the Oyster is of no use to the Monkey from the standpoint of increasing its food-supply, a proposition in which the

"same" term is affirmed of itself is of no use from the standpoint of one coming to know the proposition or his becoming certain of its truth (i. e. it is "trifling").

3. Therefore, a Partially Identical Proposition is of no use from the standpoint of one coming to know it or his becoming certain of its truth (i. e. it is "trifling").

The minor premise gives the reason for considering as "trifling" the type of proposition that functions as the major premise. In both the formulations the minor premise is the same, which indicates that Locke is suggesting the same reason - that a proposition which manifests the "formal schema" is redundant from the standpoint of coming to know it or of becoming certain of its truth. This reason is directly applicable to the Purely Identical Propositions, which manifest the said formal schema. But the reason becomes applicable to the Partially Identical Propositions as well, when they are claimed, as by Sergeant, to be known to be true only when the "formal schema" implicit in them is made manifest. This claim is based on a confusion between the requirements pertaining to these two types of propositions; requirements pertaining to the Identical Proposition where the stronger sense of "same" is employed are demanded of the Proposition where the weaker sense of 'same' is used (4:2). Locke's argument presupposes this confusion and formulation B is constructed on the basis of such a confusion. As Odegard notes:

The argument appears sound only if we fail to spot the ambiguity and confuse the requirement that the ideas in an Identical proposition must be the same with the requirement that they must be identical.
(Studia Leibnitianna, Vol. I, 1969, p. 253)²⁷

Here Odegard uses "identical" in the sense in which I use "same". The Oyster Argument in its formulation B is unsound because its major premise is formulated on the basis of this confusion. But, it should be noted, that the argument, in its formulation B is effective in such a context, where the requirements of the two types of propositions are confused. What the argument as formulated in B purports to show is that, when it is claimed as by Sergeant, that a proposition can be shown to be true only when it meets the requirements of the Purely or Formally Identical Proposition, then the said proposition is "trifling", because the Purely Identical Proposition is of no use from the standpoint of one coming to know it or his becoming certain of its truth.²⁸ The underlying assumption of Sergeant's claim is that any proposition which meets the requirements of the Formally Identical Proposition is able to show that it itself is true by virtue of the formal schema that it exhibits as a result of meeting the said requirements. Locke's argument as in Formulation B goes against this contention. It is an argument which is unsound yet effective in a particular conceptual framework. Sergeant's whole enterprise of "Reduction" is based on the conviction that the "formal schema of identity" ("N = N") is able to show the truth of the proposition that

manifests it. The Oyster Argument does not question the truth of such a proposition but challenges the capacity bestowed upon it to show the truth of the proposition concerned. Thereby, the Oyster Argument reveals Locke's antiformalism.

Non-Identical Necessary Truths:

Locke's acknowledgment that there could be propositions which are necessarily true but do not have the "form" of the Identical Proposition also indicate antiformalism. He claims that:

... we can know the Truth, and so may be certain in Propositions, which affirm something of another, which is a necessary consequence of its precise complex Idea, but not contained in it. As that the external Angle of all triangles, is bigger than either of the Opposite internal Angles; which relation of the outward Angle, to either of the opposite Angles, making no part of the complex Idea, signified by the name triangle, this is a real truth, and conveys with it instructive real knowledge.
(IV:VIII:8)

The Proposition that Locke claims here to be true is one which does not fall into the category of either Purely or "Partially" Identical Propositions. For Sergeant, every true proposition is reducible to an Identical Proposition. Reduction is dependent on a condition that pertains to the form of the proposition to be reduced. It has either to be formally identical explicitly and then reduction is not necessary for it is already in the reduced form, or it must be implicitly "formally identical" and, for it to be so, it should be one in which one term

is contained in the other. Hence, Locke's claim that there could be a true proposition in which one term is not contained in the other undermines the place of monopoly that the form of the Identical Proposition, namely, "formal identity" has in the theory which Sergeant upholds. Locke cites some other examples of such propositions. He claims that "some few of the primary Qualities have a necessary dependence, and visible connexion one with another", as "figure necessarily supposes Extension", "Receiving or communicating Motion by Impulse, supposes Solidity" (IV:III:14); "What had a Beginning, must be produced by some-thing else" (IV:X:3); "It is impossible to conceive, that even incogitative Matter should produce a thinking intelligent Being" (IV:X:10). These may be called "conceptual necessities".²⁹ Locke's acceptance of such necessary truths which are non-identical in form, indicates his antiformalism.³⁰

Conclusion:

Locke acknowledges that a tacit Identical Proposition is involved in the recognition of the metaphysical verity of a thing (IV:V:11; II:XXXII:2; IV:V:11). He accepts that Identity and Diversity are the first sort of Agreement or disagreement of Ideas (IV:I:2). He acknowledges the perception that an idea agrees with itself as the first act of the mind (Ibid.). He also emphasizes that without this elementary perception, there can be no knowledge, imagination or

distinct thoughts (IV:I:4). He marginally comments that a man who cannot perceive an idea to agree with itself, is incapable of knowing anything (Marginal Comment No. 83, p. 369). But in all this Locke accepts Identity as a condition of discourse and the capacity to perceive that an idea agrees with itself as an initial and indispensable requirement the knower has to meet in order to know anything. But he does not go further, as Sergeant does, and claim that "Formal Identity" is the Rule of Truth - that any proposition to be true must be either manifestly identical in form (then and then only it is self-evident) or reducible to such a form (or "made-evident"); that at least the "Acute Logician" has to apprehend such a form in a proposition to know it to be true.

For Locke, neither the truth of a proposition nor the knowledge of its truth is dependent on the "form" of the proposition, namely on the "form" of the Identical Proposition.

Truth is the joining or separating of Signs (Ideas and Words) as the things signified by them agree or disagree with one another (IV:V:2 & 5). We are mainly concerned here with the joining or separating of Ideas. "Things" in this context need not be only material things external to the Mind which perceives them but can also be spiritual things and even Ideas (Complex and Abstract Ideas, IV:VI:16; IV:V:8; IV:VI:6). The ways in which such "things" are related to one another are not restricted to one of "Identity", nor even

reducible to it. Hence, true propositions in which Idea Signs are joined or separated as the "things" signified by them agree or disagree need not always be "Identical" in form.

Knowledge of the truth of propositions depends on the perception of agreement or disagreement of ideas (IV:VI:3, 12, 16; IV:V:5, 9; IV:VII:4; Second Reply to the Bishop of Worcester, Works, Vol. IV, pp. 283-290 & 373-399). Since the ways in which ideas are joined or separated in true propositions are not restricted to the relationship of "Identity", the knowledge of the truth of propositions, which depends on the perception of the connections of ideas, need not be restricted to the apprehension of an "Identity".

4:4 Locke's Attack on Maxims:

In his letter to Stillingfleet, Locke makes explicit the main target of his attack in the chapter entitled "Of Maxims" (IV:VII). He replies to the Bishop thus:

I crave leave to observe, that you tell me, that in my book, "you find a chapter of Self-Evident Propositions and Maxims", whereas I find no such chapter in my book: I have in it indeed a chapter of Maxims, but never an one intitled, "of self-evident propositions and maxims". This it is possible, your lordship will call a nice criticism; but in that chapter I, as is before observed, expressly distinguish self-evident propositions from the received maxims or axioms, which I there speak of: whereas it seems to me to be your design (in joining them in a title of a chapter, contrary to what I had done) to have it thought, that I

treated of them as one and the same thing; and so all that I said there, of the uselessness of some few general propositions, under the title of received maxims, might be applied to all self-evident propositions; the quite contrary whereof was the design of that chapter. For that which I endeavour to show there is, that all our knowledge is not built on those few received general propositions, which are ordinarily called maxims or axioms; but that there are a great many truths may be known without them: but that there is any knowledge, without self-evident propositions, I am so far from denying. . . .

(Locke's Second Reply to the Bishop of Worcester, Works, Vol. IV, pp. 369-70)

Locke does not deny the importance of self-evident propositions to knowledge. As we shall see subsequently, he does not deny self-evidence to those "received general propositions". His main attack is on the latter, which are "principally these two, "Whatsosver is, is" and "It is impossible for the same thing to be and not to be" (ibid., p. 369). In his attack on Innate Principles too, he mentions these two propositions (I:II:4, 5, 10-12, 16-28). The chapter on Maxims is mainly concerned with Locke's criticisms of these "received" or "magnified" maxims or axioms. Locke also cites certain Maxims as pertaining to particular sciences - propositions like "The Whole is equal to ~~all~~ its parts taken together" (IV:VII:10 & 11), "The Whole is greater than a Part" (IV:VII:11, IV:XII:3), "Equals taken from equals the remainder will be equals" (IV:VII:6; IV:XII:4). These are Sergeant's Particular Identical Propositions, which act as maxims of particular sciences. Locke's criticisms are first and

foremost directed against "magnified maxims" (IV:VII), and secondly against certain types of propositions used in a certain manner in particular sciences (IV:XII). His criticisms of Maxims at these two levels - at the level of particular sciences and at the foundational level of knowledge in general - go against the claims concerning Maxims that were very much in vogue then, and which Sergeant upholds. ³¹

In the first three editions of the Essay, in the chapter on Maxims, Locke ends section 10 thus:

Yes they are of great Use in Disputes, to stop the Mouths of Wranglers: but, not of much use to the Discovery of Unknown Truths, or to help the Mind forwards, in its Search after Knowledge.

(IV:VII:10 in the first three editions of the Essay and transferred to section XI in the Fourth Edition)

Locke adds a substantial section to the fourth edition of the Essay, immediately following section 10. He transfers the above note to section XI to follow the addition. This addition confirms and elaborates on what he had already stated in the earlier editions concerning the use and uselessness of Maxims and which, in short, is given in the passage quoted above. In the addition to the fourth edition he states the use and uselessness of Maxims thus:

What shall we then say. Are those General Maxims of no use? By no means, Though perhaps their use is not that, which it is commonly taken to be. But since doubting in the least of what hath been by some Men ascribed to these Maxims may be apt to be

cried out against, as overturning the Foundations of all the Sciences; it may be worth while to consider them with respect to the other parts of our Knowledge, and examine more particularly to what Purposes they serve and to what not.

- (1) It is evident from what has already been said, that they are of no use to prove or confirm less general self-evident Propositions.
- (2) 'Tis plain that they are not, nor have been the Foundations whereon any Science hath been built. . .
- (3) They are not of use to help Men forwards in the Advancement of Sciences, or new Discoveries of yet unknown Truths. . .

To come therefore to the use that is made of Maxims.

- (1) They are of use, as has been observed, in the ordinary Methods of Teaching Sciences as far as they are advanced: But of little or none in advancing them farther.
- (2) They are of use in Disputes, for silencing of obstinate Wranglers, and bringing those contests to some conclusion. . .

5 (IV:VII:11, pp. 598-601)

The points about the uselessness of Maxims undermine Sergeant's claims concerning Maxims. There are grounds to believe that Sergeant is one of those, who "talked a great deal of Maxims" (IV:VII:11, (11) - (13), p. 598). This addition, where the points about the use and uselessness of Maxims are elaborated (IV:VII:11 (1) p. 598 - (34) p. 601), as well as some others to the fourth edition of the Essay (IV:VII:4 (26) p. 592 - (12) p. 593; (17) - (23)

p. 593; IV:VII:11 (25) - (26) p. 602; IV:XII:3 (32) p. 640 - (19) p. 641) may be taken as Locke's counter-response to Sergeant's criticisms as found in Solid Philosophy Asserted and Non-Ultra... Let us examine the points about the uselessness of Maxims in greater detail.

(1) The "influence" of Maxims over other self-evident propositions:

Sergeant claims that Universal Identical Propositions exert an "influence" over less general Identical Propositions, which serve as Maxims of particular sciences and that these Maxims in turn exert an "influence" over more particular Identical Propositions (4:2). Locke questions this claim and criticizes the reasons given to justify it. He states that Maxims, whether they be the "received magnified maxims" or those which pertain to particular sciences, are of no use for confirming other self-evident propositions (IV:VII:11 (10) - (11) p. 598). He states that this is evident "from what has been already said" (Ibid.). In order to appreciate his reasons for considering Maxims as useless for confirming self-evident propositions, we have to examine what he has already said about them in the sections preceding the above comment (IV:VII:1 - 10) and in the previous editions (IV:VII: 1 - 10 & IV:XII).

According to him, when the agreement or disagreement of ideas is "perceived immediately by itself, without the intervention

or help of any other" then our "knowledge is self-evident" (IV:VII: 2 & 19). Intuitive knowledge is self evident (IV:II:1, IV:VII:19); a self-evident proposition is one which neither requires nor admits of proof. "Proof" may be taken as the establishment of the truth of a proposition through the intervention of other idea or ideas, and here "proof" is equivalent to demonstration or discursive reasoning (IV:II:2 & 3). A self-evident proposition is not demonstrated. The agreement or disagreement of its ideas is immediately perceived or intuited. "Proof" may also be taken as the intermediate idea through which a proposition is established (IV:XVII:2). A self-evident proposition does not need any other idea in order to be established.

Locke does not confine self-evidence to the said Maxims (IV:VII:3). He acknowledges that the general maxims, "what ever is, is" and "it is impossible for the same thing to be and not to be" are self-evident, but he recognizes that other propositions of Identity and Diversity are also self-evident. He states:

It is not therefore alone to these two general Propositions, Whatsoever is, is; and, It is impossible for the same thing to be and not to be, that this self evidence belongs by any peculiar right.
(IV:VII:4)

For the other propositions of Identity that are self-evident he cites "a Man is a Man", "White is White" and "a Circle is a Circle"; for the other propositions of Diversity that are self-evident he cites "a Man is not a horse", "Red is not blue" and "Blue is not red" (Ibid.).

Locke notes that self-evident propositions are rare where co-existence is involved. Anyhow he finds an example, "That two bodies cannot be found in the same place". He does not develop his case here as in the case of propositions concerning Identity and Diversity. But what he seems to assert here is that, even if one could detect a self-evident proposition of co-existence, such a proposition is not more evident than any other self-evident proposition concerning co-existence and does not need any other maxim for confirmation of its truth.

In the case of propositions of Relations, Locke finds that Mathematicians have framed many axioms concerning the relation of equality such as "Equals taken from equals, the remainder will be equals". He argues that all such axioms are "unquestionable truths" (IV:VII:6). But he questions whether they have a clearer self-evidence than other particular self-evident propositions of Relations such as "one and one are equal to two" or "if you take from the five fingers of the one hand two, and from the five fingers of the other hand two, the remaining numbers will be equal" (Ibid.). For Sergeant, "Equals taken from equals the remainder will be equals" is formally identical in sense and may be reduced to "An equal is equal to itself", which is formally identical in expression too (Reason against Raillery, Discourse III, p. 26).

What Locke claims may be summed up in his words given by

him in the concluding section of section 10, Just before he makes the addition in section 11, he states:

Self evident Propositions all known by their Native Evidence, are wholly independent, receive no light, nor are capable of any proof one from another; much less the more particular, from the more general; or the more simple, from the more compounded: the more simple, and less abstract, being the most familiar, and the easier and earlier apprehended.

(IV:VII:10, (16) - (23) p. 597; as found in the first and subsequent editions)

For him, any man capable of knowledge sees the same Idea to be the same Idea, and infallibly perceives two different ideas to be different ideas (Ibid., (24) - (26) p. 597; IV:I:4). For instance, a Man sees the Idea of Yellow to be the Idea of Yellow and not the Idea of Blue; the Idea of one to be the Idea of one and not of two. These are all self-evident propositions. Their construction is a capacity any man should possess if he is to be capable of knowledge (IV:VII:10, (30) - (34) p. 597; Cf. Marginal Comment No. 83, p. 369). Since the first exercise of the Mind is about particular Ideas, particular propositions like "White is White" and "Round is Round" occur earlier than general propositions where abstract ideas are involved. But, Locke emphasizes in the first and subsequent editions of the Essay that particular propositions like "White is White", being self-evident, need no further confirmation from general propositions (IV:VII:10). He repeatedly emphasizes that "the consideration of these Axioms can

add nothing to the Evidence or certainty of the knowledge" of more particular self-evident propositions (IV:VII:7); that "the truth of no general proposition can be known with greater certainty, nor can add anything to this" (IV:VII:4); and that "general self-evident propositions do not have any clearer self-evidence" than particular self-evident propositions (IV:VII:6; IV:XII:3, 4).

Locke's criticisms concerning the "confirming" power of general propositions over self-evident propositions have a direct bearing on Sergeant's claims. We have already noted (4:2) that in his critical response to Locke, Sergeant makes explicit three specific reasons for claiming that general Identicals have an "influence" over particular Identicals - that general Identicals provide the "reason", "confirm" the instances that fall under them and have a "greater self-evidence" (Solid Philosophy Asserted, Reflexion 19, section 4, pp. 364-365). Locke criticizes all these reasons and thereby undermines Sergeant's claim. Locke elaborates his criticisms in some of his additions to the fourth edition of the Essay. It is of interest to note that some of his marginal comments anticipate these additions.

Sergeant claims that the Universal Identical Proposition "superadds" to the particular Identicals "being truths and self-evident" (Ibid., p. 364). He thinks that on account of the generality of the structure of the Universal Identicals they are able to provide the "reason" for the truths of particular Identicals which are taken as

instances of the former. He states:

For example; Should any one go about to refund the verity of this truth, Yellow is Yellow, and not Blue, into this, because White is White and not Black, it would look more like a Similitude, than a Reason; and be ridiculous to alledge the one to be the cause of the other; because yellow is not white; nor has the notion of the one any influence upon, nor any thing to do with the Notion of the other; in regard both of them stand upon the same bottom, or on the same level. But should any Sceptrick ask why the Idea of Yellow is the Idea of Yellow? tho' tis foolish to ask it, yet, it would not look so extravagant to answer, because Everything is, what it is: And, I believe, Nature would force Mr Locke, or any other to give this for his Reason. In like manner, should he ask why a man is a man? It would look preter-natural to answer because a tree is a tree, where as, it would look very natural to answer because Everything is it self, or is what it is. Which shows to an acute Reflector, that this Universal has some kind of Influence upon the Others, which their Fellow-Particulars had not. And the reason is, because Universals do engage for all the Particulars under them.

(Solid Philosophy Asserted, Reflexion 19, section 4, pp. 364-365)

Locke detects two confusions in such a claim. According to him, Sergeant is attempting to provide a reason where it is not necessary.

Locke's marginal comment to the above passage runs thus:

There is noe reason to be given of any of these propositions for they are all self evident, and soe uncapeable to be made clearer or certainer.
(Marginal Comment No. 78, p. 365)

Secondly, Sergeant thinks that, just as Particular Propositions may be derived from a general proposition of which they are instances, particular Identicals may be derived from a general Identical. He

states:

And, the Reason is, because Universals do engage
for all the Particulars under them.
(Ibid. , p. 365)

Sergeant observes that from "Every Man is Rational", its instances like "Peter is Rational" or "John is Rational" are derived. He thinks that in the same way, from the Universal Identical "Every thing is what it is", Particular Identicals like "a tree is a tree" or "yellow is yellow" may be derived. Locke does not contest the generality of the structure of the Universal Identical propositions. He also admits that from a general proposition particular propositions which are its instances, may be derived (IV:III:31). But, what he questions is the usefulness of the Universal Identical Propositions to confirm the truth of Particular Identicals. Since the latter by definition need no confirmation, the former are redundant, if they are used to confirm the truth of the latter. The generality of the structure of the Universal Identical Proposition is redundant as a means to confirm the truth of Particular Identicals.

The third reason which Sergeant gives for his claim concerning the "influence" of universal over particular identicals concerns the type of notions involved in the respective propositions. According to him, if Notions are general and simple they are clear (4:2). This is why he gives preference to "Existence" and "Everything" over "Tree" or "Yellow". (Solid Philosophy Asserted, Reflexion 19.

section 5, pp. 365-367). Sergeant suggests that a sceptic who has doubts concerning a particular identical like "Yellow is Yellow and not Blue" will be convinced of its truth when he is presented with the Universal Identical like "Everything must necessarily be what it is" or "the same is the same with itself". The reason for this, according to him, is the simplicity and generality of Notions like "existence" (Ibid., p. 367). Locke marginally comments thus:

According to this argument, (if it were true that general Ideas were the clearer) these general maxims would be of noe use to prove that yellow is yellow, for all his doubts about what is yellow would (if that were anything material) be still the same.

(Marginal Comment No. 80, p. 367)

Hence, Locke criticizes all the three reasons which Sergeant gives for claiming that Maxims have an "influence" over self-evident propositions.

The additions which Locke makes to the fourth edition further confirm his position.

The first addition to be taken note of runs thus:

And therefore where-ever the mind with attention considers any proposition, so as to perceive the two Ideas, signified by the terms and affirmed or denied one of the other, to be the same or different; it is presently and infallibly certain of the truth of such a proposition, and this equally whether these propositions be in terms standing for more general Ideas or such as are less so, v. g. , whether the general Idea of Being be affirmed of it self, as in this proposition, whatsoever is,

is; or, a more particular Idea be affirmed of it self, as a man is a man, or whatsoever is white is white. Or whether the Idea of Being in general be denied of not being, which is the only (if I may so call it) Idea different from it, as in this other Proposition, It is impossible for the same to be and not to be; or any Idea of any particular being be denied of another different from it, as a man is not a horse; Red is not Blue. The difference of the Ideas as soon as the Terms are understood, makes the truth of the proposition presently visible, and that with an equal certainty and easiness in the less as well as the more general propositions, and all for the same reason, viz., Because the mind perceives in any Ideas, that it has the same Idea to be the same with itself; And two different Ideas to be different and not the same. And this it is equally certain of, whether these Ideas be more or less general abstract, and comprehensive.

(IV:VII:4 (26) p. 592 - (12) p. 593)


Locke questions the "confirming" capacity of "maxims" of particular sciences over self-evident propositions when he adds:

So that the Maxim, The whole is bigger than a part, can never be made use of to prove the Little-Finger less than the Body, but when it is useless, by being brought to convince one of a truth which he knows already. For he that does not certainly know that any parcel of matter, with another parcel of matter joyn'd to it, is bigger than either of them alone, will never be able to know it by the help of these two relative Terms whole and part, make of them what Maxim you please.

(IV:XII:3, (12) - (19) p. 641)

In these additions, Locke confirms what he has already said in the earlier editions. Nevertheless, these additions may be taken as Locke's response to Sergeant's claims for the "Universal" Identicals "Whatever is, is" and "It is impossible for the same thing to be and

not to be". Sergeant claims that such Propositions because of the "greater self-evidence" endowed on them by the generality of their notions (existence) and of their structure are able to instantiate and thereby confirm the truth of the particulars that fall under them. Moreover, they have an influence over the other self-evident propositions of Identity and Diversity. Locke in his marginal comment has pointed out that, if a proposition is self-evident, it does not need the support of any other reason (Marginal Comment No. 78, p. 365); that, as soon as the Idea concerned in an Identical Self-evident proposition is understood, that proposition, where the idea is affirmed of it-self becomes self-evident. If there is some doubt concerning an idea ("Yellow" is cited here) then the doubt will remain the same even in the context where a general proposition, such as "everything is what it is" is presented in support of the particular proposition (Marginal Comment No. 80, p. 367). In the addition to the fourth edition of the Essay quoted above (IV:VII:4, (26) p. 592 - (12) p. 593) he makes the same emphasis that one is certain of the truth of a proposition of Identity or Diversity, as soon as the terms signifying the ideas are made clear, and that all self-evident propositions are so evident for the same reason. Hence, he goes against Sergeant's contention that the general maxims have a greater self-evidence and that the particular self-evident propositions are so evident because of the additional reason of the confirmation of their truth by the



general propositions. Another addition concerns Sergeant's claim that Maxims have a greater "self evidence". When Locke discusses the claim that the two general maxims have a greater influence, he states that they cannot "by their influence make us know, which we did not know before, or could not know without them" (IV:VII:11, p. 602). According to him, each particular proposition concerning identity or diversity "is as clearly and certainly known in it-self, if attended to, as these general ones" (Ibid.). Then he adds:

Only these general ones, as serving in all cases are therefore more inculcated and insisted on.
(IV:VII:11, p. 602)

This is almost a word to word confirmation of his marginal comment which runs thus:

not because their evidence is greater than any more particular self evident proposition but because serving in all cases they are more inculcated and used than the other.
(Marginal Comment No. 81, p. 368)

Locke agrees that the ~~general propositions~~ have a relevance to the particular propositions on account of the inclusion of the particular idea in the general idea (IV:III:31). On account of this, he admits that such propositions are more used. He uses the term "inculcated" here in the sense that the general propositions are "forced or impressed on the minds of people by emphatic admonition or by persistent repetition".³² But, what Locke stresses here is that such greater use of general propositions is not because of their greater

self-evidence.

For Locke, knowing the truth of "a man is a man" is a matter of perceiving the "agreement" of the idea of man (the subject term) with the idea of man (the predicate term) in precisely the same way one knows the truth of "whatever is, is". Here too it is a matter of perceiving the agreement of the idea of being (the subject term) with the idea of being (the predicate term) (IV:VII:4, p. 592). To this extent the general maxim and the particular self-evident proposition are epistemologically at the same level. Both depend on the same reason to be known to be true - i. e. just as the proposition "a man is a man" is known to be true so is the proposition "whatever is, is". Both are known to be true through the perception of the agreement between the ideas and not on account of a general "formal schema".

To Stillingfleet's criticism that Locke's dismissal of general maxims as adding nothing to the evidence or certainty of knowledge overthrows "all that which hath been accounted science and demonstration and must lay the foundation for Scepticism", Locke responds thus:

I can neither in that paragraph (IV:VII:4) nor chapter find that I say, "that my first design is to prove, that these general maxims" (i. e. those which your lordship calls general principles of reason) add nothing to the evidence and certainty of knowledge in general. . . . What my design in that place is, is evident from these words in the foregoing paragraph: "let us consider whether this self-evidence

be peculiar only to those propositions, which are received for maxims, and have the dignity of axioms allowed: and here it is plain, that several other truths, not allowed to be axioms, partake equally with them in this self-evidence (IV:VII:3) which shows that my design there, was to evince that there were truths that are not called maxims... Pursuant to this design, I say, "that the consideration of these axioms" (i. e. whatsoever is, is; and it is impossible for the same thing to be, and not to be) "can add nothing to the evidence and certainty of its (i. e. the mind's) knowledge (i. e. of the truth of more particular propositions concerning identity) (IV:VII:4). 33

As we have already seen, he includes other propositions (such as those of Diversity, Co-existence and Relations) in "less general self-evident propositions", even though the propositions of Identity are the predominant members.

Hence, when Locke mentions as his first point that;

It is evident from what has been already said, that they are no use to prove or confirm less general self-evident propositions.
(IV:VII:11, p. 598)

the sections previous to this section (II) of the same chapter together with his marginal comments in Solid Philosophy Asserted contain "what he has said" on the matter. His criticisms undermine the claim that maxims are able to confirm or "super-add" to the truth of other self evident propositions that fall under them.

(2) Maxims as "foundations":

Locke's second point concerning the uselessness of maxims

pertains to their role as "foundations". He states:

'Tis plain that they are not nor have been the Foundations whereon any Science hath been built.
(IV:VII:11, p. 598)

He elaborates on this as he continues thus:

There is I know, a great deal of talk, propagated from Scholastick Men of Sciences and the Maxims on which they are built: But it has been my ill luck, never to meet with any such sciences; much less any one built upon these two maxims, What is, is; and It is Impossible for the same to be and not to be. And I would be glad to be shown where any such Science erected upon these, or any other general axioms is to be found.
(IV:VII:11; p. 598)

These passages are part of his addition to the fourth edition of his Essay. So as to assess the "anti-formalism" that is involved in Locke's attack on Maxims in their role as "Foundations", the following have to be determined:

1. The kinds of propositions that he has in mind, when he criticizes "maxims" as "foundations".
2. The sense in which he understands the term "foundation" when he criticizes maxims as "foundations".

Let us first examine the kinds of propositions that he has in mind. "General maxims" for him are principally the "magnified maxims", namely, "Whatever is, is" and "It is impossible for the same thing to be and not to be". These are respectively Sergeant's Formally Identical Universal Proposition and its negative formulation.

Locke mentions "other general maxims" as being under attack. He mentions "other maxims" like the axioms concerning Equality particularly, "Equals taken from Equals, the remainder will be equals" (IV:VII:6), "The Whole is equal to all its Parts taken together" and "The Whole is greater than a part" (IV:VII:8). It is to be noted, that these propositions are the Identical Particular Propositions of Sergeant and which are often cited by him in his works. They are formally Identical in "sense". In his chapter "Of the Improvement of our Knowledge" too, Locke cites "the whole is bigger than a part" and "if you take equals from equals the remainder will be equals" (IV:XII:3). Hence, when he says that "general maxims" are of no use as "foundations", he is not dismissing the "foundational" role of all general propositions in an unqualified manner. It is principally the "magnified maxims" or Sergeant's Formally Identical Universal Propositions and the other general maxims which in Sergeant's vocabulary are "Particular" Formally Identical Propositions which are under attack. These propositions are true because of their "formal identity". Locke's contention that "general maxims" are of no use as "foundations" goes against Sergeant's claims concerning Formally Identical Propositions as "foundations" in their role as First Principles.

To get at Locke's sense of "Foundation" and to determine the scope of his criticism of "general maxims" as "foundations", it is

best to relate this criticism with his points concerning the usefulness of "general maxims" (namely for the "teaching of Sciences as far as they have advanced" and for "silencing wranglers" in disputes) and with his final point concerning the uselessness of maxims (their uselessness in the advancement of knowledge).

Locke distinguishes between the organization of knowledge and the procedure of obtaining knowledge, which is commonly described as the "discovery of knowledge". The two points concerning the usefulness of knowledge fall within the organizational aspect of knowledge. When he criticizes maxims as "foundations" he considers their uselessness in the discovery aspect of knowledge. It is here that his third and final point concerning the uselessness of maxims becomes relevant. In the discovery of knowledge these "general maxims" are of no use while in the organizational aspect of knowledge they find a place. In the section where he deals with the third and final point of the uselessness of "general maxims" he states:

Would those who have this Traditional Admiration of these Propositions, that they think no Step can be made in Knowledge without the support of an axiom, no stone laid in the building of the sciences without a general maxim, but distinguish between the Method of acquiring Knowledge, and of communicating it; between the Method of raising any science, and that of teaching it to others as far as it is advanced, they would see that those General Maxims were not the Foundations on which the first Discoverers raised their admirable Structures, nor the Keys that unlocked and opened those Secrets of Knowledge.

(IV:VII:11, p. 599)

Here he indicates that those who assign such a foundational role to general maxims fail to distinguish between the method of raising knowledge and the method of communicating it or of teaching it to others. The stone-laying analogy pertains to the process of obtaining knowledge. Locke acknowledges the use of maxims in the organizational aspect of knowledge in which communication or teaching of what has been already known forms a part, when he continues thus:

Though afterwards, when Schools were erected, and Sciences had their Professors to teach what others had found out, they often made use of Maxims, i. e., laid down certain Propositions which were self-evident, or to be received for true, which being settled in the Minds of their Scholars as unquestionable verities, they on occasion made use of, to convince them of truths in particular instances, that were not so familiar to their Minds as those general axioms which had been inculcated to them and carefully settled in their minds. Though these particular instances, when well reflected on, are no less self-evident to the Understanding than the general Maxims brought to confirm them; and it was in these particular Instances that the first Discoverer found the Truth, without the help of the general maxims. (IV:VII:11, p. 599, addition to the fourth edition)

According to Locke,

Mr Newton, in his never enough to be admired Book, has demonstrated several Propositions, which are so many new Truths, before unknown to the World, and are farther Advances in Mathematical Knowledge: But for the Discovery of these, it was not the general Maxims, What is, is; or The whole is bigger than a part, or the like, that help'd him. These were not the Clues that led him into the Discovery of the Truth and

Certainty of those Propositions.
(IV:VII:11, (4) - (11), p. 599; addition to the
fourth edition)

Axtell has argued that Locke's "characterization of science changed over his lifetime"; that "unlike the majority of his views in the Essay, Locke's view of what constitutes the most fruitful scientific method did change" from one of natural history to a mathematico-deductive method of Galileo, made famous by the success of Newton's *Principia Mathematica*:³⁴ What exactly is Newton's method, and whether or not Locke adopted it, do not fall within the scope of this dissertation. Whether or not Locke changed his view concerning the applicability of a mathematico-deductive method to Natural Sciences, he did not change his views concerning the uselessness of the "magnified maxims" in the discovery of knowledge. The addition to the fourth edition cited above indicates that, even though he grants Newton the credit of discovering "Unknown Truths", Locke does not ascribe the discoveries to the use of these "maxims". Locke cites "what is, is" and "The Whole is larger than a Part", which are Sergeant's Formally Identical "Universal" and "Particular" Propositions respectively. In such a context, Locke's phrase "or the like" in the above passage naturally indicates such Formally Identical Propositions. Locke asserts that such Identical Propositions are useless in the discovery of knowledge.³⁵ This does not go against his claim that such "general maxims" may be of use in organizing what Newton

discovered. We shall see in Chapter V that Locke does not change his view concerning the Syllogism. In the later editions his criticisms of the Syllogism as a method of advancing knowledge become more pronounced. Hence, Locke's stand against the employment of "Maxims" (Identical Propositions) and the Syllogistic form of deduction in the discovery of knowledge remains unchanged and in fact becomes more pronounced in his later years.³⁶ Even in the earlier editions of the Essay Locke is careful to distinguish the use of Maxims in disputes from their uselessness in the discovery of knowledge. He states:

As to these General Maxims therefore, they are as I have said of great use in Disputes, to stop the Mouths of Wranglers; but not of much use to the Discovery of unknown Truths, or to help the Mind forwards; in its Search after Knowledge. For whoever began to build his knowledge on this General Proposition, What is, is; or, It is impossible for the same thing to be, and not to be: and from either of these, as from a Principle of Science, deduced a System of Useful Knowledge? Wrong Opinions often involving Contradictions, one of these Maxims, as a Touch-stone, may serve well to shew whither they lead. But yet, however fit, to lay open the Absurdity or Mistake of a Man's Reasoning or Opinion, they are of very little Use for enlightning the Understanding: And it will not be found, that the Mind receives much help from them in its Progress in Knowledge; which would be neither less, nor less certain, were these two General Propositions never thought on. 'Tis true, as I have said, they sometimes serve in Argumentation to stop a Wrangler's Mouth, by shewing the Absurdity of what he saith, and by exposing him to the shame of contradicting what all the World knows, and he

himself cannot but own to be true. But it is one thing, to shew a man that he is in an error, and another, to put him in possession of Truth: and I would fain know what Truths these two Propositions are able to teach, and by their Influence make us know, which we did not know before, or could not know without them.

(IV:VII:11, pp. 601-2)

I have quoted Locke at length because this passage makes it very clear that Locke distinguishes between "Disputation" and "the Discovery of Knowledge". He grants that the "maxims" concerned may be of use in disputation but, as "first principles" of a deductive process employed for discovering knowledge, he questions their usefulness.

Sergeant interprets Locke's admission of the usefulness of maxims in silencing disputes and winning argumentative victories as a recognition of the use of maxims in gaining knowledge (Solid Philosophy Asserted, Reflexion 19, sections 6 & 14, pp. 368-369, 381-382). This is understandable since for Sergeant argumentation and the method of obtaining knowledge are the same. If Notions are taken as the basic elements (Notions are for Sergeant content-laden) knowledge could be obtained in and through argumentation (First Principles and Syllogisms) (Method to Science, Preface, p. 12; Solid Philosophy Asserted, Preface, pp. 9-24). His use of Syllogism will be examined in Chapter V. Here it is to be noted that, for him, argumentation stands for reasoning in a set mould commencing from identical

Propositions as Maxims and proceeding through Syllogistic Deduction. Such a method was used by him to gain knowledge. Since "Maxims" play an important role in such a method, for Sergeant, they are indispensable for gaining knowledge.³⁷ But, for Locke, argumentation and the process of obtaining knowledge are not the same.

In an addition to the Fourth Edition he dismisses the use of general maxims in disputes, and observes that in the Schools disputation is made the Touchstone of Men's abilities and the criterion of knowledge, "adjudged victory to him that kept the field" (IV:VII:11, p. 600). He also realizes that sometimes an impasse or deadlock may arise between skilful contestants. To prevent such running of disputes into an "endless train of syllogisms",

... certain general Propositions, most of them indeed self-evident, were introduced into the Schools, which being such as all Men allowed and agreed in, were looked on as general Measures of Truth, and served instead of Principles (where the Disputants had not laid down any other between them) beyond which there was no going, and which must not be receded from either side. And thus, these Maxims getting the name of Principles, beyond which the Men in dispute could not retreat, were by mistake taken to be the Originals and Sources from where all knowledge began and the Foundation whereon the Sciences were built. Because, when in their Disputes they came to any of these, they stopped there, and went no farther, the Matter was determined. But how much this is a mistake hath been already shewn.

(IV:VII:11, (20) - (33), p. 600)

Just because a proposition accepted by both parties in a dispute

serves to end a dispute, that does not mean that the proposition concerned is of use in the discovery of knowledge. The proposition may serve to act as an ultimate principle among the disputants but the proposition concerned does not become a "principle" in the discovery of knowledge, as an original and source from which all science is built. When Sergeant claims in Solid Philosophy Asserted that,

... it is impossible we can make an ordinary, much less any Speculative Discourse, but the Discourses must agree in something that is either Foreknown or (at least) Forgranted; for, if the two Disputants disagree in all their Principles and Grounds, and one of them still denies All the other affirms, tis impossible they should Discourse together at all.
(Solid Philosophy Asserted, Reflexion 19, section 6, pp. 368-9)

Locke underlines the word "Discourses" in the text of his copy of Solid Philosophy Asserted (p. 368) and adds in the margin "he means disputants but Mr Locke speaks not of disputants, but of knowledge" (Marginal Comment No. 82, p. 368). For Locke, since disputation and argumentation are not identified with the method to knowledge, just because the maxims are of use in argumentation and in disputation, they do not necessarily become originals or sources from which knowledge is discovered.

For Locke, the uses of maxims as teaching or communicative aids and in silencing disputes fall within the organizational aspect of knowledge as distinct from the discovery of knowledge. He finds the

maxims useless as foundations in the "discovery" aspect of knowledge. He notes:

It having been the common received Opinion amongst Men of Letters, that Maxims were the Foundations of all Knowledge; and that the Sciences were each of them built upon certain praecognita, from whence the Understanding was to take its rise, and by which it was to conduct itself, in its enquiries into the matters belonging to that Science; the beaten road of the Schools has been, to lay down in the beginning one or more general propositions, as Foundations whereon to build the Knowledge that was to be had of that subject. These doctrines thus laid down for foundations of any Science, were called Principles, as the beginnings from which we must set out and look no farther backwards in our enquiries, as we have already observed.

(IV:XII:1)

Here Locke indicates his awareness of a tendency to consider the maxims as "foundations" in the context of the discovery of knowledge. He uses the term "principle" to indicate the role of maxims as that from which we set out and has nothing antecedent to it. He also indicates that maxims here serve as principles for the obtaining of knowledge, guiding the Understanding in its search after knowledge. In section 8 of his chapter of Maxims he brings out the two main features of maxims in their role as "foundations" and both these features are implicit in the above passage.³⁸ He puts it thus:

In the next place let us consider, what influence these received Maxims have, upon the other parts of our Knowledge. The Rules established in the Schools, that all Reasonings are ex praecognitis, et praeconcessis, seem to lay the foundation of all

other Knowledge, in these Maxims, and to suppose them to be praecognita; whereby, I think, is meant these two things: First, That these Axioms, are those Truths that are first known to the Mind; and, secondly, That upon them, the other parts of our Knowledge depend.
(IV:VII:8)

The temporal priority of "Maxims" and the "dependence" of the other parts of knowledge on them are closely inter-related, as is best seen in Sergeant's presentation of Identical Propositions as First Principles (4:2).

Locke criticizes both these claims. According to him, a child certainly knows that a stranger is not its Mother and that its Sucking Bottle is not the Rod, long before he knows the Maxim that "Tis impossible for the same thing to be and not to be" (IV:VII:9). He cites other examples, particularly from Mathematics, to establish his claim that the maxims are not the first known and that several other truths are known before them and without their help (IV:VII:4, 10; IV:XII:3, 4). Locke's criticism provokes Sergeant. His response manifests what is really involved in the "temporal priority" claim. He replies to Locke thus:

He proves the First, because Particulars are known before Universals. I understand him not. Knowledge may be either considered, as instilled by insensible Degrees, into Infants, or the Ruder Sort; or, as Reducible to the Clearest Grounds, by Men of Art. Now, I cannot think that Mr Locke imagins, that we, or any Man, hold that Maxims were meant for the Infants, or the Vulgar; or, that either of

them ought to be taught General Principles at first, and by them attain to Particular Knowledge, nor, that the users of Maxims ever intended them for that end. Wherefore, all his Discourses to prove them not to be First known, may be allowed to have their full force, and yet hurt no body, being wrong levelled. The point then is, how they may avail Artists or Speculators.

(Solid Philosophy Asserted, Reflexion 19, section 4, pp. 363-4)

In Sergeant's view, maxims are first known in the "order of knowledge" adopted by and pertinent to "Men of Art", as distinct from that of infants and the Vulgar. It has to be noted here that Sergeant is not propagating a distinction between a logical order (in the sense of a non-temporal order where the relations between the maxims and other propositions are of a non-temporal nature regulated by logical rules of transformation) and a temporal order, which reveals the history of discovering truths or of becoming certain of truths. For him, the "order of knowledge" of the "Men of Art" is very much a "Natural order" exhibiting the manner in which these men obtain knowledge of the highest quality. In this order, the Maxim "Existence is Existence" is first known. This is the most self-evident Proposition on account of its "formal identity" ("N = N") and the generic notion of "existence" involved in it (4:2). If self-evidence and the content of propositions are taken into consideration one is not giving a logical order of truths that is exclusive of the history of discovering or becoming certain of truths. Sergeant goes to the

extent of claiming that not only the "Men of Art" but also any one capable of knowledge will first know this maxim (Non-Ultra . . . , sections 6, 10, 11, pp. 597-599). In such a context, Locke's counter-examples indicating that in the case of children and the "vulgar" these maxims are not first known are pertinent to Sergeant's contention, unless, as Locke himself marginally comments,

knowledge then it seems was not meant for Infants
or the Vulgar.

(Marginal Comment No. 77, p. 363)

What Locke claims is that, if the history of obtaining knowledge is taken into consideration, then it is a historical fact that particular instances are known before the general propositions. His citation of the child, young lad and country wench knowing particular truths before general maxims are counter examples which are pertinent to Sergeant's claim and undermine it (IV:VII:9; IV:XII:3). The theory underlying Locke's criticism of the "temporal priority" thesis of maxims is found in the following passage:

For that which makes the Mind assent to such Propositions, being nothing else but the perception it has of the agreement, or disagreement of its Ideas, according as it finds them affirmed or denied one of another, in Words it understands; and every Idea being known to be what it is, and every two distinct Ideas, being known not to be the same, it must necessarily follow, that such self-evident Truths, must be first known, which consist of Ideas that are first in the Mind: and the Ideas first in the Mind, 'tis evident, are those of particular Things, from whence, by slow degrees,

the Understanding proceeds to some few general ones; which being taken from the ordinary and familiar Objects of Sense, are settled in the Mind, with general Names to them.
(IV:VII:9; Cf. IV:I:4; IV:VII:4 (26) p. 592 - (12) p. 593)

According to Locke, both the maxims and their particular instances are self-evident because in both the agreement of the ideas is immediately perceived, without the intervention or help of any other (IV:VII:2).³⁹ But, since particular ideas (or ideas of particular things) are temporally prior to general ideas, particular propositions are prior to general ones. Therefore, the "maxims" on account of their generality, have to be temporally posterior to particular propositions.

Locke's attack on the "temporal priority" thesis is connected with his attack on the "dependency" thesis. He finds that there are truths, which are self-evident, but do not belong to the category of maxims (i. e. these truths are neither the magnified maxims nor those which belong to particular sciences). He also finds that many truths may be known before the maxims are known. Therefore, he finds that it is possible to know a truth without the help of the maxims concerned, and this possibility undermines the "dependency" thesis (IV:VII:10), according to which a proposition is known only a maxim. Locke claims that without maxims like "The whole is equal to all its parts taken together" one may know that one and two are equal to three (IV:VII:10). In "Of the Improvement of our Knowledge" (IV:XII) he claims that one may know several truths without Maxims like "If

you take equals from equals the remainder will be equals", and "The Whole is bigger than a Part" (IV:XII:3 & 4). Locke's attack on the claim that Maxims serve as "criterion of truth" and have an "influence" over other self-evident propositions may be taken as facets of his attack on the "dependency" thesis.

He no doubt acknowledges the importance of the capacity to recognize the sameness and difference of ideas as a condition which the knower has to meet in order to know anything. Knowledge for Locke "presupposes the ability to recognize difference and sameness but it does not entail an awareness of general principles".⁴⁰ When Sergeant emphasizes that a man who is divested of the principles of Identity and Non-Contradiction will not be able to attain any truth (Solid Philosophy Asserted, Reflexion 19, p. 369), Locke marginally comments thus:

A man divested is quite bereft or incapable of knowing them to be true is incapable of all knowledge for he is incapable of knowing the same to be the same and different Ideas to be different. But the same would happen to one that knows not that a mangastan is a mangastan and not a Turnip.
(Marginal Comment No. 83, p. 369)

For Sergeant one has to be aware of the general principles in order to know anything. For Locke one has to have the ability to recognize sameness and difference. When he describes the first sort of agreement or disagreement of ideas as "the first act of the mind", it is once again the capacity to recognize the sameness or difference of

ideas that is highlighted and not the priority of general maxims (IV: 1:4).⁴¹ He recognizes this capacity to see an idea to be the same with itself or two distinct ideas to be different from one another as a necessary condition for knowledge to be attained (Ibid.) but this does not imply that he makes the maxims of Identity and Non-Contradiction "foundations" in the discovery aspect of knowledge. Sergeant claims that Identical Propositions serve as "foundations" in the sense that,

They are the first, and most evident Truths, fixed and Rivetted by Rational Nature, in our Understanding, the Bottom of which they lie... if those be False, or we be not pre-imbued with them, we could have no Truth, nor any Knowledge at all. They are such deep-laid Foundations, that all Science is rais'd upon them.

(Solid Philosophy Asserted, Reflexion 19, section 14, pp. 381-382) See p. 236 Quote.

Here Sergeant no doubt emphasizes the presuppositional character of maxims. But, as we have already noted, he does not stop with such a characterization. As this passage indicates, for him, all truth and knowledge of the truth is dependent on Identical Propositions and the apprehension of Identities. No knowledge can advance without apprehension of Identities. It is such a claim that Locke criticizes. For him, knowledge is dependent on the perception of the connections of ideas and not on the apprehension of Identities. This is why he marginally comments to the above passage, thus:

Knowledge has its bottom only in the perception of the agreement or diversity of any two ideas and is neither founded on nor can be reduced to Identical Propositions.

(Marginal Comment No. 93, p. 382)

His emphasis on the perception of the connections of ideas in the advancement of knowledge naturally leads him to assert thus in the final section of his chapter on Maxims:

So that, if rightly considered, I think, we may say, That where our Ideas are determined in our Minds, and have annexed to them by us known and steady Names under those settled determinations, there is little need or no use at all of these Maxims, to prove the agreement or disagreement of any of them.

(IV:VII:19)

Sergeant thinks that Locke virtually lays aside these Maxims.

When Sergeant comments that in the Lockean context "we must be obliged to quit all our self-evident maxims as of little use" (Solid Philosophy Asserted, Reflexion 20, section 11, p. 406), Locke marginally comments thus:

Who is it obliged him to quit them?
(Marginal Comment No. 102, p. 406)

When Sergeant argues against Locke's position, that sometimes Maxims may be dangerous because they may generate contradictions, Sergeant observes that Locke is determined in laying aside general Maxims. But here also Locke marginally comments thus:

Who says they should be laid aside?
(Marginal Comment No. 87, p. 374)

In the Fourth Edition of his Essay Locke confirms his position thus:

'Tis to shew Men, that these Maxims, however cry'd up for the great guards to Truth, will not secure them from Error in a careless loose use of their words, that I have made this Remark. In all that is here suggested concerning their little use for the Improvement of Knowledge, or dangerous use in undetermined Ideas, I have been far enough from saying or intending they should be laid aside, as some have been too forward to change me. I affirm them to be Truths, Self-evident Truths; and so cannot be laid aside. As far as their influence will reach, 'tis in vain to endeavour, nor would I attempt to abridge it. But yet without any injury to Truth or Knowledge, I may have reason to think their use is not answerable to the great Stress which seems to be laid on them, and I may warn Men not to make an ill use of them, for the confirming themselves in Errors. (IV:VII:14, (29) - (36), p. 605; addition to the fourth edition)

Locke may be having Sergeant in mind when he makes the above addition. Locke's marginal comments (No. 's 102 & 87) anticipate this addition. Sergeant lays a great "stress" on these Maxims as "foundations" in the discovery aspect of knowledge. It is this which is questioned by Locke. In the context of the "improvement of knowledge" these maxims are laid aside by Locke. According to him, the "form" as expressed by the Identical Propositions is not sufficient to generate knowledge.⁴² If the ideas are not perceived in a clear manner and, if they are not properly determined, then no amount of the imposition of a "form" will help one to get at knowledge. On the other hand, if the ideas are "loose, wrong, or unsteady, and if we resign

our thoughts to the sound of words", the general maxims will confirm us in our mistakes and help us generate contradictions (IV:VII:12, 15, 16). In such cases, the truth that may be derived from such general maxims is verbal and does not pertain to the world outside us (IV:VII:15). In all this, Locke questions the use of maxims (Sergeant's Identical Propositions and their negative formulations) as foundations in the "discovery of knowledge".

In "Of the Improvement of our knowledge", after criticizing the Maxims (IV:XII:1-5), Locke attempts to formulate a Rule for the improvement of our knowledge. He states:

Since the Knowledge of the Certainty of Principles, as well as of all other Truths, depends only upon the perception, we have, of the Agreement, or Disagreement of our Ideas, the way to improve our knowledge, is not, I am sure, blindly, and with an implicit Faith, to receive and swallow Principles; but is, I think, to get and fix in our Minds clear, distinct and complete Ideas, as far as they are to be had, and annex to them proper and constant Names. And thus, perhaps, without any other Principles, but barely considering those Ideas and by comparing them one with another, finding their Agreement, and Disagreement, and their several Relations and habitudes; we shall get more true and clear knowledge, by the conduct of this one Rule than by taking up Principles and thereby putting our Minds into the disposal of others. (IV:XII:6)

The Rule may be spelled out thus:

1. Get and settle in our Minds determined Ideas of Things: make them as complete as we can.

2. Find out Intermediate Ideas which may shew us the Agreement, or Repugnancy of other Ideas which cannot be immediately compared. (IV:XII:14)

According to Locke, "these two (and not the relying on Maxims, and drawing consequences from some general-propositions) are the Right Method of improving our knowledge in the Ideas of other Modes besides those of quantity, the Consideration of Mathematical Knowledge will easily inform us" (IV:XII:15). Sergeant is unable to understand Locke's dismissal of Maxims and his presentation of the above Rule with its two sub-rules. Sergeant finds it non-evident and is thus unable to accept it as a First Principle (Solid Philosophy Asserted, Reflexion 20, sections 10 & 11, pp. 404-405). But Locke does not present this Rule as a self-evident Maxim nor does he place it in the category of the "General Maxims" which he criticizes. To appreciate the nature and function of Locke's Rule, Noxon's mode of analysis of Hume's "Copy Principle" may be adopted.⁴³ In the context of such an adoption, Locke's Rule has the following features:

1. It is not Tautology. Sergeant criticizes Locke that his Rule is not a legitimate maxim because it is not self-evident as the Law of Identity is. (Solid Philosophy Asserted, Reflexion 20, section 10, pp. 403-4). Locke does not claim that his Rule is self-evident.
2. The Rule is not a contingent generalisation. It is based on and follows from the definition of "knowledge of the Certainty of Principles". He states that, since such a certainty depends

only upon the perception we have of the agreement or disagreement of our Ideas, the way to improve our Knowledge depends on the Rule he formulates (IV:XII:6). This Rule is based on a theoretical analysis rather than an empirical generalization (IV:I:1 & 2)

3. The Rule is not a Psychological Law, describing how the Mind always works when it attains knowledge.
4. It may be considered as a Rule of Procedure, a methodological principle, prescriptive rather than descriptive. It is a Rule to be followed when knowledge is to be attained. The manner in which Locke presents the Rule along with its sub-rules indicates its prescriptive nature. (IV:XII:6-15)

According to Locke, advancement in knowledge is made possible through the perception of the connections of ideas. This rule prescribes the manner of perceiving these connections. He cites Mathematics, particularly Algebra, as a discipline where much progress is achieved. He ascribes this progress to the regulated perception of the connection of determined ideas. According to him, this is made possible not by the use of "general maxims" as "foundations", but by the adoption of the above-mentioned methodological principle (IV:XII:15; IV:III:3; Conduct of the Understanding, sections 6 & 7, Works, Vol. III, pp. 220-23). Hence, Locke's presentation of the above Rule may be taken as a challenge to the view that "Maxims" regulate advancement in knowledge in their role as "foundations".

When Locke criticizes Maxims as "foundations" his criticism

is directed against Identical Propositions, namely, the "Universal" Identical Propositions, which are believed to be applicable to knowledge in general, and the "Particular" Identical Propositions, which pertain to particular disciplines. He does not question the truth or self-evidence of these maxims. But he does not find any use in them as principles for advancing knowledge.

Locke's use of first principles:

When Locke discusses "General Maxims" with reference to the advancement of knowledge (IV:VII:11, point 3), he categorically denies their use. But, in Of the Conduct of the Understanding when he discusses "Fundamental Verities", he states:

There are fundamental truths that lie at the bottom, the basis upon which a great many others rest, and in which they have their consistency. These are teeming truths, rich in store, with which they furnish the mind, and, like the lights of heaven, are not only beautiful and entertaining in themselves, but give light and evidence to other things, that without them could not be seen or known. Such is that admirable discovery of Mr Newton, that all bodies gravitate to one another, which may be counted as the basis of natural philosophy; which, of what use it is to the understanding of the great frame of our solar system, he has to the astonishment of the learned world shown; and how much farther it would guide us in other things, if rightly pursued, is not yet known.

(Conduct of the Understanding, section 43, Works, Vol. III, p. 282)

Here Locke acknowledges the use of the Law of Gravity in the context of the discovery of knowledge and significantly in the language of

Sergeant (Cf. Non-Ultra . . . , section 9, p. 598). But, the Law of Gravity does not fall into the category of the "general maxims" (i. e. Sergeant's Formally Identical Universal and Particular Propositions). Locke points out that Newton's discoveries were not due to these maxims (IV:VII:11).

Similarly, in the case of the discovery of religious knowledge, Locke dismisses the use of the "general maxims" and stresses that knowledge here is obtained through the perception of the connections of ideas aided by divine revelation (IV:VII:11, p. 598). On the other hand, he allows the use of the "Great Law of Love" namely "Love your neighbour as yourself", as a fundamental verity regulating human society and as a criterion of deciding the moral worth of actions (Conduct of the Understanding, section 49, Works, Vol. III, p. 282).

He criticizes the use of non-evident and non-certain principles, as those axioms which are accepted "without questioning or examination" or "by our blind assent" (Conduct of the Understanding, section 6, Works, Vol. III, pp. 216-18; IV:XII:4 & 5). But, on the other hand, in Mathematics he allows the use of "Intermediate Principles", which may not be "self-evident" in the process of obtaining mathematical knowledge (Conduct of the Understanding, section 21, Works, Vol. III, pp. 243-4; IV:XII:2 & 3).

Locke allows the use of general propositions as a part of the "perceptual process" of obtaining knowledge. From such a point of

view he acknowledges their use. As we have already seen, the Proposition for him is by definition the joining or separating of ideas (IV:V:2 & 5). Hence, a general proposition is the joining or separating of general or abstract ideas. Such a proposition is known (or one becomes certain of its truth) when one perceives the connection between the general ideas. Hence the general proposition and the knowledge of it are within the scope of the "bottom" of knowledge, which for him is the perception of the agreement or disagreement of ideas (Marginal Comment No. 93, p. 382). What he is criticizing is the use of something extraneous to the "perceptual process" of attaining knowledge, considered as regulating it. The "formal schema" that the Identical Propositions (whether they be "Universal" or "Particular") exhibit may be the expression of the Metaphysical Verity of things and hence have a metaphysical basis. But, according to Locke such a formal schema is extraneous to the "perceptual process". He questions the claim that such a "formal schema" is the "foundation" of knowledge. Locke's acceptance of general truths does not imply that "Formalism" creeps into his account of Maxims.⁴⁵ For him, general truth is not equivalent to a formal schema. The knowledge of general truths can be obtained only by perceiving connections between the appropriate general or abstract ideas, and therefore, not by empirical means. This may make Locke less of an empiricist but does not thereby make him a "formalist".⁴⁶ These general

propositions are dependent for their truth on the connections of idea, and they are known to be true through the perception of the connections of the ideas concerned. Neither the truth nor the knowledge of the truth of these general propositions depend on the "formal schema" which the Formally Identical Propositions exhibit.

Conclusion:

For Locke, "Maxims" may be of use in the organizational aspect of knowledge, and in settling disputes, but are of no use for "confirming" the truth of other self-evident propositions, and, as "foundations" in the advancement of knowledge. His attack upon "maxims" is really one which is levelled against the claim made for the "formal schema" which Formally Identical Propositions (Universal and Particular) exhibit. Hence, his critique of Maxims, with his criticism of Formally Identical Proposition as "criterion of truth" (4:3) may be taken as a double-faced attack on the "Formalism" which Sergeant represents. The marginal comments confirm what Locke had said in the earlier editions of the Essay (Marginal Comments No. 's 78, 77, 93) or anticipate his additions to its fourth edition (Marginal Comments No. 's 92, 78, 93, 81, 102, 87).

NOTES AND REFERENCES -- Chapter IV

1. Harrison, J. & Laslett, P., The Library of John Locke, Oxford, 1965, p. 249.
2. Locke, J., Some Thoughts concerning Reading for a Gentleman, Works, Vol. III, pp. 294-5.
3. When Tillotson died, Locke wrote to Limborch thus:

I can now scarcely find anybody I can consult about points of divinity. I have indeed been robbed, to my great injury and sorrow of a friend who was both candid and sincere to whom I was endeared by the intercourse of many years.

(11 December, 1694, as cited by Maurice Cranston in John Locke - A Biography, 2nd ed., 1959, p. 386. For the ties between Locke and Tillotson see ibid., pp. 124-25, 358, 363, 388; Aaron, R., John Locke, 3rd ed., 1971, p. 98)

4. Harrison, J. & Laslett, P., op. cit., p. 230.
5. Sergeant, J., Solid Philosophy Asserted, The Epistle Dedicatory, p. 5; Non-Ultra...
6. Aquinas, T., Contra Gentiles I, 36; Summa Theologica I Q 13 a 12; Cf. Hoenen, Reality and Judgment according to St. Thomas, tr. by H. H. F. Tiblier, Chicago, 1952, pp. 74-5.
7. K. Digby anticipates Sergeant here (The Second Treatise declaring the Nature and Operations of Man's Soule..., 1645, Ch. II, pp. 365-66).
8. The following note Sergeant's resort to Metaphysics:
 1. Yolton, J. W., Locke's Unpublished Marginal Replies to Sergeant, J. H. I., 1951, pp. 538-46; John Locke and the Way of Ideas, 1968, Ch. III, pp. 77-86.

Armstrong, R. L., John Locke's Doctrine of Signs: A New Metaphysics, J. H. I., 1965, pp. 370, 373-77.

9. If we would prove that Virtue is Laudable, we shall find that the Word (Laudable) signifies (deserving to be spoke well of) and Practical Self-Evidence, as well as Reason, telling us, that, our Speech being nothing but Signes agreed on by Mankind to express their Thoughts, that thing deserves to be well spoke of which deserves to be thought well of and that's what according to the true nature of him that speaks or thinks, or to the true reason, deserves to be judged by him right and good, that is, thought well of. To which add that virtue is nothing but a disposition to act according to true reason, it comes to appear that (Virtue) and (Laudable) have something coucht in their notions that is formally identical; and that this Proposition (Virtue is Laudable) is full as Certain as What's according to Reason is according to Right Reason or What's Laudable is Laudable, which seen, Perfect Knowledge is had of the Truth of (Virtue is Laudable) that is, 'tis the Proposition Evidently Concluded or Demonstrated. (Method to Science, Book III, section 15, p. 257)
10. 'Albius' is a pseudonym for Thomas White. Bradish, N., John Sergeant...., The Monist, 1929, pp. 575-6.
11. J. W. Yolton gives a section of this letter in John Locke and the Way of Ideas, 1968, p. 82. The letter will be published in E. S. De Beer's The Correspondence of John Locke, Oxford, Clarendon Press.
12. J. Gibson notes the use of "maxims" in particular sciences as well as in knowledge in general. For instance, "The equal to all its parts" is a maxim of Mathematics while the Law of Identity the Maxim of knowledge in general. (Locke's theory of Knowledge and its historical relations, 1917, p. 186)
13. Yolton, J. W., op. cit., p. 86.
14. There is controversy concerning the nature of presuppositions - whether they could be tacit premisses or not. See: Collingwood, R. G., An Essay on Metaphysics, Oxford, Clarendon Press, 1940, pp. 29-33; Strawson, P. F., Introduction to Logical Theory, Methuen & Co., Ltd., London, 1952, re-printed 1964, pp. 18, 175-9, 213.

15. Sergeant connects the metaphysical verity of things with God:

All the Verity they have is their Metaphysical Verity, or they being truly what they are. And they partake this from the Ideas in the Divine Understanding, from which they unerringly flow, and which are essentially Unchangeable. By which we see how the God of Truth is the sole Author of all Truth that is in us, and how he does (ordinarily) communicate it to us, viz by fixing unalterably the natures or Essences of things; from which, being thus Established and imprinted on our minds by our senses, all Science and Truth in us have their Certainty originally.

(Method to Science, Book I, Lesson I, p. 5)

There is difference between "R¹" and the other three "R²", "R³", "R⁴" and "R⁵". Sergeant does not claim "E = E" can be "reduced" to "G = G". As Yolton observes "he employs a principle very similar to Descartes's that God is the author of goodness and truth and hence would not let us be deceived" (Locke's Marginal Replies to John Sergeant, p. 539)

16. Yolton, J. W., Locke and the Compass of Human Understanding, 1970, Ch. III, pp. 90-91. Yolton notes the use of the method of deducing from principles during Locke's period. He selects Sergeant as one of those who used such a method.

17. The Port Royal Logic states:

It is not sufficient to conceive these two terms - the mind must also unite or separate them and this action of our mind is denoted... by the verb IS, either alone, when we affirm, or with the negative particle, when we deny. Thus, when we say God is just; God is the subject of that Proposition, just is the attribute; and the word is marks the operation of my mind in affirming, that is to say, in connecting together these two ideas, God and just as agreeing with each other. And, if I say God is not just; is being joined with the negative particle not,

signifies the contrary action to that of affirming, to with that of denying, by which I regard these two ideas as repugnant to each other. . . The Substantive verb thus employed is called the Copula.

(The Port-Royal Logic, tr. from the French (fifth edition) 1683) by Thomas Spencer Baynes, 1861, p. 111)

The similarity between the Port-Royal Logic and Locke on the interpretation gives to "copula" and thereby to "proposition" in general may be added to R. Woolhouse's list of similarities between them (NQ, July 1970, pp. 257-58).

18. Leibniz uses the term "Semi" to describe such propositions (New Essays concerning Human Understanding, tr. by Langley, A. R., 1949, p. 492).

Some scholars have called "Trifling Propositions" analytical Propositions: Gibson, J., Locke's Theory of Knowledge . . . , 1917, p. 317; O'Connor, John Locke, 1967, p. 174; Pap, A., Semantics and Necessary Truth, London, p. 59; Perry, David L., Locke on Mixed Modes, relations, and Knowledge, J. Hist. of Phil., Vol. V, No. 3, 1967, p. 285; Ryle, G., Locke on the Human Understanding, 1933 in Locke and Berkeley, ed. by Armstrong and Martin, 1968, p. 30; Woolhouse, R. S., Locke's Philosophy of Science and Knowledge, 1971, pp. 11-16.

19. Yolton, J. W., Locke and the Compass . . . , 1970, p. 216.

20. Locke's replies to Stillingfleet, Works, Vol. IV, pp. 380-81.

Samuel Bold finds two main objections raised against the Essay. One of them concerns the doctrine of "certainty of knowledge". Bold states:

First, Certainty of Knowledge is to perceive the Agreement or Disagreement of Ideas as expressed in any Proposition. This (saith Mr. Locke) we usually call knowing, or being certain of the Truth of any Proposition (Essay; B 4 ch. 6 section 3).

(S. Bold, Some Considerations on the Principal

Objections and Arguments which have been published against Mr. Locke, London, 1699)

21. Odegard, D., Locke, Leibniz and Identical Propositions, Studia Leibnitianna, Vol. I, 1969, p. 242.
22. This argument is given in Draft A (1671) of the Essay (Aaron, R. & Gibb, ed., section F.74b 28, pp. 49-50).
23. An object of superstitious dread; something irrationally revered; originally from the practice of magic of the negroes of the Guinea Coast - Oxford English Dictionary.
24. Odegard, D., op. cit., pp. 250-51.
25. Ibid., p. 251.
26. Yolton, J. W., Locke and the Compass of Human Understanding, 1970, Ch. IX, pp. 215-18.
27. Odegard, D., op. cit., p. 253.
28. His views became explicit as early as 1666 when he replied to Tillotson (Letter of Thanks, pp. 9-11; Method to Arrive at Satisfaction in Religion (1671); Reason against Raillery (1671)). Hence Locke's argument, though formulated in an early draft of the Essay, can reasonably be interpreted as a response to these views.
29. I am here adopting J. W. Yolton's terminology, op. cit., Ch. III, pp. 82-83.
30. According to D. Odegard "Locke's position on necessary truth and knowledge of necessary truth represents another way in which he basically falls outside the empiricist's camp" (Locke as an Empiricist, Philosophy, Vol. XL, No. 153, July 1965, p. 193). One reason for Odegard's conclusion is that Locke holds "that not all categorical necessary truths have an identical or semi-identical form" (Ibid.). Odegard thinks that Locke is "no logical empiricist" in an "sense which contends that all necessary truths are formal truths" (Ibid.). In the context of Sergeant's Formalism, Locke's stand is explicitly anti-formalistic.
31. See: Gibson, J., Locke's Theory of Knowledge..., 1917,

Ch. VIII, section 4, pp. 186-87; O'Connor, John Locke, Dover Publications Inc., 1967, p. 172; Yolton, J. W., Locke and the Compass of Human Understanding, 1970, p. 90.

32. Oxford English Dictionary.
33. Locke's Second Reply to the Bishop of Worcester, May 4, 1698, Works, IV, pp. 372-73.
34. Axtell, L., The Educational Writings of John Locke, London, Cambridge, 1968, pp. 72-3.
35. As Yolton observes:

It is important to note, however, that it is not observational truths, the truths of natural histories, to which these fundamental verities are opposed: (for e. g. Newton's principle of gravitation is said by Locke to be 'the basis of natural philosophy', a fundamental verity): it is rather the trivial and uninformative truths of logic which are criticized.

(Locke and the Compass of Human Understanding, 1970, p. 88)

The "maxims" (particularly Identical Propositions as Maxims) form a major part of the "uninformative truths of logic".

36. Yolton states: "Had Locke changed his views on the method to science after the publication of Newton's work, there is no reason why he could not have incorporated any such changes into the various editions of his Essay, showing how or where demonstration might come into the science of nature" (Ibid., p. 88). In the additions Locke makes to the fourth edition of the Essay, he confirms and elaborates on his critique of "Maxims" (i. e. Identical Propositions and their negative formulations) and of Syllogistic Deduction. As Yolton notes, "The passages in the Conduct, the Elements, and one or two in the Education at least give some indication that Locke recognised the usefulness of principles and demonstrations in science" (Ibid.). But, these "principles" were not the "maxims" Locke criticizes nor these demonstrations, the "syllogistic deductions". As Yolton himself notes, the "principles"

were "fundamental verities" like Newton's Principle of Gravitation. We will see in Chapter V how Locke grants the use of "demonstration" as he interprets it, as of use in Knowledge but at the same time condemns "Syllogistic deduction". Locke's doctrine is very similar to that of Tillotson. In Sermon I, (Vol. I) he states that mathematical demonstration based on Identical Propositions is not applicable in all cases and even when applicable such demonstrations do not make one advance in "knowledge" (Works of Tillotson, Preface to Vol. I and Sermon I, "The Wisdom of being Religious"). In the Sermon he "endeavours to show that the proposition 'Jamaica is an Island' cannot be known through demonstration from Identical Propositions like the ones which he cites in the Preface (e. g. A Rule is a Rule, Faith is Faith).

37. Yolton, J. W., Locke's Unpublished Marginal Replies, J. H. I., 1951, p. 544.
38. Gibson, J., op. cit., Ch. VIII, section 5, pp. 187-8.
Wilson, Margaret, Leibniz and Locke on "First Truths", J. H. I., 1967, pp. 349-55.
39. According to Wilson, Locke denies that what he himself calls particular "instances" of maxims have any intrinsic relationship to the maxims of which they are instances. In Locke's view, maxims and instances are separate and independent truths, connected only extrinsically, in as much as the mind exercises the same sort of perception in approaching the truth of both (Ibid., p. 350). In her view "implicit in this passage (IV:VII:4) is Locke's conception of knowledge as involving essentially a comparison of the ideas signified respectively by the subject and predicate terms of a proposition. . . Locke seems to hold a separate intuition of the "sameness" of the ideas. . . is necessary to establish the truth of each of the infinitely large number of Identicals" (Ibid., p. 350).
40. Yolton, J. W., John Locke and the Way of Ideas, 1968, p. 81.
41. Wilson, Margaret, op. cit., p. 350.
42. Locke confirms his position in Of the Conduct of the Understanding, when he discusses Fundamental verities. He states:

How much of many young men's time is
thrown away in purely logical inquiries,

I need not mention. This is no better than if a man, who was a painter, should spend all this time examining the threads of the several cloths he is to paint upon, and counting the hairs of each pencil and brush he intends to use in the laying on of his colours. (Section 43, Works, Vol. III, p. 281)

The comparison with the painter preparing his brushes was a common one in attacks against formal logic (Yolton, J. W., Locke and the Compass of Human Understanding, 1970, p. 88 footnote).

43. Noxon, James, Hume's Philosophical Development, A Study of his Methods, Oxford, Clarendon Press, 1975, Part IV, section 3, pp. 138-148.
44. Locke distinguishes this principle from the "association of ideas" which he presents in II. XXXIII. The latter more properly belongs to descriptive psychology for here he describes how we associate ideas and the psychological factors which affect our association (II:XXXIII:2-18). See Yolton, J. W., op. cit. 1970, pp. 102-103.
45. M. Wilson thinks that "formalism" creeps into Locke's account since he says that all that the maxim, "whatsoever is, is", proves amounts to no more than this, that the same word may with great certainty be affirmed of itself; without any doubt of the truth of any such proposition" (IV:VIII:2-3). Miss Wilson argues that "the same word may be affirmed of itself" is a general truth and hence a "formal schema". Locke accepts general truths and even allows for reducing some of them to the "formal schema" of "identity". What he emphasizes is that such a "formal schema" does not and cannot help us in any way to increase our knowledge. The passage which Wilson cites is in the Chapter entitled "Of Trifling Propositions" (IV:VIII) and is given immediately preceding the Oyster Argument. We have already noted what Locke attempts to establish through such an argument. (See Yolton, J. W., op. cit., Ch. III, pp. 91-92 footnote).
46. The anti-empiricist character of Locke's position is explicated by D. Odegard (Locke's Epistemology and the Value of Experience, J. H. I., Vol. 26, 1965, p. 418).

CHAPTER V

LOCKE'S ANTI-FORMALISM AT THE LEVEL OF DISCOURSE

5:1 Introduction:

The controversy between Locke and Sergeant over the necessity and usefulness of the syllogism reveals their respective "anti-formalistic" and "formalistic" positions at the level of discourse. Their discussions on syllogism are tied up with their views on Demonstration and the place they assign to it in their account of the method to knowledge.

Sergeant's theory of syllogism and demonstration is propounded in Method to Science (Book III) and further developed in his response to Locke in Solid Philosophy Asserted (Reflexion 22).

Locke's critique of syllogism is mainly found in the chapter entitled "Of Reason" in the Essay. His criticisms are related to his theory of demonstration and both provide the theoretical basis for his attack on disputation. His correspondence with Stillingfleet and Clarke, and the works entitled Of the Conduct of the Understanding, Some Thoughts concerning Education and Elements of Natural Philosophy are also helpful in the determination of his stand on the said

topics. His views are similar to those of Francis Bacon¹ and Descartes² and are very much in the spirit of Glanvill's attack on the "Old Dogmatists"³ and of Sydenham's critique of the traditional methodology of medicine.⁴

5:2 Formalism at the level of Discourse:

Both Sergeant and Locke identify themselves with the then prevalent tendency, which associated certainty with knowledge; any attempt to construct a method to knowledge was viewed as a search for certainty.⁵ For Sergeant, scientific knowledge must be certain; "to have Science of anything, is to know evidently the thing is so and cannot but be so" (Method to Science, Book III, Lesson III, p. 249). In his view, one of the main reasons for the spread of scepticism during his times is the increase of "probable talking", which, according to him, is a "hypocritical profession of knowledge" (Solid Philosophy Asserted, The Preface, sections 9-13, pp. 12-17). He claims that his method yields "certainty" and hence the "Certain Method" to knowledge (Ibid., section 11, p. 14).

Self-evident propositions, identical in form, and known through intuition, are certain (4:4). Hence, they are legitimate constituents of knowledge. Any other proposition to constitute knowledge has to be certain "by way of proof", and it is here that the syllogistic mode of demonstration receives its importance in Sergeant's method

to knowledge. Before giving the details of his method, he states:

For our Notions being Cleared, first principles established, the true form of a Syllogism manifested, Proper Middle Terms found, and the Necessity of the Consequence evidenced; all those Conclusions may be Deduced with Demonstrative Evidence, which ly within our Ken, or which we can have Occasion to enquire after. (Method to Science, Preface, p. 12)

We have noted the importance he gives to Notions (Chapter III) and First Principles (Chapter IV) in his method. Three other factors have to be noted, namely, the manifestation of the true form of the syllogism, the discovery of the proper middle terms, and evidencing the necessity of the consequence.

The Syllogism is a form of argument where "form" is taken as a pattern or arrangement of terms in propositional units. A syllogism "consists in such a connexion of Terms in Two Propositions, called the Major and Minor (or the Premisses) as that a Third Proposition called the conclusion, must naturally follow from them" (Method to Science, Book III, Lesson I, p. 226). As one involved in presenting a method to knowledge, he is not interested in merely obtaining "valid" conclusions through the syllogistic formal schema, but in obtaining true ones, which qualify as constituents of knowledge. Hence, he has to take into consideration the content aspect also, and this depends on the terms of the syllogism, which are for him Notions. The connection between the terms in the conclusion of a

syllogism is effected through the middle term. The discovery of the proper middle term is an important aspect of syllogistic discourse. The propriety of the middle term is assessed on material rather than on formal considerations. After discussing the syllogistic form (*Ibid.*, Book III, Lessons I & II), he proceeds to the Third Lesson, which he entitles "Of the Matter of a Conclusive Syllogism; or what Middle Term is proper for Demonstration". He commences this lesson thus:

The Right Manner of framing a Conclusive Syllogism, or of drawing a Consequence Right, which is the Form of it, being thus laid open, there remains no more to be done as to the Attainment of Science, but to show what is the Proper Matter of such a Rigorous Syllogism.

(*Ibid.*, Book III, Lesson III, p. 248)

He goes on to state that "a Middle Term as is proper to conjoin the other two is the only matter of a conclusive syllogism" (*Ibid.*, p. 249); such a Middle Term must be taken "from the Nature of the Thing or from its Metaphysical Verity" (*Ibid.*, p. 250). The "Nature of the Thing" here signifies its essential nature; which he also calls its metaphysical verity. It is the "essential" or "substantial form" of a thing which makes it what it is from the first instance of its being (Chapter III, 3:3). In his view, definition and division helps one know the essential nature of a thing (*Ibid.*, pp. 251-3). The syllogistic method of demonstration is one of deducing from essences.⁶ The connections effected through the middle term in syllogistic discourse

are essential relations, i. e. relations between the essential natures of things.

When the proper middle term to effect the essential relations between the major and minor terms is discovered, and the argumentation is syllogistically formulated, then, according to him, the argumentation becomes "conclusive". He states:

All Argumentations are either conclusive or inconclusive; Conclusive ones have a middle term immediately connected with the Extremes; Inconclusive ones either are aimed to deceive us, by bringing a Bad Medium, or by using a Bad Form. (Sic.)
(Solid Philosophy Asserted, Reflexion 22, section 4, p. 433)

The "conclusiveness" which characterizes certain argumentations, depends on the propriety of the connection effected through the middle term and on the propriety of "form"; the former is a material while the latter is formal consideration. He claims:

... we may be as perfectly assured as that we are that the Conclusion is Consequent, and True; and that, sooner, may all the Material World crumble into Incoherent Atoms, or replace into the Abyss of Nothingness, than any conclusion thus deduced can be false, since, it could then be that Identical Proposition, on which the consequence is grounded, would be false; and so, a Contradiction would be True; which falsifies the Metaphysical Verity of Creatures; and of Ideas of them in the Divine Understanding; which would consequently shock the wisdom and even the Essence of the Godhead itself; for self-existence might not be self-existence if a contradiction might be true.

(Method to Science, Book III, Lesson I, p. 233)

When both conditions are met the consequent is not only valid,

or as he puts it "consequent" but also true. In the course of justifying that the form of argumentation most conducive for obtaining "consequent" conclusions is the syllogism, he also gives priority to its First Figure. After mentioning that self-evident propositions are identical in form and need no proof (Method to Science, Preface, p. 27), he goes on to claim:

Coming to those Propositions which need Proof, and the way of proving them, I lay open the Fundamental Ground of the Force of Consequence, which gives the Nerves to every Act of True Reasoning, and of the Certainty and Evidence of every Conclusion which we rightly infer. To perform which I manifest that there can be but One Necessary or Natural Figure of the Syllogism and but Four Moods of that Figure.
(Method to Science, Preface, pp. 27-28)

As his discussion in Book III of Method to Science clearly indicates, this "natural and necessary figure" is the First Figure of the Syllogism. He goes to the extent of claiming:

Wherefore the other two figures are Unnatural and Monstrous; For, since Nature has shown us that what conjoins two Notions ought to be placed in the Middle between them, it is against Nature and Reason to place it either above them both, as is done in that they call Second Figure or under them both as is done in that Figure they call the Third.
(Method to Science, Book III, Lesson I, p. 232)

I do not think that he dismisses the second and third figures as invalid. He works within the Aristotelian framework in which the Perfect and Imperfect figures are taken as valid syllogisms.⁷ Sergeant's discussion of the First Figure reveals the reason for his

preference. He cites the following as an example of the First Figure:

Virtue is laudable,
 Courtesy is a Virtue, therefore
 Courtesy is laudable.
 (Method to Science, Book III, Lesson I, p. 232)

With reference to the above example he states:

It is most requisite also that a Syllogism be framed after the manner which is done by disposing all its parts in such a Figure as may make the Connexion of the Middle Term with the other two most clear; For, we experience that the placing of the words aptly renders every common Discourse clearer.
 (ibid., p. 230)

He goes on to point out that the Middle Term is "rightly placed when it is placed in the middle" and claims that the Figure manifests such a "right placement". The preference here for the First Figure is not because it is "valid" and others not, but because it is more "evident"; the connection of terms (major and minor) through the middle term is made "most clear" in and through the first figure. In the example cited the middle term "virtue" is said to be "rightly placed". Such a placement does not increase the validity of the argument concerned but makes the connection of the two terms, "laudable" and "courtesy" evident. According to him,

Certainly, the seeing the Middle Term placed in the middle, as it ought, will make a Reflecting Man see better the connexion of the Terms; whence besides its own aptness to connect, it comes, even by virtue of its place, to be seen to be Immediate to each of

the Extremes; and, so more apt to connect them.
 (Solid Philosophy Asserted, Reflexion 22, section 3, p. 431)

He distinguishes the first from the other two figures on the basis of evidence. For him, in order to deduce conclusions with "Demonstrative Evidence" the proper middle term has to be discovered, the argument has to be formulated syllogistically, and the "necessity of the consequence evidenced" (Method to Science, Preface, p. 12). The First Figure is indispensable to "evidence the necessity of the consequence". He claims that "we cannot have Science of anything but by means of Discourse; that the most Exact and most Evident Discourses are those which we call Syllogisms" (ibid.). It is in the context of such a view about Science and the role of syllogistic discourse in it that the First Figure receives its importance; it is indispensable for "evident discourses". It is selected on the basis of its "formal" character - on the placement of the middle term. In order to make evident the "essential" relations effected through the proper middle term, the proper placement of the middle term is taken to be indispensable. According to him, when the middle term is placed in the middle, it is properly placed, and such a syllogistic form enables one to "evidence" the "conjoining of terms" and thereby obtain knowledge of things - their "essential relations" (Method to Science, Book III, Lesson I, p. 231; Solid Philosophy Asserted, Reflexion 22, pp. 432-3, 434). Sergeant seems to adopt the view that the First

Figure is most scientific since it is the only one that enables us to pursue knowledge of the essence of a thing.⁸

For Sergeant, the syllogistic mode of demonstration is indispensable for advancement in scientific knowledge. "The whole art of Artificial or Syllogistic Reasoning being to deduce Conclusions not yet known from premisses which are either perfectly foreknown, or at least better known". Hence, he finds Locke's view that such demonstration does not serve to "increase in knowledge" a "strange riddle" (Solid Philosophy Asserted, Reflexion 22, section 5, p. 435). Here he represents a logico-epistemological tradition, which was then widespread. K. Digby, John Wallis, Henry Aldrich, Robert Sanderson and Crakanthorpe may be cited as some who belonged to it.⁹

For Sergeant, since Science is knowledge of the highest order, the method to science has to be of the highest quality providing an opportunity for reason to function at its best. He claims that the Syllogism is the most conducive for discursive reasoning to function at its best. He acknowledges other methods of reasoning but insists that syllogistic reasoning is of the highest quality. He distinguishes between "loose discourse" or "common discourse" of the "vulgar" and "strict discourse" or the "artificial discourse of the acute logicians", which he identifies with the syllogistic form of reasoning (Method to Science, Book III, Lesson I, pp. 225-226). He commences his

discussion on the Syllogism thus:

Discourse may either mean ~~Common~~ reasoning used by all Mankind in their Ordinary Conversations, or by some in Rhetorical Speeches; which may be called Loose Discourse; or it may mean that Artificial Way of Reasoning, which consists in such a connexion of Terms in Two Propositions, called the Major and Minor (or the Premisses) as that a Third Proposition, called the Conclusion, must Naturally and necessarily follow from them; which may be properly named Contracted or Strict Discourse and by the Logicians called a Syllogism.

(Ibid., p. 225)

He calls this "Artificial Way of Reasoning" as also,

... Inference, Deduction, Concluding, Argumentation, and Proving.

(Method to Science, Book III, Lesson I, p. 226)

It is this type of reasoning that Sergeant associates with the definitional feature of Man. According to Sergeant, a definition should bring out the essential nature of the thing defined (Method to Science, Book III, Lesson III, p. 251). To exemplify such a claim, he cites the following definition: "Man is a Rational Creature" (Ibid., p. 251).

His characterization of "reason" that is essential to Man runs thus:

It remains to define the Difference (Rational) which is the Essential Nature that Compounds the Entire Notion of Man. If we ask then what Reason is, it will be answered that it is a Faculty of Deducing some new knowledge out of foregoing ones or (to express it in the language of Art) to draw the Conclusion from two other True ones called the Premisses.

(Method to Science, Book III, Lesson III, p. 252)

He goes on to reduce such a form of argumentation to the Syllogistic

rule of comparing two terms to a third and thereby connecting the two (Ibid., p. 253). His identification of Syllogistic reasoning with the "reasoning" that is essential to Man, prompts him to claim that Syllogistic Discourse should be the norm for all reasoning and any reasoning worth its name should be reducible to the syllogistic mould (Ibid., Lesson I, p. 227). He claims:

Syllogism is the Test of all the other Discourses; by reducing them to which their Truth is to be try'd. For since whatever is most perfect in its kind ought to be the Standard or Test by which to Measure and Try the Perfection of all others of the same kind; and a Syllogism is the best and most firmly grounded Act of Natural Reason made exact by Art which is to perfect Nature; and therefore absolutely the very best that can be in its kind, or the best Discourse; it follows that 'tis to be the true Test and Standard of all other Discourses; to which the verity, sense, or coherence of all the Rest are to be Reduced and be try'd by it.
(Ibid., p. 227)

Such a view of the Syllogism motivates him to make the following open challenge:

And I defy any Man to bring me any Reason, that is a good one, or Conclusive, but I will show that it is equivalently a Syllogism; and I will undertake to reduce it to that Form; and manifest that it has all its strength and Evidence from the same principles which give a Syllogism to be clearly conclusive.
(Solid Philosophy Asserted, Reflexion 22, section 6, pp. 435-6)

Hence, we can understand his insisting that "all young wits" should regiment themselves by formulating all their discourses according to Syllogistic form. According to him, such a regimentation avoids

"loose" discourse and "verbal and rhetorical defects"; it helps them to "advance in truth" and avoid scepticism (Ibid., The Preface, pp. 12-18, 24). He identifies Rationality with Syllogistic logicity. Others who belonged to both traditional and non-traditional circles made such an identification. Digby, Wallis and Aldrich may be cited as those of the traditional wing.¹⁰ Ramus and his followers, called Ramists may be cited as those who belonged to non-traditional circles.¹¹ Hence, such a view was not peculiar to Sergeant.

Associated with the claims that Man reasons best when he argues syllogistically, and that Demonstration most conducive for the attainment of knowledge must be syllogistic in form, is the place of predominance given to syllogism in the detection of fallacies.

After claiming that syllogistic reasoning is most perfect, Sergeant gives the following role as a corollary:

Hence, 'tis very useful for young wits to exercise themselves in reducing Loose Discourses to first ones, or Syllogisms; For, by endeavouring this they will, to their admiration, find how Shallow and far from Evident the Grounds; how precarious and often times contradictory the Particular Assertions; and how open and Incoherent the Contexture and Consequences are in many Rhetorical Discourses and Speeches. . .

(Method to Science, Book III, Lesson I, p. 228)

In his response to Locke, Sergeant reaffirms that the Syllogism is useful to uncover the fallacies of "loose discourse", particularly those which result from "fine language and Plausible tricks of

Rhetoric" (Solid Philosophy Asserted, Reflexion 22, section 3, pp. 431-2).

The important role he gives to the Syllogism in the detection and avoidance of fallacies is based on the assumption that the best form of reasoning has to be Syllogistic in form. If he restricts fallacies to formal ones (in his context it would mean syllogistic defects), then there is no controversy between him and Locke. But Sergeant seems to go further and claim that all faults of reasoning are due to the failure in one way or another to formulate the argument concerned in syllogistic form.

Conclusion:

The claims Sergeant makes concerning the Syllogism may be stated as follows:

1. Any piece of Demonstration to be conclusive has to be syllogistic in form.
2. Any piece of Demonstration to be "evidently conclusive" has to be in the First Figure of the Syllogism.
3. Besides Intuition, the only kind of Demonstration conducive to the attainment of Knowledge is Syllogistic Demonstration, which is either "evidently conclusive" as when formulated in the First Figure or may be made so evident by reduction to the First Figure.

4. Man reasons best when his reasoning is in syllogistic form; the most important mark of distinction between the "loose discourses" of the "vulgar" and the "learned discourses" of the acute logicians is the syllogistic formulation of the latter.
5. The defects of reasoning may be all treated as though they are all due to either not being in syllogistic form or being in defective syllogistic form. Rhetorical defects belong to the latter.

These inter-related claims pertain to "form" since syllogism is a form of reasoning or demonstration. Sergeant's claims concerning syllogism reveals the "formalism" entrenched in his theory of demonstration, when the latter is taken as a means to knowledge. Locke attacks such a "formalism".

5:3 Locke's attack on Syllogism:

Locke's critique of Syllogism, his theory of Demonstration, and his attack on Disputation indicate his "anti-formalism" at the level of Discourse. His criticism of Syllogism is closely tied up with his theory of Demonstration and both provide the theoretical basis for his attack on Disputation.

The Syllogism and Reason:

Locke places his general discussion of the usefulness of the

Syllogism (IV:XVII:4-8) within the context of his account of "reason" and "reasoning", which is also connected with his account of Demonstration. Here he discusses the Syllogism within a framework of analysis and assessment that was very much in vogue then and which Sergeant represented; one in which the Syllogism was considered the most appropriate expression of reasoning of the highest order and where the Syllogistic Method was identified with the type of Demonstration considered most conducive for obtaining knowledge.

Locke discusses the Syllogism in the chapter entitled "Of Reason". In the first three sections of the said chapter he deals with "Reason", "Reasoning" and the "four degrees of Reason" respectively. "Reason" is a Faculty of Man, whereby he is "supposed to be distinguished from Beasts, and wherein it is evident he much surpasses them" (IV:XVII:1). "Reasoning" is the operation or exercise of this Faculty (IV:XVII:2). Locke gives a wide scope for the operation of this Faculty. To the question, "What need is there of Reason?", he responds thus:

Very much; both for the enlargement of our Knowledge, and regulating our Assent; For it hath to do, both in Knowledge and Opinion, and is necessary, and assisting to all our other Intellectual Faculties, and indeed contains two of them, viz. Sagacity and Illation.
(IV:XVII:2)

Locke associates "certainty" with knowledge (IV:I:2; IV:XVII:2 & 5; IV:XIV:1 & 4; IV:XV:1, 2, 4 & 5; IV:III:14; Third Letter concerning

Toleration, Works, Vol. V, 143, 180; IV:X:2). But he allows degrees of certainty (IV:II), where the highest degree belongs to intuitive knowledge while the lowest degree is associated with sensitive knowledge, which seems to overlap with a very high degree of probability (IV:II:14). He accepts Locke's suggestion that Demonstration involves a lower degree of certainty than Intuition. Sergeant claims that this is one of the instances where he and Locke agree and cites Method to Science (Book III, Lesson I, section 3) to indicate that he had already made the Lockean distinction between Intuition and Demonstration and had made the latter depend on the former for its certainty and evidence (Solid Philosophy Asserted, Reflexion 17, p. 324). But Locke comments thus:

Yes it is easily observable in his book which was published 6 or 7 years after Mr Locke's that it has many things in it very conformable to what Mr. L. had published soe long before,
(Marginal Comment No. 61, p. 324)¹²

According to Locke, Demonstration yields certain knowledge though "not all at once" as in Intuition (IV:II:1, 2). But he does not restrict certain knowledge to what is syllogistically demonstrated. Here he goes against Sergeant's claim that other than what is obtained through Intuition, any other piece of knowledge is a product of syllogistic demonstration.

Locke does not restrict the operation of the Faculty of Reason to Intuition or Demonstration. "Reasoning" is involved when we

assent, form opinions and derive probable conclusions as well (IV: XVII:2; IV:XV:2; IV:XVII:24; IV:XV:6; IV:XII:9). "Judgement", the Faculty by which Ideas are joined or separated when their agreement or disagreement is not perceived but presumed (IV:XIX:3 & 4), is also one which is assisted by "Reason". Sagacity and Illation work within "reasoning" (IV:XVII:2). Sagacity discovers intermediate ideas in order to reveal the connections between ideas and Illation orders the intermediate ideas so as to make one see each "link in the chain" of Demonstration (IV:XVII:2). The Faculty of Reason, employing Sagacity and Illation functions in the derivation of both necessary and probable connections (IV:XVII:2).

One may detect a tighter and a looser sense in which Locke employs the terms "Reason" and "Reasoning".¹³ When one perceives the necessary connections between abstract ideas or mixed modes the tighter sense of reason is applicable (IV:I:2; IV:XII:9). This kind of reasoning may be identified with "Demonstrative Reasoning" and the knowledge which we have in Mathematics and can have in Ethics is obtained through such a kind of reasoning (IV:VII:18-20; IV:IV:5-10; IV:XII:7-8, 14-15). But Locke does not restrict the function of Reason to the perception of necessary connections. Even though the perception of probable connections of ideas constitutes a "lower degree of reason", yet it falls within the scope of Reason and is differentiated from mere "effects of chance" and the "floatings of

the mind" (IV:XVII:2). The looser sense of "reason" is applicable here. In Sensing, where one is "certain" of a particular piece of information, "Reason" is at work and the activity of sensing may be also called a kind of "reasoning"; a "perception of the mind" (IV:II:14). For instance, when I am certain that something really exists causing the appearance of what I call "white paper" (IV:XI:2) or when I feel or see the existence of certain things (IV:XVI:12) or when I observe (IV:XI:5 & 8) or remember (IV:XI:11; IV:I:9), "Reason" is at work.

Anthony Collins describes the scope that Locke gives to "reasoning" thus:

By Reason I understand that Faculty of the Mind where it perceives the Truth, Falsehood, Probability or Improbability of Propositions. Therefore when Truth, Probability or Improbability are applied to Propositions, nothing is meant by them but the necessary or probable agreement or disagreement of the Ideas of which the extremes in Propositions consist. ¹⁴

For both Collins and Locke, "Reason" encompasses the perception of both necessary and probable connections of Ideas. In the Lockean context, there are degrees of "certainty" and "reasoning" but there is no degradation of non-demonstrative "certainty" and "reasoning", which is characteristic of Sergeant's doctrine.

After determining the scope of "reasoning", Locke goes on to distinguish the four parts or degrees of Reason. They are, first, the

discovering of Proofs or Intermediate Ideas; second, the regular and methodological disposition of them in a clear and fit order, in order to make their connections easily and plainly perceived; third, the actual perception of the connections and fourth, making the right conclusion. According to Locke, these degrees may be observed in any Mathematical Demonstration (IV:XVII:3).

After his account of "Reason", "Reasoning" and stipulation of the "degrees of Reason", Locke states:

There is one thing more, which I shall desire to be considered concerning Reason; and that is, whether Syllogism, as is generally thought, be the proper instrument of it, and the usefulest way of exercising this Faculty.
(IV:XVII:4)

His general discussion of the Syllogism continues till section 8 after which he discusses certain specific questions concerning it. He commences section 8 thus:

Having here had an occasion to speak of Syllogism in general, and the Use of it, in Reasoning, and the Improvement of our Knowledge, 'tis fit, before I leave this Subject, to take notice of one manifest Mistake in the Rules of Syllogism...
(IV:XVII:8)

Hence, his general discussion of the Syllogism is placed within the context of his account of "Reason" and "Reasoning" (IV:XVII:1-8).

Locke's first reason for having doubts concerning the Syllogism as the proper instrument of "Reason" runs thus:

First, Because Syllogism serves our Reason, but in one only of the forementioned parts of it; and that is, to shew the connexion of the Proofs in any one instance, and not more: but in this, it is of no great use, since the Mind can perceive such Connexion where it really is, as easily, nay, perhaps, better without it.
(IV:XVII:4)

Here his acknowledgement of the usefulness of the syllogism is qualified almost to the point of rejection. In a context where syllogism was taken to be the form most conducive to discursive reasoning to function at its best, his comment and his subsequent criticism have the significance of cutting the syllogism down to a new unimportance. For he restricts the application of the syllogism to one of the degrees of reason and that too not to its most important part, which deals with "finding out proofs and making new discoveries" (IV:XVII:6). In the epitome of the Essay, after stating the four degrees of Reason, Locke concludes thus:

From this it appears that the Syllogism is not the great instrument of the reasoning faculty, that it only serves in the third part and solely again to show to others that the connection of two ideas, or rather of two terms, is good or bad by reason of the intervention of a third term. But the Syllogism does not serve the reason in any way when it searches out any new knowledge whatever, or when it wishes to discover any truth previously unknown and the proofs upon which that truth is founded, these being the principal uses which one ought to make of his reason, as opposed to that of winning in a dispute or reducing to silence those who wish to indulge in sophistry. 15

These sentiments are in harmony with those he later develops in the

final version of the Essay and subsequently elaborates through the additions he makes to its fourth edition.

The restriction of the usefulness of the syllogism to one of the four degrees of reason is further qualified, when he states that the syllogism may help one to see the connection of ideas through intermediate ideas (proofs) only in any one instance and here too the mind "can perceive such connexion... as easily, nay perhaps better without it" (IV:XVII:4). Let us examine the last restriction first.

He elaborates its theoretical basis when he continues thus:

If we will observe the Actings of our own Minds, we shall find, that we reason best and clearest, when we only observe the connexion of the Proofs, without reducing our Thoughts to any Rule of Syllogism.
(IV:XVII:4, p. 670)

He cites the Asians and Americans who "reason exceeding clear and rightly" and "acutely" but "who yet never heard of a syllogism nor can reduce any one argument to those forms" (IV:XVII:4, p. 670).

He claims that "scarce any one ever makes syllogism within himself when reasoning" (ibid., p. 670). According to him,

The Understanding is not taught to reason by these Rules; it has a native Faculty to perceive the Coherence, or Incoherence of its Ideas, and can range them right without any such perplexing Repetitions.
(IV:XVII:4, p. 671)

Locke's claim, pertaining to the manner in which the Mind operates when it reasons, goes against the tendency to identify reasoning of

the highest order with syllogizing and challenges the belief that Man reasons best when regulated by syllogistic form. Sergeant, who holds such a belief, is most sensitive to this criticism. Sergeant points out that the first point of disagreement between him and Locke over the syllogism is:

I deny that in Learned and Philosophical Discourse, (for which Syllogisms were intended) the Mind can perceive the Connexion of the Proofs where it really is, as easily, nay perhaps better, without them. (Solid Philosophy Asserted, Reflexion 22, section 3, p. 491)

Sergeant's denial of Locke's claim may be traced to the distinction the former makes between the "loose discourse of the vulgar" and the "learned discourse of the Men of Art" and his identification of the "learned discourse" with syllogistic reasoning. In the sections following the above passage Sergeant makes the following distinctions between the two types of discourses:

Firstly,

In a Syllogism there is no necessary word left out, nor one Unnecessary Word put in; whereas in loose Discourses this last is always wanting. (Ibid., p. 491)

Secondly,

In loose Discourses, the fine Language and Plausible Tricks of Rhetorick do too often dazzle the Eye of the Mind; and make that seem excellent Reason, which brought the Test of a Syllogism, will be seen to be plain Foolery and Ridiculous Nonsense. (Ibid., p. 492)

Thirdly,

Good Logicians, who are skilled in the Solid Reasons why the Conclusion follows, do, while they discourse Syllogistically, guide their Thoughts all along by steady and (generally) Self-Evident Rules; and see a priori, and this, by the highest causes, why and by what means the Conclusion must follow; which conduces in a high measure to Demonstration and Science; Whereas, those that have only the Assistance of their Uncultivated Natural Reason, do both want this knowing satisfaction to themselves, and are utterly unable to give it to others.

(Ibid., p. 432).

The first two distinctions will be discussed later in this chapter. But we may note here that Sergeant's emphasis that the Syllogistic method of reasoning is free from verbalism and rhetorics is also intended to highlight the superiority of the syllogistic method as a way of reasoning. Our main concern here is with his third distinction. Before presenting these three distinctions, he gives an account of how discourses became "reflective" by the use of the syllogistic method (Solid Philosophy Asserted, Reflexion 22, sections 1 & 2, pp. 428-31).

In this account he makes explicit the following:

1. That the Syllogistic Form of reasoning "was certainly not intended for the vulgar nor for the Men of Good Wits, to attain Ordinary Knowledge" (Ibid., p. 428).
2. That, even prior to the advent of Syllogistic Reasoning, "Mankind could use their Reason, and improve in it too"

(Ibid. , p. 428).

3. That, even though Men were able to reason prior to the advent of Syllogistic Reasoning, "they could not so well make it out to themselves or others, why the Consequence must follow nor refund it into Causes, and so let it above Contest, by reducing it to evidence" (Ibid. , p. 428).
4. That, in the course of time, "Reflecters" found that some Discourses were more conclusive than others and wanted to find out the reason for this conclusiveness. "They set themselves to anatomize and dissect a Rational Discourse so that they might discover the hidden nerves and Ligaments that gave force and Consequence to the whole" (Ibid. , pp. 428-9).
5. These "Reflecters" found that the Syllogism constituted such a "Rational" or "Conclusive" Discourse, and that, on account of the discourse being in syllogistic form, the reason for its conclusiveness was revealed (Ibid. , p. 429); that, when the discourse is in syllogistic form the Middle Term makes explicit the reason for the connection between the major and minor terms in the conclusion. The third distinction that Sergeant mentions is a reaffirmation of this claim and highlights the "reflective aspect" of Syllogistic Reasoning.

Sergeant's distinction between "Loose" and "Artificial" Discourse and his identification of Syllogistic Reasoning with the latter, carried with it a degradation of all non-syllogistic Discourse as being "uncultivated", "non-reflective", "less-rational", lacking that "knowing satisfaction" and as belonging to the "vulgar", or to the Men of Art when they discourse in an "ordinary" fashion. A normativeness came to be associated with Syllogistic Reasoning, so much so it was claimed that any piece of reasoning, which claimed to be "cultivated" or "reflective" had to be in the syllogistic mould. The ultimate theoretical basis for such a hierarchical distinction is the claim that Man reasons best, when he is regulated by Syllogistic Form. In concluding his account of the development of Syllogistic Reasoning, Sergeant states:

Now, things standing thus; who can think Logick, or Syllogism (the main End of it) are to be slighted as of little or no use? Can any Man think that Art and Reflexion do add no Advantage to Untaught Nature? Or that our Rude, Natureal, and Common Reason may not be Cultivated or Improved, as well as our Natural Voice, Walking and Handling, may be bettered, by being taught to sing, dance, or play on the Lute Artificially.
 (Solid Philosophy Asserted, Reflexion 22, section 1; p. 430)

When Locke claims that we reason best and clearest perhaps without the Syllogism and without having our thoughts reduced to any Rule of Syllogism (IV:XVII:4, p. 670) and that Understanding is not taught to reason by the Rules of Syllogism (IV:XVII:4, p. 671), he goes against

the claim that reasoning of the highest order is identical with Syllogistic reasoning, and that any type of reasoning is improved or "made exact by art", when syllogistically formulated; that the Mind functions best when regulated by syllogistic form and that syllogistic logicity is identical with "rationality".

Some of Locke's additions to the fourth edition of the Essay confirm the above claim (IV:XVII:4, (25) p. 670 - (24) p. 671; (27) p. 671 - (4) p. 672). The first addition is of substantial length and hence is discussed in two parts. Its first part runs thus:

But, the weakness or fallacy of such a loose Discourse it shews, by the Artificial Form it is put into, only to those who have thoroughly studied Mode and Figure, and have so examined the many ways, that three Propositions may be put together, as to know which of them does certainly conclude right, and which not, and upon what grounds it is that they do so. All who have so far considered Syllogism, as to see the Reason, why, in all three Propositions laid together in one Form, the Conclusion will be certainly right, but in another, not certainly so, I grant are certain of the Conclusion they draw from the Premisses in the allowed Modes and Figures: But they who have not so far looked into those Forms, are not sure by Virtue of Syllogism, that the Conclusion certainly follows from the Premisses; They only take it to be so by an implicit Faith in their Teachers, and a confidence in those Forms of Argumentation; but this is still but believing, not being certain. Now if of all Mankind, those who can make Syllogisms are extremely few in comparison of those who cannot, and if of those few who have been taught logic, there is but a very small number, who do any more than believe that Syllogism in the allowed Modes and Figures do conclude right, without knowing certainly that they do so; If the

Syllogisms must be taken for the only proper instrument of reason and means of knowledge, it will follow, that before, Aristotle there was not one Man that did or could know anything by Reason; and that since the invention of Syllogisms, there is not one of ten thousand that doth.
(IV:XVII:4, (25) p. 670 - (14) p. 671)

Here Locke discusses the Syllogism within a framework which distinguishes between "Loose" and "Artificial" discourses and identifies the latter with Syllogistic Reasoning (Solid Philosophy Asserted, Reflexion 22, sections 1-3, pp. 428-433). Locke also acknowledges that, to those who are proficient in the syllogistic method, the syllogistic formulation of an argument reveals the reason why the conclusion necessarily follows from the premisses. But, the further claim that the Syllogism is the only instrument of "reason" of the highest order, according to Locke, leads to devastating consequences - that none prior to the advent of the syllogistic method did or could in principle know anything by "reason of the highest order"; that ever since the "invention" of the syllogism, only a minute minority who are proficient in it do know anything by "reason", and that they who use the syllogistic method without being proficient in it are involved in a hypocritical profession of knowledge. According to Locke, these consequences result when syllogistic reasoning is identified with "reasoning" of the highest order. It is in such a context that he adds the second part of the addition, which runs thus:

But, God has not been so sparing to Men to make them barely two-legged creatures, and left it to Aristotle to make them Rational, i. e. those few of them that he could get so to examine the Grounds of Syllogisms, as to see, that in above threescore ways, that three Propositions may be laid together, there are but about fourteen wherein one may be sure that the Conclusion is right, and upon what ground it is, that in these few the Conclusion is certain, and in the other not. God has been more bountiful to Mankind than so. He has given them a Mind that can reason without being instructed in Methods of Syllogizing.

(IV:XVII:4, (15) - (24) p. 671)

Locke does not question the rationality of Man.¹⁶ Locke states that Man is rational by nature and hence capable of knowledge, gained by the play of reason on the materials provided by Sensation and Reflection (II:I:2). Locke also acknowledges that "rationality" along with the Faculties pertaining to it are God given (IV:XIV:1 & 3; IV:XVIII:5). But, as we have already noted, Locke takes "reason" in an accommodative sense to include assenting, and deriving probable conclusions. What he questions is the claim that the "rationality" of Man is identical with Syllogistic Reasoning. His claim that God has given Man a Mind that can reason without being instructed in the Methods of Syllogizing goes against the assumption that Man reasons best only when regulated by syllogistic form. Locke hastens to make the following addition for fear of being misunderstood:

I say not this any way to lessen Aristotle, whom I look on as one of the greatest Men amongst the Antients; whose large Views, acuteness and penetration of Thought, and strength of Judgment, few

have equalled: And who in this very invention of Forms of Argumentation, wherein the Conclusion may be shewn to be rightly inferred, did great service against those, who were not ashamed to deny any thing. And I readily own, that all right reasoning, may be reduced to his Forms of Syllogism. But yet I think without any diminution to him I may truly say, that they are not the only, nor the best way of reasoning; for the leading of those into Truth who are willing to find it, and desire to make the best use they may of their Reason, for the attainment of Knowledge.

(IV:XVII:4, (27) p. 671 - (1) p. 672)

As a form of argument to test the validity of arguments Locke acknowledges the usefulness of the Syllogism. I take it that he uses the terms "rightly" and "right" in the above passage in a more restrictive sense to mean "validity". But his emphasis that Syllogism is neither the only nor the best way of reasoning goes against the claim that reasoning of the highest order is identical with syllogistic reasoning and the assumption that the Mind reasons best when regulated by syllogistic form.

Locke's citation of the Country Gentlewoman's reasoning and Sergeant's response to it also indicate how both differed on the place Syllogistic Form should have in reasoning.

According to Locke:

Tell a Country Gentlewoman, that the Wind is South-West, and the Weather louring, and like to rain, and she will easily understand, 'tis not safe for her to go abroad thin clad, in such a day, after a Fever: she clearly sees the probable Connexion of all these, viz. South-West-Wind, and Clouds, Rain, Wetting, taking

cold, Relapse, and danger of Death, without tying them together in those artificial and cumbersome Fetters of several Syllogisms, that clog and hinder the Mind, which proceeds from one part to another quicker and clearer without them: and the Probability which she easily perceives in Things thus in their Native state, would be quite lost, if this Argument were managed learnedly, and proposed in Mode and Figure. For it very often confounds the connexion: and, I think, every one will perceive in mathematical demonstrations, that the Knowledge gained thereby, comes shortest and clearest without Syllogism.

(IV:XVII:4, p. 672)

Sergeant responds thus:

I grant then, that the Untaught Vulgar in Common Conversation and obvious Affairs can need no Syllogism; and that the Gentle-woman he speaks of, may have Wit enough to avoid catching Cold, tho' neither her self, nor any for her, do put the Reason of it into a Syllogism; and so does a Milk-Maid without the help of Mathematics, know certainly that the Diameter of her Pail is shorter than the Circumference of it; nay, both of them would be blundered and know those Truths worse, were the True Reasons for them put into uncouth garb of a Syllogism; for Art is not their Talent; But to think that Learned Men and Disputants gain little or no Advantage by them above the Vulgar, is to maintain, that Art, tho' never so Solidly Grounded, is good for nothing.

(Solid Philosophy Asserted, Reflexion 22, pp. 432-3)

Both agree that the imposition of the Syllogistic Form on the Country Woman's reasoning has adverse effects. But, the reasons they suggest are different and the difference is traceable to the role each assigns to the syllogism in reasoning.

According to Sergeant, the imposition of the syllogistic form

does more harm than good, since the Country Woman's reasoning is probabilistic, which is for him "less-rational" (Solid Philosophy Asserted, Reflexion 22, section 5, p. 435). The Syllogistic form, which shows an "infallibly certain way of concluding" (Ibid., pp. 434-5) is appropriate only to the learned discourses of acute logicians. In the context of his hierarchical distinction of the kinds of reasoning, what is appropriate to "reasoning of the highest order" should not be applied to the less-rational. There is a sarcastic overtone characterizing his comment on the Country Woman's manner of reasoning.

According to Locke, the probable reasoning of the Country Woman does not yield knowledge that is "certain", but he accommodates "probable" discourse as a kind of reasoning that characterizes Man and is useful to him. He thinks that Syllogism is "of far less or no use at all in probabilities", because the conclusions in such reasoning are arrived at "after due weighing of all proofs with all the circumstances on both sides" (IV:XVII:5). According to him, the assessment of probabilities which depend on the examination of a number of instances gets "intangled" and "manacled" if moulded into "Topical" argumentative moulds (Ibid.). According to him, the syllogistic form does not express the character of probable reasoning and syllogistic formulation is a hindrance rather than a help to the execution of probable reasoning. The attempt to formulate probable

reasoning into Topical arguments is an attempt to syllogize it. ¹⁷

When Sergeant insists that the syllogism is inappropriate to probable reasoning and should not be imposed on it (Solid Philosophy Asserted, Reflexion 22, section 5, p. 435) Locke comments thus:

What becomes then of all his Master Aristotle's pains about Topical Arguments?
(Marginal Comment No. 110, p. 435)

Even though Sergeant is against syllogizing probable reasoning, such a tendency was prevalent during this period. John Wallis and Crakanthorp may be cited here. ¹⁸ The attempt to syllogize probable reasoning as well as the insistence that it should not be syllogized, as Sergeant insists, are founded on the same assumption - that the Syllogism is the only and the best instrument of reason of the highest order. Sergeant rejects syllogizing probable reasoning because he thinks what is appropriate to a higher order should not be imposed on a lower order of reasoning. Those who attempt to syllogize probable reasoning through Topical Arguments presuppose that in and through such an attempt probable reasoning is enhanced and better formulated. As Wallis emphasizes:

To whatever extent they (probable reasonings) are argumentative, however, just so far are they syllogistical. And in proportion as they are imperfect argumentations, so far are they (and in the same degree) imperfect syllogisms. So that, on this account, it should not be necessary to deduce that this kind of argumentation is in a different class from the syllogistical kind. ¹⁹

Locke questions this underlying assumption that "reasoning" of the highest order is syllogistic in form and any other reasoning to be enhanced has to be syllogized.

Locke states that the knowledge gained through Mathematical Demonstration "comes shortest and clearest" without the Syllogism (IV:XVII:4). But Sergeant identifies Mathematical Demonstration with Syllogistic Reasoning (Method to Science, Preface, pp. 10-12). In his response to Locke's citation of the Country Woman's reasoning, Sergeant emphasizes that such syllogistic reasoning adversely affects the Milk-maid's manner of reasoning about the diameter of the pail. Here too, there is a sarcastic overtone characterizing his comment. Since Mathematical Demonstration is syllogistic in form he thinks that it is inappropriate to the "lower order" of reasoning of the Milk-maid. The assumption is that the reasoning of the highest order is syllogistic in form and hence not appropriate to that of the "vulgar".

Another reason, which makes Locke sceptical of the Syllogism as the "only proper instrument of Reason", in his realisation that syllogistic forms of discourse are not less liable to fallacies than the "plainer ways of argumentation". In the first three editions of the Essay Locke states that the syllogism "engages the mind in the perplexity of obscure equivocal, and fallacious Terms" and that it is "adapted more to the attaining of Victory in Dispute, than the

discovery or confirmation of Truth" (IV:XVII:4; as in the first three editions). Sergeant responds to Locke thus:

But he thinks this good is over balanced by this, that it engages the Mind in the perplexity of Obscure, Equivocal and Fallacious Terms. Let us blame then those Logicians, who multiply Terms and needless Crotchets (which I have endeavoured in my Method, to lop off as Superfluous) and those who do not define those Terms they use; and not Syllogism nor Artificial Logick, which tells them they ought to do it.

(Solid Philosophy Asserted, Reflexion 22, section 4, p. 434)

Here Sergeant's observation that Syllogism should not be blamed for verbosity and the use of obscure terms is tied up with his emphasis that the Syllogistic Method is and ought to be free from these defects of language (ibid., sections 1-3, pp. 428-33). Sergeant is correct in his claim that one cannot blame the syllogistic method for verbosity. But Locke too cannot be blamed, since, during his day, the syllogistic method was associated with rhetorical presentations particularly in the practice of disputations at the universities. Anyhow, Locke seems to have realized his mistake, when he drops the first reason in the fourth edition of the Essay. He elaborates the second reason and adds that the syllogistically formulated "artificial methods of reasoning" are "more adapted to catch and intangle the Mind than to instruct and inform the Understanding" (IV:XVII:4, (22) - (26), p. 677, addition to the fourth edition). This goes against the claim that syllogistic reasoning is identifiable with reasoning of the highest

order, for here Locke points out that syllogistic argumentation may be a hindrance rather than a help to reasoning. He also elaborates his point that the syllogism is helpful to win in a dispute but not for discovering truth (IV:XVII:4, (24) p. 677 - (4) p. 678). This takes us to his theory of demonstration and the place he assigns to syllogism in it.

Syllogism and Demonstration:

Locke generally characterizes demonstration in terms of a perceived connection of ideas effected through intermediate idea or ideas. Such a characterization may be described as "informal" since its locus lies in the content rather than in the form of demonstration. In this sub-section we shall examine how and to what extent Locke's characterization goes against Sergeant's "formal" account of demonstration.

In certain places Locke seems to interpret the terms "Demonstration" and "Deduction" in the traditional formal sense (I:3:4; I:4:26; 2:II:13). In certain places one is not sure whether he uses these terms in the formal or informal sense (I:II:6-9, 10, 22, 28). But significantly these passages belong not only to the earlier portions of the Essay²⁰ but also to its earlier editions. When he comes to discuss the role of Syllogism with specific reference to demonstration in Book IV, he makes explicit the "informal" sense of "Demonstration".

He attempts this on an elaborate scale in the fourth edition of the Essay. It must be noted that even though the "informal" sense becomes pronounced in the later editions, it may be detected even in the earlier editions, where he maintains that Demonstration is "ideas placed in order, a due comparing of them, and deductions made with attention" (I:IV:23; Cf. IV:I:2, 9; IV:II:2-9, 15; IV:III:28-31; IV:XV:1). In his account of the "second degree of knowledge", this "informal" sense is explicit and this is found in the Essay from its first edition. He states:

The next degree of Knowledge is, where the Mind perceives the Agreement or Disagreement of any Ideas, but not immediately... The Reason why the Mind cannot always perceive presently the Agreement or Disagreement of two Ideas is, because those Ideas, concerning whose Agreement or Disagreement the Enquiry is made, cannot by the Mind be so put together, as to shew it. In this case then, when the Mind cannot so bring its Ideas together, as by their Immediate Comparison, and as it were Juxta-position, or application one to another, to perceive their Agreement or Disagreement, it is fain, by the Intervention of other Ideas (one or more, as it happens) to discover the Agreement or Disagreement, which it searches; and this that which we call Reasoning... Those intervening Ideas, which serve to shew the Agreement of any two others, are called Proofs; and where the Agreement or Disagreement is by this means plainly and clearly perceived, it is called Demonstration.
(IV:II:2-3)

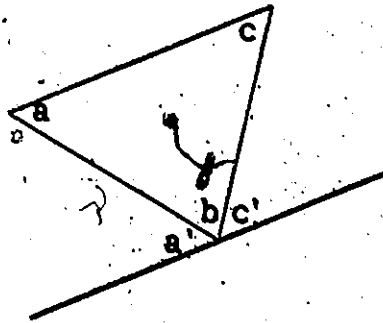
To show that Demonstration is a perceived connection of Ideas through Intermediate Idea or Ideas, he goes on to cite an example from Mathematics (ibid.). Since we do not perceive the equality of

the angles of a triangle to two right angles intuitively, it must be demonstrated by means of some intermediate Idea. He states:

In this case the Mind is fain to find out some other Angles, to which the three Angles of a Triangle have an Equality; and finding those equal to two right ones, comes to know their Equality to two right ones.

(Ibid.)

The following diagram helps to get at the Lockean Characterization of the Demonstration.²¹ A straight line is drawn through one of the points of the triangle parallel to the opposite side:



The intermediate Idea here is angles "a', b, c'" taken together. We perceive that angles a, b & c are equal to angles "a', b, c'", and that the latter are together equal to two right angles. Thus, by means of "a', b, c'" we have demonstrated that angles a, b & c are equal to two right angles.

Such a demonstration may be syllogistically formulated and Locke will not object to it; for him all right reasoning may be reduced to syllogistic forms (IV:XVII:4, p. 671). But what he emphasizes here is that demonstration is essentially a perceived connection

of ideas; one which is effected through an intermediate idea. Sagacity helps one to discover the intermediate ideas (IV:XVII:2), while Illation orders these ideas so that one may discover the connections between "each link of the chain, whereby the extremes are held together" (IV:XVII:2). In Locke's view, Algebra is a "great Instrument of humane sagacity" (IV:XVII:11; IV:XII:15). He commends the nature of mathematical demonstration because of the manner in which it proceeds to connect determined ideas through intermediate ideas (IV:XVII:7; IV:XII:14-15). He finds that mathematicians are able to "trace" the ideas and "find out their relations, and agreements and disagreements one with another" without getting entangled in verbalism (IV:III:30). Mathematical knowledge is obtained through demonstration but Locke does not identify the latter with syllogistic deduction. He makes it clear that it is not (IV:XVII:4; IV:XII:15). He no doubt appreciates the value of symbols like diagrams, figures, and numerical notations in mathematical demonstration and considers their lack in Ethics as making demonstration in the latter more difficult. But their presence does not make mathematical demonstration yield more certain conclusions; their certainty depends on the connections of ideas and their perception. Symbols help in presenting the demonstration, for recording and retaining it (IV:III:19-20). Ethics is demonstrable on account of the possibility of perceiving the necessary connections between mixed-modes and not because of the

sylogistic forms into which the connections may be moulded (IV:XII:8; IV:III:18-19).

Locke places demonstration along with probable reasoning within the scope of inference (IV:XVII:2, 15, 16, 23; IV:XV:1). To infer one has to either "certainly perceive" (IV:XIV:4) or "presume", "assent" or "judge" (IV:XIV:4; IV:XV:1 & 2). When one demonstratively infers he "certainly perceives" while, when one probably infers, he "presumes", "assents" or "judges". I use "perceive" to label the act involved in demonstrative inference and 'perceive' to label the act involved in probable inference, covering "presuming", "assenting" and "judging". As in the case of Simple Apprehension, there seems to be an "object" corresponding to the various inferential acts. Here I take "object" in the predominantly 17th Century sense as what is present to the mind in any of its acts. Unlike in Simple Apprehension, the "object" of an inferential act is a connection of ideas and not a single idea. Unlike in Intuitive act, the "object" of an inferential act is a mediate connection of ideas, i. e. a connection effected through intermediate idea or ideas (IV:II:2 & 3, 9, 15). The example already cited about the three angles of a triangle being equal to two right angles is helpful to get at the nature of the "object" of the inferential act. According to Locke, when one demonstratively infers he "perceives" with certainty the connection between "three angles of a triangle" and "two right angles" through an

intermediate idea (IV:II:2; IV:XV:1; IV:XIII:3; IV:II:15). We have already noted how this connection may be "perceived". Locke also cites a person "who never took the pains to observe the Demonstration, hearing a Mathematician, a Man of credit, affirm the three angles of a triangle, to be equal to two right ones, assents to it; i. e. receives it to be true" (I:XV:1). Here the person concerned does not "certainly perceive" but assents in a probable manner. The "object" of "assent" or the "perceived connection" involved in assenting differs from what is involved when the mathematician "certainly perceives" the connection between the angles of a triangle and two right angles. In the fourth edition of the Essay Locke cites the case of a man who once knew the demonstration about the angles of the triangle but has since forgotten it. Locke points out that the man now "knows it in a different way, from what he did before" - i. e. the "perceived connection" differs from the original one. But in any case, whether one is demonstrating, assenting or recollecting, there is a "perceived connection" involved in the act. Our concern here is with demonstration. According to Locke, in demonstration the agreement or disagreement of ideas through an intervening idea or ideas is "shewn to the Understanding, and the Mind made see it is so" (IV:II:3; Cf. IV:XVII:8). Just as in the case of Ideas taken as "objects", these "perceived connections" are inseparable but distinguishable from the act. There is a sense in which there are connections of ideas which

are not "perceived" but they are not what is meant by "perceived connections". There may be connections which have not yet been "perceived" (or "discovered") or those beyond the powers of human "perception", as in topics like the "Resurrection of the dead, the future state of this Globe Earth" and of substances (IV:III:25-29; IV:VIII:9 & 10). Even in an improper demonstration, there is a "perceived connection" as the "object" of the act.

In the first three editions of the Essay, after discussing the ill effects of the imposition of the Syllogism on the Country Woman's reasoning, Locke proceeds to criticize the Syllogism (IV:XVII: 4, 5, 6). But, in the fourth edition, he makes a substantial addition to Section 4 (IV:XVII:4, (19) p. 672 - (26) p. 678), and certain other additions (IV:XVII:8, (9) - (29) p. 681; IV:XVII:15, (6) - (14) p. 684 & (18) - (28) p. 684). These additions not only make more pronounced and precise the interpretation of Demonstration as "perceived connection" but also confirm and elaborate his criticisms of the Syllogism given in the first three editions of the Essay. Hence, these additions have to be placed in the context of his earlier criticisms. They are, in short, as follows:

Locke acknowledges the usefulness of the Syllogism in the organization and presentation of what is already known, in the testing of the validity of arguments, and in the attainment of argumentative victories in disputes (IV:XVII:4 as found in the first three editions:

footnote on p. 677; IV:XVII:6, p. 679). But he is convinced that the Syllogism is useless in the advancement of knowledge (IV:XVII:6, p. 679).

The discovery of intermediate ideas is most important since only through such ideas can new connections be established; those which were not perceived before such discoveries. He emphasizes:

But 'tis chiefly by the finding out those Ideas that shew the connexion of distant ones, that our stock of Knowledge is increased, and that useful Arts and Sciences are advanced.
(IV:XVII:6).

Advancement in knowledge takes place in the uncovering of new conceptual connections through the discovery of intermediate ideas. In such a context:

The Rules of the Syllogism serve not to furnish the Mind with those intermediate ideas; that may shew the connexion of remote ones. This way of reasoning discovers no new Proofs, but is the Art of marshalling and ranging the old ones we have already.
(IV:XVII:6)

The 47th proposition of the First Book of Euclid is no doubt true but was not discovered through the "rules of Common Logick" (Ibid.). The reasons for Locke's view that the Syllogism is useless in the advancement of knowledge becomes explicit in the additions to the fourth edition. But his general position is stated from the first edition and runs thus:

A Man knows first, and then he is able to prove syllogistically. So that Syllogism comes after Knowledge...
(IV:XVII:6)

He emphasizes that the Syllogism can never be one of the "right helps of Art" that Hooker mentions, for the advancement of knowledge (IV: XVII:7). The sections entitled, "Serves not to increase our Knowledge" (IV: XVII:6) and "Other Helps should be sought" (IV: XVII:7), to which the above passages belong have been substantially the same since the first edition. Their main import is that the syllogism, as a form of argumentation, may be of use in the organizational aspect of knowledge but not in the advancement of knowledge. A knowledge of the inferential patterns (i. e. of the modes and figures which yield valid conclusions through the syllogism) made possible through proficiency in the Rules of Syllogism may help in making valid conclusions (IV: XVII:6), but does not aid in the discovery of knowledge. The perceptions of the new connections of ideas are closely tied up with such a discovery. Bacon and Descartes anticipate Locke here.²²

The additions to the fourth edition confirm these criticisms and make more explicit their theoretical basis.

In these additions Locke distinguishes between a "natural order" of ideas and an "artificial form" which he associates with the syllogism (IV: XVII:4 (3) - (4), p. 674; Ibid., (32) - (38), p. 673). He also describes the "natural order" as "visible agreement of ideas (IV: XVII: (3) - (4), p. 672), "due order" (Ibid., (33) p. 672; (17) p. 676), "simple and natural disposition" (Ibid., (33) p. 673), "simple and plain order" (Ibid., (9) p. 675) and "juxta-position of Ideas" (Ibid.,

(25) p. 674). They may be all taken as various formulations of his informal interpretation of inference, and in particular, demonstration as "perceived connection" of ideas. The "natural order" may be expressed verbally or non-verbally (i. e. through symbols) but such an expression is purely for communicative purposes. The "order" itself is essentially ideational (IV:XVII:18); it is a "perceived connection" that is inseparable from the act of perceiving.

• The act of perceiving the connection of ideas forms an intrinsic part of his description of inference. He states:

To infer is nothing but by virtue of one proposition laid down as true, to draw in another as true, i. e. to see or suppose a connection of the two Ideas, of the inferr'd Proposition.
(IV:XVII:4, (25) - (27), p. 672; addition to the fourth edition)

Here, Locke uses the terms "see" and "suppose" to describe the acts of the mind. He uses "see" in various other places in the additions (IV:XVII:4, p. 672, 673, 674, 675, 678). "See" is suggestive of the "perception" of the "connection of ideas" with "certainty", and "suppose" is suggestive of "perception" (i. e. presuming, assenting or judging). Some of Locke's marginal comments anticipate the use of "see" and "suppose" in the fourth edition.

When Sergeant objects to Locke's distinction between Judgment and Knowledge, Locke comments thus:

Very well for knowledg is seeing the thing to be
soe Judgmt when right is assent to a true

proposition without certainly knowing it to be true.

(Marginal Comment No. 105, p. 413)

When Sergeant asks, "May we not judge a Conclusion that is Demonstrated?" (Solid Philosophy Asserted, Reflexion 22, section 3, p. 414), Locke replies thus:

noe, we see it to be true if we see the demonstration and doe not judge

(Marginal Comment No. 107, p. 414)

When Sergeant comments on the "Degrees of Assent" and states that "To Assent to any Truth is to say the Thing (is) and to Dissent is to say the Thing (is not)," (Solid Philosophy Asserted, Reflexion 21, section 6, p. 418), Locke comments thus:

To assent I take it is to say I believe a thing to be.

(Marginal Comment No. 108, p. 418)

In these marginal comments (No. 's 105, 106 & 107), Locke groups "assenting", "judging" and "believing" together. He distinguishes them from "seeing" which takes place when we are involved in demonstrating (or knowing). When we relate these two types of acts to the addition already cited, concerning the nature of inference (IV: XVII:4, p. 672), we find that the acts of "assenting", "judging" and "believing" fall into "supposing". When we "see" the connection of ideas (i. e. when we "perceive" it) we are involved in demonstrative inference; when we "suppose" the connection (i. e. when we 'perceive' it) we are involved in non-demonstrative demonstration. But, in any

case the act of perception (whether in the weaker or in the stronger sense) is indispensable to any inference.

We note in the said description of inference, Locke's use of "proposition" (IV:XVII:4, p. 672). But, as we have already noted (Chapter IV), in the Lockean context "proposition" may be taken as the "object" of the second act of the mind. The proposition becomes a part of "perceived connection" of ideas in the third operation of the mind. In the act of inference we "see" or "suppose" one proposition to be true from others.

Locke's comments on the example he gives for Inference also indicate the close connection between the "connection of ideas" and the act of "perceiving" it. He presents the derivation of "Men can determine themselves" from "Men shall be punished in another World" in the following order:

Men shall be punished, - God the Punisher, - just Punishment, - the Punished guilty, - could have done other-wise, - Freedom, - self-determination. (IV:XVII:4, (17) - (19), p. 673, addition to the fourth edition)

He calls this the "short natural plain order" (Ibid., (1), p. 674). The manner in which the "natural order" is tied up with the act of "perceiving" it is made explicit, when he continues thus:

For here the Mind seeing the connexion there is between the Idea of Men's Punishment in the other World, and the Idea of God punishing, between God punishing, and the Justice of the Punishment;

between Justice of Punishment and Guilt, between Guilt and a Power to do otherwise, between a Power to do otherwise and Freedom, and between Freedom and self-determination, sees the connexion between Men and self-determination. (IV:XVII:4, (24) - (31) p. 673, addition to the fourth edition)

The derivation given above is possible only when the connections are "perceived".

When Locke was involved in writing these additions he was also involved in the writing of Of the Conduct of the Understanding. Here also he emphasizes the necessity of the act of "perceiving" in demonstration. He recommends the study of mathematics for improving the habit of reasoning, since he finds mathematical demonstration most conducive for the development of such a habit. But he interprets mathematical demonstration as "observing the connexion of ideas" (Of the Conduct of the Understanding, section 7, Works, Vol. III, pp. 220-23). In Elements of Natural Philosophy he describes demonstration as the "Mediate perception of the agreement or disagreement of two ideas". He also acknowledges that one 'perceives' the "likely agreement or disagreement of ideas" in probable inference (Chapter XII, Works, Vol. III, p. 330).

When Locke points out that with hasty perception of the connection of the "connection of ideas" inference becomes defective, he confirms the necessity of the proper enactment of the act for inference (IV:XVII:4 (19) - (24), p. 672, addition to the fourth edition).

He makes the "discernment" of the "agreement or disagreement" of ideas through intermediate ideas a condition of demonstration (IV: XVII:15, (6) - (14), p. 684, addition to the fourth edition). He gives an important role to memory in his account of demonstration, since he characterizes it in terms of a "perceived connection", necessarily involving the act. Since demonstration is not "perception", "all at once" as in intuition, the demonstrator must retain the various connections effected through intermediate ideas and for which memory is necessary (IV:XVII:15, (18) - (28), p. 684, addition to the fourth edition).

Hence, these additions to the fourth edition confirm and elaborate Locke's basic contention that Demonstration be interpreted in terms of a "perceived connection" in which the act and the object are inseparable but distinguishable. His description is here similar to that of "Idea" as "object". Just as the "Idea" being inseparable from the act is tied up with psychological facts, the "perceived connection", being inseparable from the act, is connected with the psychological make-up of the person who is involved in the act. As Yolton points out, Locke is here presenting a "psychology of inferring" rather than a "logic of inference".²³

When Locke discusses the Syllogism in relation to this "natural order" he does not present the latter as an alternative to the former. It is not another formal schema. On the other hand, the

Syllogism is an artificial form or a mechanism of argument (IV:XVII: 4, (32) - (38), p. 673, addition to the fourth edition). As an artificial form, the Syllogism presupposes the "natural order". The latter is usually temporally prior but always epistemologically prior to the "formal order". According to him, ideas should be seen in the "plain and natural order" before they can be put into the "train of syllogism" (Ibid., (1) - (3), p. 674). The "natural order" must direct the "formal order". One must see the connection of each intermediate idea with those ideas it connects, before he can with reason make use of it in a syllogism (Ibid., (3) - (6), p. 674). Locke concedes that, to those who cannot see the "connection of ideas" or, in other words, to those who cannot "mediateally perceive" without the manipulation of a "formal schema" or a "mechanism", the Syllogism may be of help, as a pair of Spectacles is to those who have weak eyesight. In such a context, the "natural order" is not temporally prior to the "artificial order" (IV:XVII:4, (21) - (26), p. 678, addition to the fourth edition). When one perceives the "connection of ideas" he is also involved in syllogizing the connection and vice-versa. Despite this temporal conjunction between the "natural" and "formal" orders, the latter cannot replace the former, just as the pair of spectacles can never replace the Eye.

Whenever "artificial form" is made to function as "natural order" Locke considers that the former is trespassing into grounds

foreign to it. In an addition to the fourth edition he makes his position clear. He adds:

I have had Experience, how ready some Men are, when all the use which they have been wont to ascribe to any thing, is not allowed, to cry out, that I am for laying it wholly aside. But to prevent such unjust and groundless Imputations, I tell them, that I am not for taking away any helps to the Understanding, in the attainment of Knowledge. And if Men skill'd in, and used to Syllogisms, find them assisting to their Reason in the discovery of Truth, I think they ought to make use of them. All that I aim at is, that they should not ascribe more to these Forms than belongs to them; And think that Men have no use, or not so full a use of their reasoning Faculty without them.

(IV:XVII:4, (5) - (15) p. 678)

It is ascribing more to the forms than what belongs to them that concerns Locke.

This is one of the main points of controversy between him and Sergeant. Sergeant may be taken as one of those who Locke thinks as ascribing more to "forms" and then criticizing him that he totally lays them aside. Sergeant assigns certain functions to the syllogistic form (5:2) and finds that Locke disallows them. Hence, he thinks that Locke might have said in "one word that Syllogisms are good for nothing" (Solid Philosophy Asserted, Reflexion 22, section 4, p. 433).

In Sergeant's view, knowledge advances either through the apprehension of self-evident-propositions or through the establishment of a proposition from others "by way of proof". For the former the proposition concerned has to be "formally identical" and for the

latter the "proof" or demonstration has to be in "syllogistic form". He acknowledges that the discovery of the intermediate notions as middle terms of syllogistic demonstrations is not dependent on syllogistic form (5:2). But, for him, the "essential relations" between notions have to be effected through the proper middle term placed in the proper place so that it may "conjoyn the notions" and make such a connection evident. It is here that the syllogistic form becomes a necessity for Sergeant. The proper placement of the intermediate notion involves the syllogistic formulation of the demonstration.

The "certainty" that characterizes the propositions which constitute knowledge is not mere "formal validity" taken in isolation, but one which takes into account the conceptual connections of notions. Sergeant claims that, after the discovery of the mediate notion, the conceptual connection between two notions established as "certain" is shewed and strengthened through the Syllogistic Form. The "form" is made to shew and strengthen a conceptual connection (Solid Philosophy Asserted, Reflexion 22, pp. 435-36). According to him, if the "Syllogism be discarded, where any other Help can be found to make the force and Glearness of the Consequence better appear, or upon more evident and more Certain Grounds, not the Wit of Mankind can Imagin" (Ibid., p. 435). Any consequence so established receives its "strength and evidence" from the Syllogistic Form (Ibid., p. 436). He prefers the First Figure of the Syllogism to provide the "evidence".

(5:2). When Sergeant claims that the "whole design of Artificial or Syllogistick; reasoning being to Deduce Conclusions not yet known from Premisses which are either perfectly Foreknown, or at least better known"²⁴ (Ibid., p. 435), Locke marginally comments thus:

Syllogisme is to shew the rectitude of what we have infered if there be a doubt of it but does not help us to find the medius terminus by virtue of which we doe infer.

(Marginal Comment No. 111, p. 435)

Locke allows the Syllogism to function in the organizational aspect of knowledge; to test the "validity" of arguments. But in his view, knowledge advances through the perception of new connections of ideas made possible through the discovery of intermediate ideas. This is at the level of "natural order". The Syllogistic form cannot take the place of this "natural order" (IV:XVII:4, (36) p. 672 - (5) p. 673, addition to the fourth edition). He makes his view explicit in the following addition:

For a Syllogism neither shews nor strengthens the connection of any two Ideas immediately together, but only by the connection seen in them shews what connection the Extremes have one with another. But what connection this intermediate has with either of the Extremes in that Syllogism, that no Syllogism does or can shew. That the Mind only doth, or can perceive as they stand there in that juxta-position only by its own view, to which the Syllogistical Form it happens to be in, gives no help or light at all.

(IV:XVII:4, (19) - (27), p. 674)

Here Locke clearly distinguishes between the "natural" and the

"formal" orders - between the "juxta-position of ideas" and the "syllogistic form". The close relationship between the "juxta-position" and Mind's "perception" of it is shown. He also points out that the Syllogistic Form does not and cannot shew nor strengthen the connection of ideas. Here he goes against Sergeant's claim that the Syllogistic Form "shews and strengthens" the connections of notions and thereby establishes the consequence with "certainty". For Locke this is an instance of ascribing more to the Syllogistic Form than it can handle.

For him, the seeing and strengthening of the connections of ideas are at the level of "natural order". The Syllogistic Form presupposes this "perceived connection" but can never replace it. The visibility and strength of the connections depend on the "content" aspect and the psychological factors connected with the person involved in the act of "perceiving". The imposition of the Syllogistic Form on the argumentation of a non-logician, who is not proficient in the rules of the syllogism, hinders his "perception" of the connection of ideas (IV:XVII:4, (11) - (15), p. 674). As for the Logician, he "sees" the connection of ideas as well before as after syllogistic formulation. The latter in itself is of no use in the perception of the connection (Ibid., (16) - (18), p. 674). Locke does not deny the usefulness of the Rule of the Syllogism in the construction of a valid argument. He refers to this Rule several times. He states that "if the intermediate

Idea agrees with those it is on both sides immediately applied to, then those two remote ones, or as they are called Extremes do certainly agree" (IV:XVII:4, (27) - (29), p. 674). What he denies is that the Rule of the Syllogism helps us to "see" the connection of ideas.²⁵

The Rule of the Syllogism may guarantee the validity of arguments but cannot be of use in "seeing and strengthening" the connections of ideas. In his correspondence with Stillingfleet he distinguishes between deductions being certain and our being certain of them.²⁶ The Rule of the Syllogism pertains to the former - to the "formal order". The validity of an argument may depend on the Rule of the Syllogism but the "force of an argument" depends on the "perceived connection" of ideas.

There are two types of connections involved in this "perceived connection". They are as follows:

1. The connections of Ideas made possible through the intermediate idea. They are the psychological counter-parts of the premisses in a syllogism. These are Locke's "link" connections (IV:XVII:4, p. 673).
2. The connection of Ideas that result from the above connections and includes them. This is Locke's "chain" connection and is the psychological counter-part of the step from the premisses to the conclusion in a syllogism (Ibid., p. 673).

Let A and B be the ideas to be connected through Demonstration (i. e. the counter-parts of the major and minor terms in a syllogism). Let C be the intermediate idea (i. e. the counter-part of the middle term). The "natural order" of ideas may be schematized thus:

A—C—B

The "perceptions" of the "link" connections between A and C and between C and B leads to the "perception" of the "chain" connection between A and B. There is a dependency between the "link" and the "chain" connections. When the Mind "perceives" the "link" connections (i. e. between A and C, and C and B) it also is led to "perceive" the "chain" connection (i. e. between A and B), unless Illation breaks down or there is a memory block or some such psychological factor preventing the leap from the "link" connections to the "chain" connection.

The two examples added to the fourth edition to illustrate this "natural order" are helpful to understand its nature and how he distinguishes it from the "syllogistic form". The first one is the derivation of "Men can determine themselves" from "Man shall be punished in another World" (IV:XVII:4, (15) - (30), p. 673). With reference to this example, Locke states that, "the Mind seeing the connection there is between the idea of Man's punishment and the Idea of God's punishing, between God punishing and the justice of punishment. . . . sees the connection between Man and self-determination"

(Ibid. , p. 673). Locke also states that, if any of the link connections is "loose, the strength of the chain connection is lost (Ibid. , p. 673). For him, the "perceived" connection or the "natural order" involves both the "link" and "chain" connections which in turn are closely inter-related. The "perceptions" of "link" and "chain" connections may be considered as two facets or stages in the same act of "perception" rather than as two distinct "perceptions".

The second example is schematized as follows:

Homo — Animal — Vivens
(Ibid. , (27), p. 673)

According to Locke, the Mind "perceives" the connection between the ideas Homo and Vivens through the intermediate idea Animal "more readily and plainly" when the said ideas are placed in the above "simple and proper" order than in the "perplexed" syllogistic order,

Animal — Vivens — Homo — Animal
(Ibid. , (29), p. 673)

The manner in which Locke describes and compares these two schemas ("Homo — Animal — Vivens" and "Animal — Vivens — Homo — Animal") may give the impression that he is presenting the first as an alternative to the second and takes his alternative as a "formal schema" of the same order as the syllogistic form. In that case, Locke is here claiming that there is a "form" more effective than the "syllogistic form" to shew and strengthen the connection of ideas in a demonstration. But this will undermine his basic

contention, that the "form" cannot shew nor strengthen the connections between ideas. Locke's alternative here has to be interpreted as the "natural order" or "perceived connection" of ideas. It is not of the same category as the "syllogistic formal schema". The latter presupposes the former. For one to "see" the "truth and reasonableness (of the inference syllogistically formulated) one has to turn to the "natural order", i. e. to the perception of the connection of ideas through the intermediate idea, which the schema such as "Homo—Animal—Vivens" expresses. The syllogistic form such as "Animal—Vivens—Homo—Animal" per se does not and cannot make one see the connection of ideas. For such a schema is only a pattern of relationship between terms. It may help one see the connection, as a pair of Spectacles, but by itself it is only a "formal schema" such as "M - P, S - M, S - P". Such a schema has to be instantiated for one to see the connection of ideas through it. But instantiation is possible only when the "connection of ideas" is "perceived", i. e. when the "natural order" of ideas is got at. This is why Locke is careful to point out that the Syllogism may "shew the connection of the Proofs in any one instance and no more" (IV:XVII:4, (8) - (9), p. 670). It is really the "natural order" of ideas which makes us "see" the connection of ideas, when the latter is syllogistically formulated, i. e. when the syllogistic formal schema is instantiated.

In a context where this "connection of ideas" is not taken into serious consideration but the mechanics of argumentation is given more importance, the syllogistic schema may be given an honorific place. He cites the Schools and certain other unspecified circles as "where Men are allowed to deny without shame the Agreement of Ideas that do manifestly agree" (IV:XVII:4, p. 675). For him, the "truth and reasonableness" of a demonstration is "better seen in ranging of the Ideas in a simple and plain order" and does not need any "form to force the allowing of the Inference". When one is involved in convincing either himself or others of the "truth" of a proposition, he "never uses the syllogism". His reason is:

Because, before they can put them into a Syllogism they must see the connexion, that is between the Intermediate Idea, and the two other Ideas it is set between, and applied to, to shew their Agreement, and when they see that, they see whether the inference be good or no, and so Syllogism comes too late to settle it.

(IV:XVII:4, (12) - (16), p. 675, addition to the fourth edition)

For Locke the "natural order" of Ideas is indispensable for one to see the connection of ideas. The "formal order" pre-supposes the "natural order".

In the fourth edition, Locke says that the "Form Syllogism now has" is not the best to "shew the agreement or disagreement" of the ideas through the intermediate idea (IV:XVII:4, (10) - (14), p. 681). He suggests that the Form the Syllogism ought to have is one in

which the middle is placed between the other two terms as in:

Omnis Homo est Animal
 Omne Animal est vivens
 Ergo omnis Homo est vivens
 (Ibid., (21) - (23), p. 681)

According to him, such a form is "more natural and shews the Agreement or Disagreement of the Extremes clearer and better" than the traditional syllogistic figures (Ibid., (16) - (17), p. 681). We have already noted that Sergeant suggests that the first figure of the Syllogism is most "natural" and "evident" (5:2). Locke's suggestion is of interest, when viewed with reference to Sergeant's suggestion, and in the wider Aristotelian context where the First Figure is preferred to the other figures. Aristotle preferred the First Figure on account of its "evidence".²⁷ Sergeant too prefers it for the same reason. But, during this time the first figure was known mostly through English translations and not as Aristotle first formulated it.

Even Sergeant gives it thus:

Virtue is laudable
 Courtesy is a virtue
 Therefore Courtesy is laudable
 (Method to Science, Book III, Lesson I)

When Sergeant claims that a Reflecting Man sees the connection of terms most clearly when the middle term is placed in the middle (Solid Philosophy Asserted, Reflexion 22, section 3, p. 431), Locke marginally comments thus:

as in the Syllogisms of the Schools it is not.
(Marginal Comment No. 109, p. 431)

Locke's reformulation of the first figure in the fourth edition of the Essay may be taken as a return to Aristotle's first figure as formulated in Greek and is as follows:

If A is predicated of all B, and B of all C, A must be predicated of all C.
(Prior Analytics Book I, Ch. 3, section 4, 25b
39-26a 42, p. 68)

Whether or not Locke was aware of Aristotle's formulation, I cannot decide. But except for the positions of the major and minor terms in the conclusion, Locke's formulation is more Aristotelian, than the scholastic formulation and which Sergeant seems to have adopted.²⁸

Locke's formulation and suggestion has to be viewed in the light of his overall claim that the "form" of an argument by itself cannot shew nor strengthen the connection of ideas. If his formulation is taken as an alternative to the "natural order" such as "Homo—Animal—Vivens" then there is a tension in Locke. But his formulation is really an alternative to any syllogistic schema which is not in the first figure and is not a replacement of the "natural order". The "natural order" which he cites is: Homo—Animal—Vivens. The Syllogistic form he suggests is:

Homo—Animal
Animal—Vivens
Homo—Vivens

This may be diagramatized thus:  Homo—Animal—Vivens

According to him, such a syllogistic expression of the "natural order" best expresses it if it is at all syllogistically formulated.

The syllogistic expression of the "natural order" is not a replacement of it, but presupposes it, as any artificial form presupposes the "natural order". According to Locke such a syllogistic expression is preferable to the other figures of the syllogism and to the traditional latter scholastic formulation of the first figure, because the "perceived connection" or "natural order" is more transparent in such a "form". Nevertheless, it is still a "form" and has all the limitations which he ascribes to a "form" - particularly its incapacity to take over the function of the "natural order".

As Locke makes his informal interpretation of "demonstration" more pronounced and precise, he delimits more carefully the role of the syllogism in detecting fallacies. He states:

I grant that Mode and Figure is commonly made use of in such Cases, as if the detection of the incoherence of such loose discourses, were wholly owing to the Syllogistical Form; and so I myself formerly thought, till upon a stricter Examination, I now find that laying the intermediate Ideas naked in their due order, shews the incoherence of the Argumentation better, than Syllogism.

(IV:XVII:4, (13) - (23), p. 676, addition to the fourth edition)

The cases he refers to here are those fallacies hidden in "florid, witty and involved discourses", which he notes in the preceding paragraph (ibid., (34), p. 675). There he points out that it is a mistake

to think that Syllogism is of "necessary use" to shew such non-formal fallacies. These may be shewn by stripping them of the "superfluous ideas, which blended and confounded with those on which Inference depends, seem to shew a connexion where there is none; or at least to hinder the discovery of the want of it" (Ibid., (5) - (9), p. 676). To detect such fallacies, Locke turns to the "naked and due order" of ideas, and this is in keeping with his overall claim, that the "force" or "reasonableness" of a demonstration depends on the perceived connection or "natural order of ideas". Such a defect may occur when one is unable to get at the "natural order" and this may be due to either the perception of the improper intermediate ideas or to some defectiveness in the act of "perception", i. e. the defect may pertain to the "content" or to the "act". But, as we have already noted, at this level of "natural order" or perceived connection the "act" and the "content" are inseparable in that they are inter-dependent. Hence, a defect in "content" implies also a defect in "act" and vice-versa. Such a defect cannot be remedied or detected by syllogistic formulation.

Just as the syllogism as an artificial form may help some to see the connection of ideas, it may also help them to see the defect of a demonstration. But in neither case can the syllogistic form replace the "natural order". Locke states:

Syllogism shews the incoherence only to those (who are not one of Ten Thousand) who perfectly understand Mode and Figure, and the Reason upon which those Forms are established; whereas a due and orderly placing of the ideas, upon which the Inference is made, makes every one both Logician or not Logician, who understands the Terms, and hath the Faculty to perceive the Agreement or Disagreement of such Ideas, (without which, in or out of Syllogism, he cannot perceive the strength or weakness, coherence or incoherence of the Discourse) see the want of Connexion in the Argumentation, and absurdity of the Inference.

(IV:XVII:4, (21) - (30), p. 676, addition to the fourth edition)

"Strength and weakness", "coherence and incoherence" mentioned above takes into account the content aspect, and hence depends on the "perceived connection" of ideas and not on the syllogistic form. The analogy of the Spectacles applies here also (IV:XVII:4, p. 678). The Syllogism, like a pair of Spectacles, may be of help to those who are proficient with the rules of syllogism and who need a "formal schema" to see the connections of ideas. But the Syllogistic form is neither necessary nor by itself capable of discovering the "weakness" or "incoherence" of a demonstration. Both the spectackled logician and the naked-eyed non-logician have to resort to the "natural order" of ideas to get at the weakness of the demonstration. They have to "perceive" properly the "connection of ideas".

Locke does not question the usefulness of the Syllogism in the detection of "formal" fallacies. But he questions the tendency to view all defects in demonstration as if they are due to defects in syllogistic

form. Such a view is based on the assumption that if, and only if, a demonstration is syllogistically formulated it is free from defects; that syllogistic-discourse is reasoning of the highest order. According to Locke, the tendency to view all defects as if they are due to improper syllogizing is ascribing more to the "form" than what belongs to it. When Sergeant distinguishes "loose" and "learned syllogistic" discourse, he seems to ascribe more to the "syllogistic form" than what belongs to it, in the detection of fallacies. For him, Syllogistic discourse is precise and exact discourse and any linguistic or rhetorical "dazzle" may be detected and remedied through the "test of a Syllogism" (Solid Philosophy Asserted, Reflexion 22, section 3, pp. 431-32). As we have already noted, Locke seems to agree with Sergeant that the Syllogism cannot be blamed for rhetorical and linguistic defects (IV:XVII:4, p. 677). But, Locke makes it a point to add in the fourth edition that a linguistic fallacy may be uncovered by stripping off the superfluous idea without any syllogistic formulation at all. He adds:

Indeed Syllogism is thought to be of necessary use, even to those Lovers of Truth, to shew them the Fallacies, that are often concealed in florid, witty or involved Discourses. But that this is a mistake will appear, if we consider, that the Reason why sometimes Men, who sincerely aim at Truth, are imposed upon by such loose, and as they are called Rhetorical Discourses, is that their Phancies being struck with some lively metaphorical Representations, they neglect to observe, or do not easily perceive what are the true Ideas, upon which the

inference depends. Now to shew such Men the weakness of such an Argumentation, there needs no more but to strip it off the superfluous Ideas, which blended and confounded with those on which the Inference depends, seem to shew a connexion, where there is none; or at least do hinder the discovery of the want of it; and then to lay the naked Ideas on which the force of the Argumentation depends, in their due order, in which Position the Mind taking a view of them, sees what connexion they have, and so is able to judge of the Inference, without any need of a Syllogism at all. (IV:XVII:4, (32) p. 675 - (12) p. 676, addition to the fourth edition)

Here Locke seems to be responding to Sergeant (Cf. Solid Philosophy Asserted, Reflexion 22, section 3, pp. 491-493). For Locke, the syllogistic forms of discourse are not less liable to fallacies than the "plainer ways of argumentation" (ibid., (19) - (21), p. 677). The "syllogistic form" is only a "form" of discourse. The defects of "form" in a syllogistically oriented context may be detected and remedied by the "test of the Syllogism". But, the informal fallacies have to be detected and remedied by resorting to the "natural order" of Ideas.

Review:

In these two sub-sections of 5:3, we found that Locke's criticisms of the role of the syllogism are closely related to the interpretation he gives to "reasoning" and "demonstration". His criticisms of the syllogism become more poignant as his interpretation of demonstration in terms of "perceived connection" becomes more precise

and pronounced.

Locke does not totally dismiss the syllogism. As a method of testing validity, as a mode of organizing and presenting knowledge, as a strategy to gain argumentative victories, and even as a help to one who needs a "formal schema" to perceive the conceptual connections of ideas, Locke acknowledges the usefulness of the syllogism. Here, he is in agreement with those who belonged to the syllogistically oriented logico-epistemological tradition. Even Sergeant acknowledges that "in diverse parts of this Discourse (Essay), I doubt not but Mr. Locke agrees with me" (Solid Philosophy Asserted, Reflexion 22, section 3, p. 431). Nevertheless, there is controversy between Sergeant and Locke over the syllogism.

Locke accepts that, when one reasons he may use syllogistic form. But he questions the further claim that one reasons best only when he reasons in syllogistic form; that rationality of the highest order is identical with syllogistic logicity. Locke acknowledges that the syllogism may be of use in the organizational and presentational aspects of knowledge. But he questions its use in the advancement of knowledge.²⁹ The syllogistic form may manifest or express what has been already known but cannot replace the "natural order" or the "visible agreement of ideas" which is for Locke the "original way to knowledge" (IV:XVII:4).

Sergeant's response to Locke is mainly over these two

criticisms. His response to Locke (Solid Philosophy Asserted, Reflexion 22) is organized in a manner that highlights the said criticisms. He finds Locke questions the claims that syllogistic logicity is identical with rationality of the highest order and that syllogistic demonstration is the only means to knowledge, excluding intuition. According to Sergeant, if these two claims concerning syllogism are not accepted, then one has to discard it as "good for nothing at all". Some of Locke's additions to the fourth edition of the Essay (IV:XVII: 4, (25)-p. 670 - (24) p. 671; (27) p. 671 (4) p. 672; (19) p. 672 - (15) p. 677; (16) p. 677 - (4) p. 678; (5) - (26), p. 678; (9) - (29), p. 681) seem to be direct responses to Sergeant's critical response. We have examined these additions in these sub-sections.

Disputation, which occupies an important place in the university curriculum of this period also indicates the honourific place given to the syllogistic form, and thus may be taken as another facet of the "formalism" that is under attack.

The Syllogism and Disputation:

Locke's distaste for Disputation is evident from his undergraduate days and may be considered as resulting from his unpleasant encounter with it at Oxford.³⁰ The disputation oriented curriculum was overburdening and Locke could not take it. But his criticism of it was not a mere emotional outburst. There is a logico-

epistemological basis for it. As his "informal" interpretation of "Demonstration" became more pronounced and his criticism of Syllogism became more poignant, the logico-epistemological reasons for his opposition to Disputation became more explicit.

Disputations were then organized on the syllogistic model.³¹ The disputants were expected to propose and defend "pro-forma", which meant, according to syllogistic form. The underlying assumption for such an organization is that one reasons best when he argues syllogistically; that any piece of reasoning which is adequate for the purposes of Disputation has to necessarily be syllogistic in form. Locke not only questions this assumption (IV:XVII:4 (15) - (25), p. 671, addition to the fourth edition), but also goes so far as to claim that sometimes the syllogistic form is a hindrance to reasoning (IV:XVII:4, (16) - (23), p. 677, addition to the fourth edition).

Locke also detects a tendency to regard the syllogistically organized disputation as the most effective method of discovering truth and attaining knowledge. When he emphasizes that argumentative victories may be achieved through the employment of the syllogistic form of reasoning but that such victories should not be identified with the discovery of truth and the attainment of knowledge (IV:XVII:4, pp. 677-8; IV:VII:II, p. 600, additions to the fourth edition), he questions the soundness of the reasons that prompted the University Authorities to give such a place of prominence to

Disputation in the curriculum.³² They were convinced that such a training in Disputation will not only turn the students into expert disputants but also make them proficient in the syllogistic method and thereby equip them with the most effective form of reasoning for the attainment of knowledge and the discovery of truth; "the great unwritten assumption was that by conducting disputes men could detect error and establish truth".³³

When he discusses the role of Maxims, Locke makes the following addition to the fourth edition of the Essay:

The Schools having made Disputation the Touchstone of Mens Abilities, and the criterion of knowledge, adjudged victory to him that kept the Field; and he that had the last Word was concluded to have the better of the Argument, if not of the Cause. . . . But the Method of the Schools, having allowed and encouraged Men to oppose and resist evident Truth, till they are baffled, i. e. till they are reduced to contradict themselves, or some established Principle; tis no wonder that they should not in civil Conversation be ashamed of that, which in the Schools is counted a Virtue and a Glory; viz. obstinately to maintain that side of the Question they have chosen, whether true or false, to the last extremity; even after conviction. A strange way to attain Truth and Knowledge.
(IV:VII:II, pp. 600-601)

He does not question the possibility of having argumentative victories in Disputation, but is concerned with the view which Disputation encourages - that of taking argumentative victories for attainment of knowledge and discovery of truth (IV:XVII:4, (24) p. 677 - (1) p. 678, addition to the fourth edition).

In an addition originally intended for the fourth edition of the Essay (III:X:II), Locke states:

I grant the method of syllogism is right as far as it reaches; its proper business is to show the force and coherence of any argumentation, and to that it would have served very well, and one might certainly have depended on the conclusions as necessarily following from the premisses in a rightly ordered syllogism, if the applauded art of disputing had not been taken for knowledge, and the credit of victory in such contests introduced a fallacious use of words, where by even those forms or arguing have proved rather a snare than a help to the Understanding. 34

He is most concerned with the tendency to take the syllogistically organized Disputation as a method to knowledge. In another intended addition to section 13 of the same chapter (III:X:II), he allows for the learning of the syllogistic forms as quickly as one can for the sake of managing arguments but restricts the use of syllogistically organized disputation to those who have mastered a science as a means to attain. He states,

... for if they be accustomed and required to dispute before they know, will it not teach them to take words for things, - prefer terms for truth, - and take disputing for knowledge. 35

In advising Edward Clarke on how to educate his son, Locke exhorts:

If the use and end of right Reasoning, be to have right Notions, and a right Judgement of things: to distinguish betwixt Truth and Falsehood, Right and Wrong; and to act accordingly: be sure not to let your Son be bred up in the Art and Formality

of Disputing, either practising himself or admiring it in others: unless instead of an able Man, you desire to have an insignificant Wrangler, Opinator in Discourse, and priding himself in contradicting others; or, which is worse, questioning every thing, and thinking there is no such thing to be sought but only Victory in Disputing . . . Truth is to be found and supported by a mature and due Consideration of Things themselves, and not by Artificial Terms and Ways of Arguing. ³⁶

We may ascribe two reasons for Locke's description of disputation as a "formality". Disputation during his day was ceremoniously enacted with a meticulous observation of the rules of debate and a rigorous conformation to the syllogistic forms of reasoning. But, for him, such an enactment, although conducive for the achievement of argumentative victories was of no use for, and sometimes a hindrance to, the attainment of knowledge. In the paragraph preceding the passage quoted above he makes it clear why he does not say much of Rhetoric, Logic and Grammar. He finds so little use of them. "Right reasoning" that is conducive for the attainment of Knowledge, according to Locke, is "founded on something else than the Predicaments and Predicables, and does not consist in talking Mode and Figure it self"; ³⁷ such reasoning is founded on the perception of the connection of ideas through intermediate idea or ideas. In such a context, the practice of Syllogistic Mode and Figure is of no use and hence he suggests, "I would have a young Gentleman take a view of them in the shortest Systems could be found, without dwelling

long on the contemplation of those Formalities".³⁸

Moreover, Locke detects the learned disputants indulging in verbalism (III:X:2, 6, 7 & 9). He stops blaming the Syllogistic Method of reasoning for the abuse of words.³⁹ Yet he detects that the "learned disputants" who employed the syllogistic form of reasoning also indulged in verbalism which amused rather than informed (III:X:2).

Hence, on account of the Syllogistic form of reasoning and Verbalism being associated with Disputation, Locke called it a "formality". His criticism of two logicians of his day makes explicit the import of a Logic that encouraged the practice of such Disputation.

He comments:

Seneca complains of the contrary Practice in his time: And yet the Burgersdicus's and the Scheiblers did not swarm in those Days, as they do now in these. What would he have thought, if he had lived now, when the Tutors think it their great Business to fill the Studies and Heads of their Pupils with such Authors as these? He would have had much more reason to say, as he does, Non Vitae sed Scholasticismus, 'we learn not to Live, but to Dispute, and our Education fits us rather for the University, than for the World.'⁴⁰

Locke's confession after witnessing a medieval disputation at a local monastery reveals his attitude towards Disputation:

Our disputing in Oxford comes short of it as the rhetoric of Carfax does that of Billings-gate. But it behoves the monks to cherish this art of wrangling in its declining age, which they first nursed

and sent abroad to give it a troublesome, idle employment.⁴¹

The "troublesome and idle employment" of Disputation, that concerns Locke, is when it is used as a method to knowledge when "victory in dispute" is taken to be "discovery of truth".

Sergeant too is against verbalism (Method to Science, Preface, pp. 1-10). But his theory of Notions and his insistence that the type of Demonstration that yields Knowledge has to be syllogistic in form, turn his "method to science" into a "formality". He claims that Notions are "things themselves". He is convinced that, when such Notions are used as the basic constituents, the Science constructed on them will be "solidly based". The "formally identical" propositions provide the first principles and the "Rule of testing the truth of propositions". The syllogistic form of reasoning provides the method to reach "certain" conclusions, and thereby establish legitimate scientific propositions. These are his justifications for his claim that a "Science of Nature" is possible.

But in the Lockean perspective, such a "method to science" becomes a "formality", particularly in the field of Nature; a mere cosmological speculation. Locke distinguishes between "real" and "nominal" essences and emphasizes that we cannot have the knowledge of "real" essences of substances.⁴² Here the "method of natural history" proceeds by experiment and observation recording

the experienced co-existences in substances. The general ideas which we may obtain here are only "nominal essences" (III:III:12-20; IV:III:9; III:VI:8-11; III:VI:29). But here, according to Locke, "Demonstration" is inapplicable. When we do not have the idea of the real essences of substances but only one where several qualities co-exist, "no visible or necessary connexion or inconsistency" of one of those ideas of co-existing qualities with any other, is possible (IV:III:9-10, 14; IV:III:11).

He no doubt acknowledges that there are a few qualities which do have a necessary connection with other perceived qualities, as "figure necessarily supposes extension, receiving or communicating motion by impulse supposes solidity" (IV:II:12). Here, the connections are perceived not through observation and experimentation but through intuition and demonstration; they are conceptual necessities (IV:II:15; IV:VII:5; II:III:11; III:XI:15-16). But when we obtain information concerning the connections between co-existing qualities through observation and experimentation, as in the case of substances, Locke is careful to emphasize that we cannot conceive those non-necessary connexions to be necessary. For necessary connections to be perceived we have to get at the real essences of substances. Hence, demonstration is not applicable in the case of the investigation of natural phenomena since the "necessary connexion or repugnancy" between the co-existing qualities is not "perceived" (IV:III:26-28, 16;

IV:VII:12).

According to Locke, the Syllogistic form presupposes and depends on the "necessary connections" between ideas and is applicable only in contexts where we are able to perceive these necessary connections. Hence, we can syllogize only in demonstrative contexts. Sergeant's attempt to construct a "Science" of Nature through Syllogistic Demonstration on the basis that his "Notions" are "things themselves" becomes for Locke formality since we cannot employ Syllogistic Demonstration here. We expect Nature to have certain necessary connections but our basis for that is only the perception of non-necessary connection between co-existing qualities.

Locke does not question the coherence of the scientific structures which may be constructed but his concern is whether such a coherent structure gives us any knowledge of Nature. He observes that "one may often meet with very clear and coherent Discourses, that amount yet to nothing", that "one may make Demonstrations and undoubted Propositions in Words, and yet thereby advance not one jot in the Knowledge of the Truth of Things" (IV:VIII:8). Sergeant claims that through the syllogistic form, conceptual connections between notions may be shewn and strengthened and thereby "certain" conclusions established and knowledge increased. But in the Lockean perspective such a claim encourages the practice of a "formality". Hence, both in Sergeant's use of Notions as "things themselves" and

of the syllogistic form as the method to increase knowledge, his "method to science" is comparable to the verbalistic syllogistic disputations which Locke criticizes as "mere formalities".

In this dissertation no attempt is made to examine Locke's account of the "science of nature" or his critique of language. It is sufficient merely to note that Locke criticizes the verbalistic - syllogistic disputation as a method of knowledge. Here he goes against the "disputation" oriented tradition of the "rational scientists". 48

Conclusion:

In this chapter I have attempted to examine the main facets of Locke's anti-formalism at the level of discourse. He does not attack Formal Logic but a "Formalism" which attempts to employ the syllogistically formulated demonstration for epistemological purposes; one which takes syllogistic demonstration as the only means, excluding Intuition, for gaining knowledge; one which tends to blind the distinction between rationality and syllogistic logicity and which gives a theoretical basis for a procedure for gaining knowledge, which in Locke's view, is a mere "formality". Sergeant's theory of syllogism and demonstration exemplifies such a "Formalism". Locke's "informal" interpretation of Demonstration, his critique of syllogism, and his attack on Disputation, are inter-related and

become more pronounced in the later editions of the Essay and in some of his later works. Some of the marginal comments in Solid Philosophy Asserted anticipate Locke's developments on the said topics (Marginal Comments No. 's 105, 106, 107, 108, 109, 110 & 111). In a context where logical, epistemological and psychological questions are not clearly demarcated and where the syllogistic form is made to function in areas where it cannot and should not, Locke's critique becomes relevant and disturbing.

NOTES AND REFERENCES -- Chapter V

1. Bacon, Francis, Advancement of Learning, The Second Book, pp. 114-5, 117; Novum Organum, The First Book of Aphorisms, XI-XV; The Second Book of Aphorisms, XXVIII; De Augmentis Scientiarum, Book V, Ch. II & IV.
 Cf. W. R. Sorley's A History of British Philosophy to 1900, 1920, reprinted 1973, Ch. II, pp. 14-33; R. Adamson & W. R. Sorley's A Short History of Logic, London, MDMXI, Ch. IV, pp. 85-92; Neal Wood's The Baconian Character of Locke's Essay, Studies in the History of Philosophy of Science, Vol. VI, 1975.
 Locke owned the complete works of Bacon (Harrison, J. & Lasslett, P., op. cit., p. 78) and cites him occasionally (Of the Conduct of the Understanding, section 1, Works, Vol. III, pp. 206-7; IV:XXII2).
2. Descartes, Regulae ad Directionem Ingenii, 1701; Cf. Beck, L. J., The Method of Descartes, 1970, pp. 100-110; Aaron, R., John Locke, 1971, Ch. VII, pp. 220-27.
3. Glanville, J., The Vanity of Dogmatizing... 1661, The Preface, Ch. 's XVI & XVII; Sceptis Scientifica... 1665, An Address to the Royal Society, Ch. 's XIII, XVIII & XIX.
4. Sydenham, T., Observations medicae, Preface, as found in the The Works of Thomas Sydenham, tr. from the Latin ed. by R. G. Lathan, London, 1848-50.
5. Von Leyden, W., Seventeenth Century Metaphysics, An Examination of Some Main Concepts and Theories, 1968; Leeuwen, H. G. Van, The Problem of Certainty in English Thought, 1630-90, The Hague, Nijhoff, 1963; Yolton, J. W., Locke and the Compass of Human Understanding, 1971, pp. 115-17.
6. Yolton, J. W., Locke and the Compass of Human Understanding, Ch. III, pp. 79-86.

7. Aristotle, Prior Analytics, Book I, Ch. 3, section 4, 25b 32-39, Mckean ed. p. 69; Cf. Book I, Ch. 1, section 1; 24b 18-31, p. 66.

G. Patzig notes that the distinction between the first and other figures were made on the basis of evidence rather than of validity. (Aristotle's Theory of the Syllogism, A Logico-Philological Study of Book A of the Prior Analytics, 1968, Ch. III, pp. 43-61.)

8. Aristotle, Posterior Analytics, Book I, Ch. 14, 79a 18-34, Mckean ed. p. 131.
9. K. Digby states:

Now in this our first employment will be, to shew how three of these thoughts or judgments, well chosen and duly ordered, do compose the first and most simple of perfect discourses which Logicians call a Syllogisme: whole end and effect is to gaine the knowledge of some thing, before hidden and unknowne. (The Second Treatise..., Ch. III, p. 376)

For the views of Wallis, Sanderson, Crakanthorpe and other Peripatetics, see Howell, W.S., Eighteenth-Century British Logic..., pp. 13-60.

10. K. Digby claims:

Now these syllogisms, being as it were interlaced and woven one with another, they are the steps by which we walke in all our conversations and in all our business: man as he is man, doth nothing else but weave such chaines: whatsoever he doth, swerving from this worke, he doth as deficient from the nature of man. (op. cit., Chapter III, section 3, p. 377)

Cf. Howell, W.S., op. cit., pp. 13-60.

11. Peter Ramus claims:

Finally let us remember that the Syllogism is a law of reason, one fashioned through

which the judgement of the doubtful proposition is established by a necessary and immutable verdict - I say a law of reason, proper to man, not being in any sense shared with the other animals.
 (P. Ramus, Dialectique..., 1574, p. 118, cited by Howell, W.S., Logic and Rhetoric in England, 1500-1700, pp. 159-60)

Ramus goes on to say that lower forms of life like spiders and ants, despite their sensory adjustment to their environment, can conceive of nothing by using a middle term, and can draw no conclusion by properly comparing and disposing such a term in the figure of a syllogism. He concludes '... certainly this part in Man is the image of some sort of Divinity' (Ibid., p. 119, and Howell, p. 160).

Ramism was not dead in England. It was popular, particularly in Cambridge (Howell, W.S., Ibid., Ch. IV, 'The English Ramists'). Thomas Spencer in The Art of Logick (1628) attempted to reconcile Aristotelian with Ramistic Logic. The Syllogism was given a predominant place by Spencer.

12. I do not think that either Locke or Sergeant can claim originality for this doctrine. The doctrine of "degrees of certainty" was very much in vogue during the 17th Century. See Yolton, J. W., Locke and the Compass of Human Understanding, pp. 115-116).
13. Locke states the two senses in which he employs "reason" thus:

The greatest part of our Knowledge depends upon Deductions and intermediate Ideas: And in those Cases, where we are fain to substitute Assent instead of Knowledge, and take Propositions for true, without being certain they are so, we have need to find out, examine, and compare the grounds of their Probability. In both these Cases, the Faculty which finds out the Means, and rightly applies them to discover Certainty in the one, and Probability in the other, is that which we call Reason. For as Reason perceives the necessary, and indubitable connexion of all the Ideas or Proofs one to another, in each step of any

Demonstration that produces Knowledge: so it like-wise perceives the probable connexion of all the Ideas or Proofs one to another in every step of a Discourse, to which it will think Assent due.
(IV:XVII:2)

When Locke asserts that in the case of knowledge of substances "experience" must teach us what "reason cannot", he seems to use "reason" in the tighter sense, whereby we perceive the necessary connections between abstract ideas. D. Odegard notes Locke's use of "reason" in two senses (Locke's Epistemology and the Value of Experience, J. H. I., 1965, p. 420).

14. Collins, A., An Essay Concerning the Use of Reason in Propositions, The Evidence whereof depends upon Human Testimony, 1707, pp. 3 & 4.
15. King, Lord, The Life of John Locke, Vol. II, 1830, pp. 226-7.
16. Hans Harsleff notes this (The State of Nature and the Nature of Man, in John Locke: Problems and Perspectives, ed. J. W. Yolton, p. 100).
17. Howell, W. S., Eighteenth Century British Logic and Rhetoric, 1971, pp. 26-28, 33-38.
18. Ibid.
19. Wallis, J., Institutio Logicae, Oxford, 1687, p. 167, as tr. by W. S. Howell, op. cit., p. 34.
20. J. W. Yolton notes that Locke's "informal" characterization of Demonstration becomes more pronounced and precise in the latter portions of the Essay (Locke and the Compass of Human Understanding, p. 93).
21. I am making use of the diagrammatic presentation given by Lyn Rose (Aristotle's Syllogistic, 1968, pp. 141-42).
22. Both Francis Bacon and Descartes find the syllogism useful for expounding, communication and in disputation, but not in advancement of knowledge. Bacon, F., Novum Organum, The

Plan of the Work, in Works, op. cit., p. 249; Descartes, R., Discourse on Method, 1637, p. 16; Cf. Howell, W. S., Logic and Rhetoric in England, pp. 348-352.

23. Yolton, J. W., Locke and the Compass..., Ch. III, p. 93.
24. Digby anticipates Sergeant here (Kenelm Digby, op. cit., Ch. III, p. 376).
25. Yolton, J. W., op. cit., p. 97.
26. In his Second Reply to the Bishop of Worcester, Locke writes:

Now of the certainty in making deductions, I see none of the ancients produced by your lordship, who say anything to show, wherein it consists, but Aristotle; who, in his method of inferring one thing from another, went upon this common principle of reason, that what things agree in a third, agree among themselves. And it so falls out, that so far as he goes towards the showing wherein the certainty of deductions consists, he and I agree, as is evident by what I say in my Essay (IV: II:2; IV:XVII:15). And if Aristotle had gone any farther to show, how we are certain, that those two things agree with a third, he would have placed that certainty in the perception of that agreement, as I have done, and I should have perfectly agreed... he would have placed our knowledge or certainty of the agreement of and two things in the perception of their agreement...

(Works, Vol. IV, pp. 383-4; Cf. IV:XVII:4)

I do not here claim that Locke's characterization of the "agreement" or "disagreement" of ideas is free from unclarity. See Bennett, J., Locke, Berkeley, Hume, Central Themes, pp. 238-9.

27. Refer to 5:2, note 7.
28. According to G. Patzig, Locke recognized and adopted Aristotle's theory of "Perfect" Syllogism (Aristotle's Theory of

the Syllogism, 1968, note 20, p. 85). Aristotle's and Locke's formulations are similar except for the position of the major and minor terms in the conclusion. They are reversed in the Lockean formulation.

29. S. Toulmin's observation on the method of analyzing scientific progress in terms of a logical apparatus resembles Locke's critique of the role of syllogism in the advancement of knowledge. Toulmin states:

Analysis in logical terms can give us an instantaneous 'snapshot' of the faultless scientific inference, within the scope of existing concepts and methods; but still leaves us without the 'moving picture' we need if we are to understand the rational procedures by which the scope of Science is extended.

(From Logical Systems to Conceptual Populations, Boston Studies, Vol. VIII, 1970, p. 554)

30. Lady Masham wrote thus:

I have often heard him say, in reference to his first years in the University, that he had so small satisfaction there from his studies (as finding very little light brought thereby to his Understanding) that he became discontented with this manner of life; and wished his Father had rather designed him for any thing else than what he was destined to... Mr Locke never loved the trade of Disputing in publick in the Schools, but was always wont to Declaim against them as being rather invented for wrangling or ostentation than to discover Truth.

(Lady Masham, 1705, as given by M. Cranston, John Locke, 1959, p. 38)

31. Refer to Appendix II.
32. Ibid.
33. Howell, W.S., Logic and Rhetoric in England... , p. 98.

34. King, P., The Life and Letters of John Locke, p. 361.
35. Ibid., p. 363.
36. Locke, J., Some Thoughts Concerning Education, section 189, Works IX, p. 178. Cf. Locke to Clarke, 29 Jan., 1686, in The Correspondence of John Locke, ed. by E. S. de Beer, Vol. II, p. 976, pp. 784-5.
37. Locke, J., Some Thoughts Concerning Education, section 188, p. 177.
38. Ibid.
39. Locke, J., Essay IV:XVIII:4, p. 677, see footnote also.
40. Locke, J., Some Thoughts..., section 94, p. 86.
41. BL. MSS. Locke C 24 F. 231 as cited by M. Cranston, op. cit., p. 84.
42. I do not examine Locke's distinction between "real" and "nominal" essences since I do not deal with the applicative aspects of Locke's account of the method to knowledge. But the following points may be noted:
 1. The Nominal Essences are for Locke abstract Ideas (III: III:12-20).
 2. What Sergeant considers as Substantial Forms or Essential Forms, Locke regards as "Nominal Essences" (III: III:16).
 3. These Nominal Essences being a type of Ideas have no ontological character in them. Sometimes they are described as immutable but this "immutability" is not to be identified with what is associated with an ontological entity. For instance, Locke describes the idea named "justice" as an abstract idea which is immutable (III:III: 19). But this "immutability" depends upon how the word "justice" is used, i. e. the "abstract idea of justice is immutable as long as the same name can have the same signification" (Ódegard, D., Essences and Discovery, op. cit., p. 222).

4. Locke's characterization of Substantial Forms as "Nominal Essences" de-ontologizes them, since Nominal Essences are for Locke Ideas (abstract) and they are not ontological (III:VI:4, 5, 6, 7, 8, 10, 11, 24, 28; III:VIII:1-3; III:III:13-16).

43. William Wotton's observation on the Logic and Metaphysics of the "Ancients" is relevant here. He states:

Logick is the Art of Reasoning: but, by it Men commonly understood the Art of Disputing, and making Syllogisms: As this is taught in Schools, it is certainly owing to the Ancients. . . . But as Logick is truly the Art of Reasoning justly, so as not only to be able to explain our Notions, and prove our Assertions, clearly and distinctly: but to carry our Speculations further than Men have carried theirs, upon the same Arguments: it has not only been much cultivated by Modern Philosophers as far persued as ever it was by Ancients: For hereby the late Enquiries been made into Physical, Metaphysical, and Mathematical matters, the Extent where of is hereafter to be examined. Hereby the Ancient Mathematicians made their discoveries, and when they had done they concealed their Art: for, though we have many noble Propositions of theirs, yet we have few hints how they found them out. . . .

Whether the Moderns have been deficient in this noble Part of Logick, may be seen by those who will compare Descartes' Discourse on Method, Mr Lock's Essay of Humane Understanding, and Tschirnhaus's Medicina Mentis; with what we have of the Ancients concerning the Art of Thinking: Where, tho' it may be pretended that their Thoughts and Discoveries are not entirely new in themselves yet to us, at least, they are so, since they are not immediately owing to Ancient Assis-
tances, but to their own strength of Thought, and Force of Genius. And, since this Art, 'is indeed, the Foundation of all Knowledge, I ought to take notice, that my Lord Bacon and Descartes

were the two great Men, who found Fault with the Logick of the Schools, as insufficient of itself for the Great Design of Logick, which is the Advancement of real Learning: and got Authority enough to persuade the World, in a very great degree, that other Methods must be taken, besides making Syllogisms.... The True use of the Common Logick being rather to explain what we know already, and to detect Fallacies of our Adversaries than to find that out, of which we before were ignorant. So that the Moderns have enlarged its Bottom: and by adding the Desideratum which the Ancients either did not perfectly know or, which is worse, did invidiously conceal, namely the Method of Discovering Unknown Truths...
(Reflections upon Ancient and Modern Learning, London, 1694, Ch. XIII, pp. 154-58)

CHAPTER VI

CONCLUSION

In this dissertation I have attempted to examine Locke's logico-epistemological enterprise in the light of the "Formalism" that Sergeant represents. Such an examination reveals the reasons for labelling Locke an "Anti-Formalist". Certain consequences result from such a comparative examination.

The Locke-Sergeant controversy has helped me to appreciate more fully Locke's logico-epistemological enterprise. Since he does not specifically mention his opponents nor explicitly identify the target of his attack, one is unable to determine precisely the nature of the doctrines he attacks and their broader theoretical foundations. One is forced to rely on Locke's remarks alone to determine the nature of the doctrines he criticizes, and his remarks on the views of his opponents are not very exhaustive. Moreover, since many of the views he criticizes are mostly foreign to the contemporary context, one begins to wonder whether Locke was merely involved in criticizing a set of "straw" doctrines, which he had conjured up for the sake of providing a pretext for his logico-epistemological enterprise.

When one attempts to assess Locke's enterprise without taking into account the context in which it takes place, such doubts naturally arise. For instance, Lynn Rose concludes that Locke's criticism of the Syllogism was "one of the most extreme and incompetent attacks" he had come across.¹ He reaches such a conclusion mainly because he finds that Locke's criticisms are neither applicable to Aristotle nor to any "competent logician".² According to Rose, "Locke's arguments against Syllogism are thus reminiscent of his arguments against innate ideas: he attacks views that have rarely, if ever, been held".³ If Rose had placed Locke's criticisms in the 17th Century context, and had taken into consideration the views of philosophers like Sergeant, who belong to this period, I do not think that Rose would have been so hasty in his conclusion. For, when one places Locke's criticisms in the context in which they occurred, one is led to observe the various reactions to the Essay, as the Lockean scholars who have adopted such a strategy have been led to.⁴ Sergeant's critical response to Locke is one of the major reactions to his logico-epistemological criticisms. Sergeant's response exhibits the major views and doctrines that Locke attacks. Hence, when one views Sergeant's response as manifested in his works like Solid Philosophy Asserted and Non-Ultra..., along with his earlier philosophical work, Method to Science, and with his religious works like Reason against Raillery, which contain topics of philosophical interest,

one is able to determine more precisely the nature of the doctrines which Locke attacks. One also realizes that Locke was not attacking doctrines which were not upheld. For instance, his criticism of the view that "general maxims" confirm the truth of other self-evident propositions (4:4) appears trivial, when one views it outside the context in which it was made. One begins to wonder whether Locke was criticizing a doctrine that was never seriously held. But, as we have noted (4:2 & 4:4), Locke's criticism prompts Sergeant to make explicit the reasons for his holding the view that Formally Identical Universal Propositions exert an "influence" over Formally Identical Particular Propositions, which are also self-evident. Sergeant's response to Locke's criticism reveals that the view which Locke attacks was held by Sergeant. Hence, an examination of the said criticism in the light of Sergeant's response helps one to determine more precisely the target of Locke's attack on the "confirming" capacity of Identical Propositions.

Locke states that there is "one manifest Mistake in the Rules of Syllogism; viz. that no Syllogistical Reasoning can be right and conclusive, but what has, at least, one general Proposition in it" (IV:XVII:8, as found in the first and subsequent editions of the Essay). Such a criticism, when viewed apart from the context in which it was made, is completely off the mark. For, this would mean that he is going against a perfectly valid Rule of the Syllogism. But he allows

the use of Syllogisms having general propositions. The example he cites, immediately following his comment on the "manifest mistake" in the rules of syllogism, contains three general propositions (Omnis Homo est Animal, Omne Animal est vivens, Ergo Omnis Homo est vivens - IV:XVII:8). This appears to create a tension in Locke's views. For he employs Syllogisms with general propositions, and at the same time he seems to criticize the rule of Syllogism, according to which there should be at least one general proposition in a valid syllogism. O'Connor thinks that Locke's "concession" concerning the usefulness of the Syllogism in "silencing wranglers" is "hardly consistent with his (Locke's) criticism".⁵ But Locke's criticism is best understood, and its effectiveness fully appreciated only when we place it in the context in which it was made. Locke makes it in a context where the syllogistic reasoning was identified with "reasoning of the highest order" and with what was considered most appropriate for gaining scientific knowledge. O'Connor realizes that the Rule of Syllogism, which Locke criticizes, "would be false only if it were maintained to be a universal rule of reasoning on the grounds that all reasoning is syllogistic in form".⁶ But, O'Connor goes on to point out that "the theory of the syllogism is known nowadays to be only a very small part of deductive logic, but it does provide examples of important types of logical relations involved in inference (class membership and class inclusion, for example)".⁷ He concludes

his discussion with the observation that had Locke concentrated on the study of the "logical powers of these relations" it would have given him a "more fertile basis for his account of inference than the one he actually adopted".⁸ But had O'Connor taken into account the specific context in which Locke had given his account of the Syllogism, and had made the criticism concerning the Rule of Syllogism, O'Connor would have been able to better appreciate Locke's endeavour here. We noted (5:2) that during Locke's day there was a widespread view that Man reasons best when he argues syllogistically, and that syllogistic reasoning was most conducive for the attainment of science. Sergeant represents such a view (5:2). In such a climate of opinion, any piece of reasoning worth its name has to be syllogistic in form. This implies that such a piece of reasoning has to have at least one general proposition as its premise, by the said rule of syllogism. Sergeant's critical response to Locke's criticism of the said rule makes explicit the place Syllogistic Reasoning had in Sergeant's doctrine. According to Sergeant, the conclusions of Science have to be "Universals" and not "Particulars" (Solid Philosophy Asserted, Reflexion 22, section 6, p. 436), in the sense that the Notions involved in the propositions concerned have to be "general" and not "particular" or "individual". He states that the Science of Medicine is interested in herbs in general and not in an "individual herb"; that Mathematics is concerned with establishing that the angles of any

triangle are equal to Right Angles and not those of an "Individual" triangle drawn on a particular piece of paper. According to him, the "Knowledge of the Singulars does not perfect the Understanding" and Science is "The Perfection of the Soul" (Ibid., pp. 436-437). We have also noted that, for him, the conclusions of Science have to be certain (5:2), and that this "certainty" is achieved either through Intuition or through Demonstration. The latter is identified with Syllogistic Reasoning (5:2). Combining the requirements of "generality" and "certainty", he stipulates that the conclusions of Science have to be general propositions established with certainty. They may be either self-evident, and then they are "Formally Identical", or may be made-evident, and then they are syllogistically established. The form of Syllogism that is conducive for such a purpose has to contain general propositions as premisses, for only then could one arrive at a general conclusion through the syllogistic form (Method to Science, Book III, Lesson II, sections 21 & 22). According to him, for a conclusion to be transparently evident it has to be established through the First Figure of the Syllogism (Ibid., Lesson II). When Locke questions the rule of the Syllogism, his main target is not the rule itself but the underlying claim that the reasoning of the highest order has to be Syllogistic in form. For him, any piece of reasoning depends on "the perception of the Agreement, or Disagreement of any two Ideas and consequently, our knowledge, is equally clear and

certain, whether either or both, or neither of those ideas" (IV:XVII:8) are general. Hence, Locke's criticism is effective in the context of Sergeant's claim that man reasons best when he argues syllogistically and that the method of reasoning conducive for the attainment of scientific knowledge is syllogistic in form. When we view Locke's criticism outside the context in which it was made, we naturally find it as revealing "a very imperfect acquaintance with the theory of the syllogism".⁹

Moreover, one is able to better appreciate the organization of Locke's logico-epistemological criticisms, when they are placed and viewed in the context of Sergeant's "Formalism". For instance, Locke places the chapters entitled, "Of Maxims" (IV:VII) and "Of Trifling Propositions" (IV:VIII) side by side in the fourth book of the Essay. We also noted that there is an overlap in his criticisms in the said chapters (4:3 & 4:4). When we view these chapters in the light of Sergeant's "Rule of Truth", we are better able to understand Locke's placement of these chapters and the reasons for the overlap in his criticisms. We noted (4:2) that Sergeant claims that Identical Propositions provide the "Rule of Truth" acting as "Criterion of Truth" and as "First Principles". Locke's two chapters go against these two claims. He claims that the Identical Propositions provide neither the adequate "Criterion of Truth" (in IV:VIII) nor the "First Principles" (IV:VII) in the manner Sergeant makes a case for them (4:2).

Similarly, we are able to better appreciate the organization of Locke's critical discussion of Maxims (IV:VII), particularly as it becomes more elaborate in the Fourth Edition of the Essay, when we view it in the context of Sergeant's views. We noted that Locke highlights three points concerning the uselessness of Maxims in the additions he makes to the fourth edition of the Essay - that the Maxims are of no use in "confirming" the truth of other self-evident propositions, or as "foundations" of knowledge or for making advancement in knowledge (IV:VII:11, as noted in 4:4). We also found that these points go against Sergeant's claims concerning Identical Propositions as Maxims (4:2 & 4:4). When we place Locke's criticisms of Maxims alongside Sergeant's claims, we are better able to understand the reasons why Locke highlights the points concerning the uselessness of Maxims,

Similarly, we are able to better appreciate the organization of Locke's criticisms of the Syllogism, particularly as the organization becomes more elaborate in and through the additions he makes to the fourth edition of the Essay. We noted (5:3) how Locke's organization of his criticisms of the Syllogism develops in the fourth edition of the Essay and highlights his claims - that the Syllogism is not the "great instrument of Reasoning", and that Demonstration employed for advancing knowledge need not be identified with syllogistic argumentation. We found that Sergeant makes these claims and elaborates

them in his response to Locke (5:2 & 5:3). Hence, the manner in which Locke's organization of his criticisms of the Syllogism develops in the fourth edition may be best understood in the light of Sergeant's critical response.

Moreover, Locke is preoccupied with certain analytical trivialities, particularly in some of the additions, which he makes in the fourth edition of the Essay. For example, the substantial addition in the chapter entitled "Of Trifling Propositions" (IV:VIII:3 (14) p. 610 - (13) p. 612) reveals a preoccupation with an analytical triviality. In this addition he repeatedly emphasizes, giving additional examples, that he takes Identical Propositions to mean "only such, wherein the same term importing the same Idea, is affirmed of itself" (IV:VIII:3, p. 611). He dismisses these propositions as "trifling". We found (4:2 & 4:3) that there is a similarity of structure between Locke's Purely Identical and Sergeant's Formally Identical Propositions. Both exhibit "formal identity" ("N = N" or "I = I"). Those which Sergeant claims as providing the legitimate "Criterion of Truth" on account of the "form" they have (4:2), Locke dismisses as "trifling" (4:3). Hence, I am able to appreciate Locke's recurrent emphasis concerning the nature of Identical Propositions and his dismissal of them, when I take into account Sergeant's claim concerning Formally Identical Propositions as "Criterion of Truth" (4:2). Similarly, in some of the additions concerning Maxims and Syllogism Locke is

preoccupied with emphasizing over and over again certain points of criticisms (4:3, 4:4 & 5:3). As we have already noted, there are sufficient grounds to view these additions as being directed against the views which Sergeant represents and which become more explicit in his critical response to Locke. Some of the Marginal Comments anticipate Locke's additions to the fourth edition of the Essay (3:3, 4:3, 4:4 & 5:3).

Hence, an examination of Locke's criticisms in the light of Sergeant's "Formalism" and his critical response helps one to understand better Locke's logico-epistemological enterprise - to determine his target, appreciate the manner in which he organizes his critical enterprise, understand his preoccupation with certain analytical trivialities, and sense the motives behind some of the additions he makes on the said subjects in the fourth edition of the Essay.

Moreover, there are certain features which stand out, when we characterize Locke's logico-epistemological views as "anti-formalist".

Locke is an "anti-formalist" but he is not against Formal Logic. He allows the use of terms, propositions; first principles, and syllogisms in certain areas and for certain purposes. He is not against the Tripartite Distinction of Logic. His presentation of the "Way of Ideas" is organized on the basis of such a distinction. He criticizes the use of the traditional parts of Logic, namely terms,

propositions and syllogisms when they are characterized in a particular manner and used for epistemological purposes (i. e. as instruments for obtaining knowledge).

At the level of Simple Apprehension, he does not question the place and function of the Term in the logical enterprise, but its characterization in terms of "form" when employed as the "object" of knowledge. He challenges Sergeant's presentation of Notion characterized in terms of "form". Locke too considers the idea as the "object" of knowledge, but, instead of resorting to "form", he characterizes the idea as a deontologized and deformed sign (3:4).

At the propositional level he does not question the "form" the Identical Propositions exhibit ("A = A"). He accepts that an Identical Proposition, when it manifests the said form, is self-evident and true. What he questions is the employment of such a form for epistemological purposes. Sergeant uses the Formally Identical Proposition, on account of the "form" it manifests, for epistemological purposes - as "Criterion of Truth" and as "First Principle." (4:2). According to Locke, all true propositions need not be identical in "form" and the knowledge of the truth of propositions need not be restricted to the apprehension of the "form" of identity (4:3). Moreover, in Locke's view, Maxims need not be restricted to Identical Propositions and their negative formulations. In the "discovery of knowledge" these propositions are of no use (4:4). Locke questions the

epistemological use of the "form" which the Identical Proposition manifest.

At the level of discourse, he acknowledges the Syllogism as a "form" of argument. He accepts that such a "form" may be of use for testing the validity of arguments, for organizing what one has already acquired as knowledge and for achieving argumentative victories (5:3). But he criticizes the tendency which identifies reasoning of the highest order with syllogistic argumentation, and considers syllogistic demonstration as the only means of making advancement in knowledge. Sergeant's theory of Syllogism exhibits such a tendency (5:2). Locke is also concerned with the tendency to take the syllogistically organized disputation as a method to knowledge. For him, such a method is a "formality" (5:3).

Hence, at all the three levels, he questions the characterization of terms, propositions, and syllogisms in terms of "form", when they are employed for epistemological purposes. Hence, his "anti-formalism" is logico-epistemological in character.

In "The Epistle to the Reader" Locke states:

The Commonwealth of Learning, is not at this time without Master-Builders. But every one must not hope to be a Boyle, or a Sydenham; and in an Age that produces such Masters, as the Great Huygenius, and the incomparable Mr. Newton, with some other of that Strain; 'tis Ambition enough to be employed as an Under-Labourer in clearing Ground a little, and removing some of the Rubbish, that lies in the way to Knowledge.
(pp. 9-10)

Locke's anti-formalistic logico-epistemological enterprise may be considered as an important part of his "under-labour". The formalistic presentation of the method to knowledge may be considered as part of the "rubbish that lay in the way to Knowledge", which he attempted to clear away.¹⁰

In the process of attacking the formalistic method to knowledge Locke presents an alternative analysis of the method to knowledge; one which appeals to psychological facts.¹¹ His basic assumption seems to be that the method to knowledge is "humanly conditioned" and hence any analysis of it has to appeal to psychological facts.¹²

At the level of Simple Apprehension, Locke presents the Idea as "object" with a signficatory role assigned to it. He considers it as an "instrument of knowledge" when it functions as sign (IV:XXI:4 & 5). But, as we have already noted (3:3), he describes "object" as inseparable, though distinguishable, from the "act". This inseparability implies an inter-dependency between "act" and "object" (3:3), which in turn means that Idea is deontologized. To deontologize the Idea in this way is to psychologize it, for it becomes a mental entity which is not independent of "human conditioning". The Ideas cannot be permuted and combined as symbols.

Psychological considerations also creep into Locke's analysis of the method to knowledge at the propositional level. We noted (4:3) that there is some justification to consider Locke's proposition as

"object" or "immediate object" of the second operation of the mind. In this sense, like the idea, the proposition too becomes inseparable from the act and therefore it too is not independent of "human conditioning". Hence, any satisfactory analysis of the proposition or anything concerned with it has also to take into account psychological facts. He insists that to know the truth of a proposition one has to perceive the connection of ideas (4:3). He claims that "knowledge has its bottom only in the perception of the agreement or diversity or any two ideas" (Marginal Comment No. 93, p. 382). In both the above claims Locke takes into consideration psychological factors. His methodological principle which we have already discussed (4:4) is not a psychological law and does not describe the process involved in the act of knowing. It is prescriptive. It prescribes a rule of procedure for one to obtain knowledge. In this sense, it is formulated for epistemological purposes. But the two sub-rules it accommodates are dependent on psychological factors. Both are dependent on the mind and its capacity. The first sub-rule, stipulates that we have to "get and settle in our minds determined ideas". The second rule deals with "the finding out of intermediate ideas". The first rule depends on the capacity of the mind to have "ideas" and the second rule depends on the "sagacity" of the mind to discover intermediate ideas. Hence, Locke's rule of procedure to obtain knowledge is "humanly conditioned".

We noted (5:3) that Locke presents a "natural order of ideas", a "perceived connection" at the level of discourse, when he discusses Inference and Demonstration. We also noted, that, according to him, like the Idea and the Proposition, the "natural order of ideas" is inseparable though distinguishable from the "act" (Ibid.). In his view, one obtains demonstrative knowledge when one perceives the connection of ideas through another intermediate idea or ideas. This perception depends on the capacity of the perceiver, which means that the method to knowledge at the level of discourse is also "humanly conditioned". The "Syllogistic form" can never replace this "natural order" but presupposes it (5:3).

Hence, at all the three levels Locke's epistemological analysis takes into consideration psychological facts.

His admission that Man is limited in his knowledge also reveals "human conditioning". The recognition of human limitation in attaining knowledge may be taken as an appeal to psychological facts about human nature, particularly about human capacity. I have not examined the application of Locke's method of Demonstration to various subject-matters. I have merely mentioned that he acknowledges that Demonstrative knowledge is possible in Mathematics and Ethics but not in the Natural Sciences (5:3). He seems to accept that God and angels could have such demonstrative knowledge of natural phenomena (IV:III:6, 3; III:XI:23; IV:III:6; II:X:9; IV:XVII:14).

When Locke states that such demonstrative knowledge cannot be held by Man, Locke does not deny that there are necessary connections in nature. According to him, Man is limited in his capacity to have such knowledge. Locke is here taking into consideration psychological factors.

Sergeant, on the other hand, usually resorts to metaphysical explanations. He thinks that many "Great Scholars" are unable to explain "divers effects" because they attempt to find out "Natural Causes", when the true cause has to be "transnatural" "which only Metaphysicks give us". According to him, "Men beat their Brains to find out Efficients for that which depends only on Formal Causes" (Solid Philosophy Asserted, Reflexion 13, section 10, p. 248). To this claim, Locke comments thus:

Transnatural causes in natural philosophie are not natural causes consequently supernatural i. e. immediate effects of Divine power appearing out of the course of natural causes and effects a sort of philosophising which J. S. very much explodes.
(Marginal Comment No. 43, p. 248)

When Sergeant attempts to give a metaphysical explanation for "Monsters and Changelings" Locke comments thus:

The author has found a short way to solid philosophie by haveing noe thing to doe that does not agree with our systemes.
(Marginal Comment No. 73, p. 352)

For Locke, resorting to such metaphysical explanations is an indication that psychological considerations have not been taken into

account. Such a tendency, in his view, leads to a dogmatism, which he resists.¹⁴ For instance, when Sergeant claims that we could have knowledge of Substances and that he is obliged to provide the analytical apparatus for such knowledge to "perform the duty I owe to Science and Truth", Locke comments thus:

J. S. speaks every where as if Truth and Science had personally appeared to him and by word of mouth actually commissioned him to be their sole Defender and Propagator.
(Marginal Comment No. 39, p. 239)

When Sergeant claims that Locke's Ideas are most unlike the "Ideas in the Divine Understanding" (Solid Philosophy Asserted, Reflexion 20, section 4, p. 395, Locke comments thus:

J. S. speaks here as if he knew that Ideas in the Divine understanding. I wish he would tell us how he comes to know them, for I fear in this matter he makes God like unto himself and measures the Divine understanding by his own.
(Marginal Comment No. 98, p. 395)

Locke's recognition of human limitation in knowledge is well stated, when he adds the following verse from the Bible to the title page of the fourth edition of the Essay:

Eccles: XI:5

As thou knowest not what is the way of the Spirit,
nor how the bones do grow in the Womb of her that
is with Child: even so thou knowest not the works
of God, who maketh all things.

Locke's anti-formalism, psychologism and his anti-metaphysical attitude are closely inter-related. I have concentrated on his

"anti-formalism". When he presents his "Informal Logic" he does not really present a new and organized Logic. He is merely suggesting an approach to Logic when the latter is employed as a means to knowledge - an approach which takes into consideration psychological facts and does not resort to metaphysical explanations at the slightest pretext. I do not thereby claim that his approach is free from problems and that he never resorts to metaphysical explanations. But when compared to the metaphysically oriented "formalistic" approach that was prevalent then, and which Sergeant represented, Locke's logico-epistemological enterprise is "anti-formalistic".

NOTES AND REFERENCES--Chapter VI

1. Rose, Lynn, Aristotle's Syllogistic, 1968, Appendix VI: John Locke's Criticisms of Aristotle and the Syllogism, pp. 137-43.
2. Ibid., p. 137.
3. Ibid., p. 137.
4. See Gibson, L., Locke's theory of Knowledge and its Historical Relations, 1917. In his Preface, he states that "the relation of Locke's thought to that of his contemporaries has hitherto received but little consideration". Gibson attempts to place Locke's New Way of Ideas in its historical context (Ch. 's I, VIII, IX).

J. W. Yolton too adopts such a strategy in John Locke and the Way of Ideas, 1968 (Preface, p. 9, Ch. 's I, III, IV). Cf. John Locke and the 17th Century Logic of Ideas, J. H. I., Vol. IV, 1955.
5. O'Connor, D.J., John Locke, 1967, p. 170.
6. Ibid.
7. Ibid., p. 171.
8. Ibid.
9. Ibid.
10. G. Ryle claims that Locke did achieve his ambition to be an "under-labourer" in that he "taught the whole educated world the lesson. . . that there are differences in kind, and roughly what these differences are, between mathematics, philosophy, natural sciences, theology, inspiration, history and common sense acquaintanship with the world around us. . . He taught us to distinguish the types of our inquiries" (John Locke on the Human Understanding, 1933 as in Locke and Berkeley, ed. by Martin & Armstrong, 1968, pp. 38-9). When Locke criticizes

the method to knowledge which commences from "magnified maxims" and proceeds through syllogistic demonstration, and when he points out that the type of inquiry through such demonstration, though applicable in the fields of mathematics and ethics is inapplicable in natural sciences, he seems to teach us to differentiate the types of inquiries.

11. R. Aaron observes that, although Locke's main concern in Book IV of the Essay is "logical and metaphysical", yet "psychological considerations are not wholly absent" (John Locke, 1971, p. 128).

According to Yolton, Locke's presentation of "natural order" or "lay-out of argument" "attempts to capture the way in which our thinking does in fact move from idea to idea". But this "lay-out" is distinguished from the association of ideas" which Locke presents in his added chapter (II:II:XXXIII). According to Yolton, Locke saw the difference between "conceptual analysis and descriptive psychology" (Locke and the Compass of Human Understanding, pp. 102-3).

12. See Noxon, J., Hume's Philosophical Development, 1975, Part IV, section 2; Psychological Fact and Psychological Theory, pp. 133-136.

13. According to R. L. Armstrong, the metaphysics which Locke attacks may be taken as a "kind of reasoning from maxims or principles supposedly self-evident or indisputable", proceeding through syllogistic demonstration and based on the use of words without clear and distinct signification. Armstrong selects Sergeant to represent such a "metaphysical mode of explanation" (John Locke's "Doctrine of Signs": A New Metaphysics, J. H. I., 1965, pp. 369-382).

14. Sergeant claims that a "science" of Metaphysics is possible as in Mathematics; that one could have the knowledge of the essences of "metaphysical objects" like God, Angels, created things, of their "essential relations" and their "existence" (Solid Philosophy Asserted, Reflexion 1, sections 1-5, pp. 113-118). Locke's comments on Sergeant's claim run thus:

Instead of talking thus loosely he had done better to give us a science where in was made out the several sorts of Angels and

intelligences with their distinct powers and properties, as mathematicians do the distinct sorts of figures and their properties.

(Marginal Comment No. 26, p. 117)

When Sergeant claims that "only the Definition of a Thing, shews us Distinctly the True Spiritual Notion of it", Locke comments thus:

Where are those definitions that explicate the true essences of things? and (excepting mathematical) how many of them has J. S. ? He would oblige the world by a list of them if it were of no more but those things he has talked of in his booke and pretends to know.

(Marginal Comment No. 85, p. 372)

This "pretension to knowledge" concerns Locke.

APPENDIX I

LOCKE'S MARGINAL COMMENTS

<u>Annotation</u>	<u>Text</u>	<u>Solid Philosophy Asserted</u>
(1)	Where is it Mr. Locke says Ideas are the similitudes of things he expressly says most of them are not similitudes?	The Epistle Dedicatory. p. 6
(2)	Where is it Mr. Locke says noe man can tell what a <u>Thing</u> is?	The Epistle Dedicatory. p. 7
(3)	That is as Mr. Locke expresses it the immediate object of the mind in thinking.	The Preface. p. 8
(4)	Vid-cham p8	The Preface. p. 2
(5)	Truth has forced J. S. to own that Mr. Locke did not say that <u>they denyd themselves to be men</u> And therefore that all this triumph of J. S. is founded on his misrepresenting of Mr. Locke, as may be seen in J. S. 's Idea Cartesianae Examine. p. 33	The Preface. p. 23
(6)	When for B4 one has put book 2 yet I think these words here will not be found in Mr. Locke's booke.	The Preface. p. 33
(7)	Vid pr: b. 4 V. P. , 378	Preliminary First. p. 8

- (8) Vid. Idea Cartesianae. p. 33. Ibid.
- (9) 2: Where? Preliminary
First.
p. 23
- (10) Soe that by these 2 last argumts
J. S. has proved Ideas to be No-
tions and why then soe much
quarrell about the name? Preliminary
Second.
p. 37
- (11) And soe the good Author has at
last proved that his Notions are
likenesses of things. Preliminary
Second.
p. 38
- (12) Sense the same with Notion how
then does Notion and Phantasme
differ? Preliminary
Second.
p. 39
- (13) it should be, has the very thing
Preliminary
Second.
p. 39
- (14) It should have been inferred
according to what J. S. says in
this by which the soul becomes
god. Preliminary
Second.
p. 40
- (15) i. e. must be that things as not
being that thing. sic. Preliminary
Second
p. 43
- (16) i. e. they are in her as out of
her Preliminary
Second.
p. 43.
- (17) what is it for a material thing
to exist Spiritually? Preliminary
Fourth.
p. 59
- (18) I cannot but wonder to hear a
man soe often repeat what if he
were not a Dictator in philoso-
phie would be nonsense VIZ
That a like is the same. Preliminary
Fourth.
p. 61

- (19) And yet this man of Solid philosophie excuses him self in the next from makeing this fundamental point clearly out Preliminary Fourth. p. 62
- (20) This I take it make the soule of a man and the soule of a beast, as to its substance and immateriality just the same. Preliminary Fourth. p. 65
- (21) what is to be corporeo=spiritual? Preliminary Fourth. p. 66
- (22) Does the form inform but a part of that whereof it is the form? Preliminary Fourth. p. 67
- (23) And a million of Atoms lyeing by the seat of knowledg twill be as hard to explain what finds out the right one of the thing we would remember Preliminary Fourth. p. 75
- (24) And now let the reader consider whether by reading what he finds from § 6 whether he has not got a perfect clear knowledg how material things get into the immaterial soule. Preliminary Fourth. p. 76
- (25) it Reflexion First. p. 115
- (26) Instead of talking thus loosly he had done better to give us a science where in was made out the several sorts of Angels and intelligences with their distinct powers and properties, as mathematicians doe the distinct sorts of figures and their properties. Reflexion First. p. 117

- (27) were ideas as he makes his notions p. 63-76 adventitious effluvioms lodgd in the brain, we might be said to have those Ideas when we do not perceive them Reflexion Second. p. 121
- (28) His arguing here is to prove that the minde can-not have two objects at once which if true the minde can never have any knowledg which is had only by the comparing 2 Ideas or notions which are 2 objects. The eye sees and consequently the minde perceives an hundred objects at once though some more and some less clearly and distinctly. Reflexion Second. p. 123
- (29) A man perceives his thoughts just as he perceives the notes of a tune or sparks of a flint and steel. Reflexion Second. p. 124
- (30) This argumt will as well prove that all men are but one man as it does that all bodys are but one body Reflexion Third. p. 132
- (31) Blewnesse or heat in the minde are the Ideas there whether they be like anything in the object or noe. But he will have Mr. Locke to mean resemblances by Ideas. though Mr. L. says expressly that he does not. Reflexion Fourth. p. 137
- (32) If God exists noe where but where he gives being to creatures by the same reason it will follow that he existed not before he gave being to creatures. the consequence whereof is that the creatures are eternal or god is not. Reflexion Ninth. p. 200

- (33) J. S. al along confound duration with the thing enduring whereas noe body I think will say Duration is god or god is duration. Reflexion Tenth. p. 212
- (34) This is to make Duration and Motion the same thing which they by noe means are, for things at rest have duration as well as those in motion. Reflexion Tenth. p. 212
- (35) The place and words where this is said should be quoted Reflexion Eleventh. p. 213
- (36) Where dwell the soule beyond the region of the brain? Reflexion Twelfth. p. 221
- (37) I thought J. S. had denied al phantasms of spiritual nature and restrained them only to corporeal natures. Reflexion Twelfth. p. 224
- (38) Ease is opposed by Mr. L. to uneasinesse and not to activity. Reflexion Twelfth. p. 233
- (39) J. S. speaks every where as if Truth and Science had personally appeared to him and by word of mouth actually commissioned him to be their sole Defender and Propagator Reflexion Thirteenth. p. 239
- (40) Al which amounts to noe more but this that substance is something which is what Mr. L. says. Reflexion Thirteenth. p. 241
- (41) If the Idea of substance be capacity to exist then Accidents are substances for they are capable to exist. If it be as J. S. puts it here and also when a thing capable to exist, then his Idea of substance or thing, will be this, Reflexion Thirteenth. p. 244

that a Thing is a thing capable to exist which as much clears the point as if he should say an is an accident capable to exist. Or a man is a man capable to exist.

- (42) The sum of which argumt is this we make the word body stand for an Idea of solid parts united together or cohering therefore we know what makes those parts cohere. Reflexion Thirteenth. p. 248
- (43) Transnatural causes in natural philosophie are not natural causes and consequently supernatural ie immediate effects of Divine power apering out of the course of natural causes and effects a sort of philosophising which J. S. very much explodes. Reflexion Thirteenth. p. 248
- (44) i. e. they doe cohere because they doe cohere Reflexion Thirteenth. p. 249
- (45) we may know that they exist though we can not explain all their properties and qualitys Reflexion Thirteenth. p. 251
- (46) what change does the father in the I[n]dies suffer when his son is born in England? Reflexion Fourteenth. p. 254
- (47) So fire that softens Wax and hardens clay had some way or other softness and hardness in it. Reflexion Fourteenth. p. 255
- (48) Does nothing found a real relation but what makes the subject better what thinks he Robber and Robbed. Tormentor and Tormented? Reflexion Fourteenth. p. 255

- (49) What complexion of accidents besides those of place and perhaps time can distinguish two atoms perfectly solid and round and of the same diameter? Reflexion Fourteenth. p. 258
- (50) How will this Doctrine hold in a very witty or rational man who by a knock loses his parts in the strength of his age? Reflexion Fourteenth. p. 258
- (51) This, if it has any meaning is that we should take the signification of our words from one sort of men and joyn them by the direction of others. Whereas their signification is the only rule and measure of joyning them. Reflexion Fourteenth. 264
- (52) A man has the individuality of a man before he has knowledg but is not a person before he has knowledg Reflexion Fourteenth. p. 265
- (53) An intelligent individuum is not an intelligent individuum before it has knowledg. Reflexion Fourteenth. p. 267
- (54) to Reflexion Fifteenth. p. 272
- (55) He mentions his as the only proper way to make definitions, let him by examples shew that it will doe Reflexion Sixteenth. p. 295
- (56) This is idly proposed to Mr. L: who denies that motion can be defin'd Reflexion Sixteenth. p. 297
- (57) yes because he in that thing finds his Nominal essence of gold Reflexion Sixteenth. p. 305

- (58) If the proposition were sugar is sweetnesse it would be false Reflexion Seventeenth. p. 318
- (59) Is the notion of a Triangle or of that number 3 a partial conception of the thing? Reflexion Seventeenth. p. 319
- (60) v. g. Haec longitude illi est aequalis ebrietas dedecorat. Is not in these the concrete predicated of the abstract? Reflexion Seventeenth. p. 320
- (61) Yes it is easily observable in his book which was published 6 or 7 years after Mr. Locke's that it has many things in it very conformable to what Mr. L. had published soe long before. Reflexion Seventeenth. p. 324
- (62) Then I think our senses as much tell us that whitnesse exists as that the wall exists. Reflexion Seventeenth. p. 327
- (63) which is rarer quicksilver or steel? and which is the more easily divisible of the two? Reflexion Seventeenth. p. 330
- (64) v. g. which is more dense a diamond or corck? christal or the powder of christal in these and 1000 other instances the more dense is the more pellucid. Reflexion Seventeenth. p. 332
- (65) what think you of quicksilver and a spung? Reflexion Seventeenth. p. 333
- (66) which mixtures and demixtures of white and black will never produce a blew a red or an yellow Reflexion Seventeenth. p. 337

- (67) may not colours put together in figures as pleases the painter make a picture which shall have noe reference to any real being? Reflexion Eighteenth. p. 343
- (68) Things are truly what they are whether we have any Idea of them or noe. But they cannot belong to any ones specific name, unlesse they agree to his specific Idea Reflexion Eighteenth. p. 343
- (69) where does he say soe? Reflexion Eighteenth. p. 343
- (70) Then God or angels have a better more durable and nobler existence in the minde of man than they have in their own actual beings. Reflexion Eighteenth. p. 345
- (71) If a man falling from a house strike out another mans eye or brains with the foot is that foot the whole man and shall the whole man be punished for it? Reflexion Eighteenth. p. 346
- (72) He argues against Ideas because they are similitudes and yet blames Mr. L., in many places, for saying they are not similitudes, particularly p. 347. Reflexion Eighteenth. p. 351
- (73) The author has found a short way to solid philosophie by haveing noe thing to doe that does not agree with our systemes Reflexion Eighteenth. p. 352
- (74) Betwixt Rational and irrational there is noe medium but every one admits not the definition of man to be animal rationale Reflexion Eighteenth. p. 353

- (75) Not soe: Because the contradiction here is speaking and not speaking according to the speaker's persuasion, and soe both sides of the contradiction never be morally true. Reflexion Eighteenth. p. 357
- (76) without doubt he that knows what he makes the word man stand for knows what he makes it stand for. Reflexion Nineteenth. p. 360
- (77) knowledge then it seems was not meant for infants or the vulgar. Reflexion Nineteenth. p. 363
- (78) There is noe reason to be given of any of these propositions for they are all self evident, and soe uncapeable to be made clearer or certainer. Reflexion Nineteenth. p. 365
- (79) where is it Mr. L: says soe of simple Ideas Reflexion Nineteenth. p. 366
- (80) According to this argumt, (if it were true that general Ideas were the clearer) these general maxims would be of noe use to prove that yellow is yellow, for all his doubts about what is yellow would (if that were anything material) be still the same. Reflexion Nineteenth. p. 367
- (81) not because their evidence is greater than any more particular self evident proposition but because serving in all cases they are more inculcated and used than the other. Reflexion Nineteenth. p. 368
- (82) He means Disputants, but Mr. L. speakes not of Disputation but knowledge Reflexion Nineteenth. p. 368

- (83) A man divestd is quite bereft or incapable of knowing them to be true is incapable of all knowledge for he is incapable of knowing the same to be the same and different Ideas to be different. But the same would happen to one that knows not that a mangastan is a mangastan and not a Turnip. Reflexion Nineteenth. p. 369
- (84) According to this maxim of our Author in what place is the Soule or an Angel by his doctrin. Reflexion Nineteenth. p. 370
- (85) Where are those definitions that explicate the true essences of things? and (excepting mathematical) how many of them has J. S. ? He would obleig the world by a list of them if it were of noe more but those things he has talked of in his booke and pretends to know. Reflexion Nineteenth. p. 372
- (86) He that has a meaning to any word has it no doubt whilst he has it: But he that varys the meaning of his terms or knows not precisely what he means by them (as noe thing is more ordinary) fills his discourse with obscure and confused Ideas. Reflexion Nineteenth. p. 374
- (87) who says they should be laid aside? Reflexion Nineteenth. p. 374
- (88) Matter is a solid substance and not a power Here J. S. falls under the same rebuke which he bestows on Mr. Locke for a misunderstood expression and nor for any mistake in his meaning for that by body he means an extended solid Reflexion Nineteenth. pp. 375 & 376

substance and not the modes of extension and solidity without substance may be seen

{ B. II. CXIII #12. Though arguing
BIII C. X #. 15
against Cartes' use of the word
Body (I)

(I) he thought it sufficient to mention those modes which in the proper use of the word Body are different from the sole mode which Des Cartes uses it for, without mentioning of substance. And therefor to use his own expression meer power is noe more the notion of matter than an Horseshoe is a pancake.

- (89) I desire him to look into
B. III C. X. #15
Reflexion
Nineteenth.
p. 376
- (90) V. p. 8
Reflexion
Nineteenth.
p. 378
- (91) Corpus est quantum. Aequalia
alicui tertio sunt aequalia inter
se, instanced by J. S. in the
place quoted are not Identical
propositions.
Reflexion
Nineteenth.
p. 380
- (92) An Identical proposition is the
affirming the very same term
of it self.
Reflexion
Nineteenth.
p. 381
- (93) Knowledge has its Bottom only in
the perception of the agreement
or diversity of any two Ideas and
is neither founded on nor can be
reduced to Identical propositions.
Reflexion
Nineteenth.
p. 382
- (94) An ingenuous man that had read
ch: IX could have made noe such
question what Mr. L. there meant.
Reflexion
Twentieth.
p. 389

- (95) This is to suppose that god hath not given cogitation to any parts of matter and thence to conclude he cannot. But the proof must begin at the other end. Reflexion Twentieth. p. 391
- (96) Mr. L. 's way puts an eternal difference between material and immaterial. But that all thinking things are immaterial is supposed only and must be proved, and till that be done which Mr. L. has said may be true how much so ever it may disturb any received hypothesis. Reflexion Twentieth. p. 392
- (97) If he will read again and consider what Mr. L. has said in the case he will find them not confounded. Reflexion Twentieth. p. 395
- (98) J. S. speaks here as if he knew the ideas in the divine understanding. I wish he would tell us how he comes to know them, for I fear in this matter he makes god like unto himself and measures the Divine understanding by his own. Reflexion Twentieth. p. 395
- (99) Mr. L. having before spoke of our knowledg of the Existence of our selves and of god J. S. interprets other things here very strangely. Reflexion Twentieth. p. 399
- (100) Gathering by Reason unlesse it amount to demonstration produces not knowledg but belief. Reflexion Twentieth. p. 399
- (101) A man may see his hand and there by know that a hand exists but tis not there by that he knows his own existence. Reflexion Twentieth. p. 401

- (102) who is it obliged him to quit them? Reflexion Twentieth. p. 406
- (103) Here that good gent: himself falls into the same fault which he condemns in me p. 404 for adviseing to beware what principles one takes. Reflexion Twentieth. p. 407
- (104) I thought that outward actions had concerned our future eternal state too. Reflexion Twenty First. p. 410
- (105) Very well for knowledg is seeing the thing to be soe Judgmt when right is assent to a true proposition without certainly knowing it to be true. Reflexion Twenty First. p. 413
- (106) Judgmt Mr. S: says may be suspended, then it is not knowledg for that cannot be suspended. Reflexion Twenty First. p. 414
- (107) Noe, we see it to be true if we see the demonstration and doe not judg. Reflexion Twenty First. p. 414
- (108) To assent I take it is to say I believe a thing to be Reflexion Twenty First. p. 418
- (109) as in the syllogismes of the schools it is not Reflexion Twenty Second. p. 431
- (110) What becomes then of all his Master Aristotle's pains about topical arguments? Reflexion Twenty Second. p. 435
- (111) Syllogisme is to shew the rectitude of what we have inferd if there be a doubt of it but does not help us to find the medius terminus by virtue of which we doe infer. Reflexion Twenty Second. p. 435

- (112) They have either not agreed or do not keep to that agreemt. Reflexion
Twenty Second.
p. 437
- (113) I perceive that J. S. argues from the summarys by the sides but Mr. L. 's words in the text #5 are that noe proposition can be received for divine revelation or if it be contrary to our clear intuitive knowledge. Reflexion
Twenty Second.
p. 439
- (114) Soe that a man is to be a sceptic in all where he has not demon- stration Reflexion
Twenty Second.
p. 448
- (115) A very slight thing will not serve to make a thing probable because the account must be cast up on both sides to shew the ballance. Reflexion
Twenty Second.
p. 449
- (116) There are then it seems Ideas in gods understanding. Reflexion
Twenty Second.
p. 450
- (117) And why not Elephos as well as homo. Reflexion
Twenty Second.
p. 457
- (118) How does the understanding which is denyd to belong to body come under the notion of body. Reflexion
Twenty Second.
p. 457

APPENDIX II

THE PLACE OF DISPUTATION IN THE OXFORD CURRICULUM

Information concerning the place given to disputation in the Oxford curriculum may be obtained from the Laudian Code of Statutes (1636). I have used John Griffith's and C. L. Shadwell's edition of the Laudian Statutes (Oxford, Clarendon Press, 1888). For translations of the Statutes into English, I have used C. E. Mallet's A History of the University of Oxford, Volumes I & II, London, Methuen, 1924-27.

These Statutes were codified by a Committee of 15 headed by Richard Zouche and Brian Twyne under the patronage of Archbishop Laud. After four years of work, the draft was approved on June 2, 1636 (Griffith and Shadwell, Preface, pp. 7 & 8).

Titles IV and V contained the rules for Lecturers and Lectures. Titles VI, VII and VIII give details of the place given to Disputation. "Since active use of knowledge as well as reading and meditation greatly helps progress in learning" (Title V, section I, para. I, p. 46. See also Mallet, Vol. I, pp. 186-89) very frequent and many kinds of disputations were prescribed. This Title reveals

the theoretical basis for giving predominance to Disputation in the curriculum - that disputation helps "progress in learning".

Four years were required to become a Bachelor of Arts, except for sons of Peers and the eldest sons of Baronets and Knights who could do it in three years (Title VI, section I, C. I. Mallet, Vol. 2, p. 323). After two years, every candidate must respond and oppose Proforma at Disputations in Parviso. Proforma (in form) was a highly Scholastic form of debate where "syllogistic form" of argumentation was the main element. (Kenney, W. H., op. cit., p. 17); Parviso meant "church court" - the debates must have been originally held in a church court. (Kenney, W. H., op. cit., p. 18)

The disputations were held in the Arts Schools three times a week during the full-terms (Mallet, Vol. II, p. 323 footnote). The names of the Scholars and the questions in Grammar or Logic must be previously approved by the Master of the Scrolls. All Scholars had to attend these disputations from the end of their first year till they completed the period for the Bachelor's degree and four Regents had to be present to supervise the proceedings (Title VI, Mallet, III, p. 323).

The respondent (or defender), standing upon some sort of a podium would state the thesis he was to defend, and then explain the sense of the thesis, and advance proofs for approximately one-half hour, after which the opponent would propose objections in pro-forma.

The respondent then would answer the objections in pro-forma and the opponent would proceed to further objections which had to flow out of the respondent's solutions; this interplay would continue till time was out or until the Regent Master summed up the disputation (Title VI, section 1, C 1 & 3; Mallet, pp. 322-323).

After his first year, every scholar had to attend, each week during the four terms, three ordinary disputations in Parviso from one to three in the afternoon. The Subject matter of these disputations was to be either logical or grammatical questions (Title VI, section VII, para. 7, p. 49; See also Kenney, W. H., op. cit., p. 18).

After the disputations, the Scholars responding pro-forma met in the Natural Philosophy School and were created General Sophisters.

One of the four Regents made a short speech on the study of letters and merits of Aristotle's Logic and hung around the candidate's neck a simple hood (Title VI, section I, C 4; Mallet, History, Vol. 2, p. 324). For every term afterwards, till his degree, the General Sophister had to dispute at least once in the Parviso, for ninety minutes (Title VII, section 6; Mallet, Vol. II, p. 324).

For the degree of Master of Arts, three years further study was required, which meant twelve more terms of lectures and disputations. A Bachelor of Arts, after taking his degree, must "determine" formally in Lent, respond in the Quadlibet Disputations, respond or oppose in Austins, and read six formal lectures before

receiving the Master's degree (Mallet, p. 324). Elaborate rules for their disputations were laid down. For four days the candidates defended propositions in Logic according to Aristotle. On Fridays problems of Grammar, Rhetoric, Politics and Morals were discussed. Two Masters of Arts presided, two Bachelors acted as collectors; the Proctors appointed both. After Determination, every candidate for the Mastership had to respond once to some Regent Master at the Quodlibet Disputations. Then he had to deliver six lectures, three on Natural and three on Moral Philosophy in the Public Schools (Title VI, S11, C. 13; Mallet, p. 324). The Disputationes Quodlibeticæ were held on every disputable day (only forty one days in the four terms were free from these disputations) in St. Mary's from 10 A.M. to 11 A.M. (Title VI, section II, para. 8, p. 57).

During Lent term when there were no lectures, there was an orgy of disputations. From Mondays through Thursdays there were ordinary disputations on Logical questions, particularly on Aristotle's Logic, from one to five p. m. On Fridays, from 9 to 11 a. m., the disputations were on Grammar, Rhetoric, Politics and Moral questions (Title VI, section II, para. 2, pp. 50-54; Mallet, II, p. 324; Kenney, op. cit.; pp. 18-19).

To become a Bachelor of Civil Law, a student had to attend Law Lectures for three years, if he were a Master of Arts already. If not, he had to take five years (Title VI, section 4, C. 1; Mallet,

Vol. II, p. 325). During this period of three or five years he had to take part in Juridical disputations (Ibid.). Bachelors of Medicine must be Masters of Arts and must take part in the necessary Medical Disputations (Title VI, section 4; Mallet, II, p. 325).

The Eighth Title dealt with Ordinary Disputations. They were held in Theology ten times, in Law and Medicine only twice a year. Disputations were prescribed for every disputation day during the full term (Title VIII, C. 4). The Proctors and the Vice-Chancellor had to be present at the Ordinary Disputations (Mallet, Vol. II, p. 327).

The manner in which the Laudian statutes were compiled indicates that they picture precisely the way in which disputations were carried on then. The delegates were asked to compile a "complete code, to contain all the Statutes and customs of the University then in force" (Griffith and Shadwell, Preface, p. 8). "At length with much ado, great pains and industry of all the Delegates the whole book was finished, divided into several parts. . . . Which being done, Mr. Twyne, in the meeting of all the Delegates and heads of houses every Monday in Chamber of the School Tower, did openly read before them some part, and was by them tried and examined, and an account given of every Statute by itself, when so ever it was demanded, with reasons of the alternatives of any of the Old Statutes or inserting of any new or such as seemed to be new. Every Statute was also voted by itself,

and a note made in the margin of the Book. . . . The said sub-delegates in drawing up of the Statutes followed this course for the most part: viz. that besides the written laws, took for the most part what customs they found to be in use and revived in the university during these times and those in many places as the occasion served, they drew into forms of Statutes what they found to be University customs before" (Griffith and Shadwell, Preface, pp. 8 & 9).

These Statutes indicate the seriousness with which disputations were organized and practised during this period. Such a practice may be described as a ceremonial procedure.

Thomas Sprat describes the procedure of employing disputation as a method to knowledge thus:

They [Schoolmen] began with some general Definitions of the Things themselves, according to their Universal Natures, then Divided them into several Propositions, which they laid down as Problems. These they controverted on both sides: . . . But though this Notional War had been carry'd on with far more care and calmness amongst them, than it was: Yet it was never able to do any good towards the Enlargement of Knowledge: it rely'd on general terms, which had not much foundation in Nature, and also because they took no other Course but that of Disputing Disputing is a very good Instrument to sharpen Men's wits and to make them versatile and wary defenders of the Principles, which they already know; but it can never augment that solid substance of Science itself (The History of the Royal Society of London for the Improving of Natural Knowledge, MDCCXXXIV, pp. 16 & 17).

Locke, who was a member of the Royal Society and had in his

library a copy (1667 ed.) of Sprat's book (Harrison, J. & Laslett, P., op. cit., p. 238), shared Sprat's opinions in disputation (5:3).

In Cambridge too disputation had a similar place and had "degenerated into a mere form by 1700" (Costello, W. T., The Scholastic Curriculum in Early Seventeenth-Century Cambridge, 1958, pp. 147, 14-31).

"Raillery" was associated with Disputation. According to Locke, "Raillery is the most refined way of exposing the faults of others" and is "usually done with wit and good Language" (Some Thoughts concerning Education, section 143, Axtell, ed., p. 248). Locke spoke against Raillery too (ibid., p. 248, Lady Masham's letter as given by Fox Bourne, op. cit., II, pp. 533-4).

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- ✓ Schism Dispatcht, or a Rejoynder to the Replies to Dr. Hammond and the Ld. of Derry, (J. Bramhall), Paris (?), 1657.
- ✓ A Vindication of the Doctrine contained in Pope Benedict XIII's Bull and in the General Council of Florence, under Eugenius the III. concerning the State of Departed Souls, Paris 1657 (or 1659).

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 - ✓ Sure-Footing in Christianity, or Rational Discourses on Rule of Faith. With three short Animadversions on Dr. Pierce's Sermon; also on some passages in Mr. Whitby and Mr. Stillingfleet which concern the Rule, by J. S., London, 1665.
 - ✓ A Discovery of the Groundlessness and Insincerity of my Lord of Down's Dissuasive, Being the Fourth Appendix to Sure-Footing. With a Letter to Dr. Casaubon, and another to his Answerer, by J. S., London, 1665.
 - ✓ Let Common Reason be Judge, A Treatise on the use of Holy Images in answer to B. Horwood, London, 1665 (?).
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- The Method to Arrive at Satisfaction in Religion, 1671.
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- ✓ Edited and Enlarged Devotions (a work by his lately deceased friend John Austin), 1672.
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- ✓ Methodus Compendiosa qua Pervestigatur et certo invenitur Fides Christiana, Paris, 1674.
- ✓ Clypeus Septemplex, Paris, 1677.
- ✓ Vindiciae John Sergeant: Tribunalibus Romano et Parisiensi, Paris, 1678.
- ✓ A Letter to Mr. Mettam, 1678.
- ✓ Of Devotion, 1678.
- ✓ Disclaimer of antecedent acquaintance with Oats Plot, 1679.
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