INFORMATION TO USERS

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

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

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

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

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

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms
300 North Zeeb Road
Ann Arbor, Michigan 48106

MILTON'S USE OF RAMIST METHOD IN HIS SCHOLARLY WRITINGS

by

BRIAN WEISS

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

1974

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

26 Aug 1974
date

Samuel I Mintz
Chairman of Examining Committee

29 August 1974
date

John T. Mawicz
Deputy, Executive Officer

Samuel I Mintz

John T. Mawicz

Supervisory Committee

The City University of New York

PREFACE

The present dissertation is a reading and analysis of three of Milton's major scholarly works--the Artis Logicae, the Accedence Commenc't Grammar, and the De Doctrina Christiana--with respect to their use of Ramist method. The intention is to prove not only Milton's general awareness of Ramist principles and familiarity with Ramist writers in logic, but also his detailed reference to Ramist texts and use of Ramist techniques in exposition. It is also possible to demonstrate some relationship between Milton's expository practice and his philosophical understanding of the nature of scholarly discourse.

In Renaissance logic texts, including Milton's own Artis Logicae, method is the last subject introduced, as it subsumes all other techniques and itself requires the most flexible, subtle, and intelligent application. In a lengthy and thoughtful discussion of this subject, William Temple, a leading Cambridge Ramist, suggests that a true understanding of method implies a knowledge of Aristotelian universals. The "road" in "method," in Temple's broad philosophical approach, leads didactically from these universals to particulars, and vice versa.[1] But the special

[1] Sir William Temple, P. Rami Dialecticae Libri Duo, Scholiis G. Tempelli Cantabrigiensis illustrati

advantage of Ramist method is that it provides simple techniques of organization and priority that eliminate much of the immediate difficulty.[2] Milton uses these simple devices, although casually. He does not take the trouble to state explicitly that the Accedence Commenc't Grammar or the De Doctrina Christiana follow Ramist method, or to provide any of his works with a synopsis libri, a diagram in the Ramist fashion that would have had the effect of calling attention to the work's structure. His treatment of method in the Artis Logicae is not elaborate, and he does not take Temple's broad, contemplative approach. Milton leaves it to his reader to infer the significance of method from his broader philosophical statements.

Michael Lieb's recent article, "Milton and the Metaphysics of Form"[3] draws attention to Milton's use and understanding of a concept which he derived and slightly modified from the "formal cause" of scholastic analysis. In Milton's use of form, "we see a metaphysic that maintains the integrity of the phenomenal world from the vantage point of a supraphenomenal perspective." Such flexibility is made possible, for example, by Milton's distinction between "external" and "internal" form.[4] Lieb derives his conclusions

---

(Cantabrigiae: ex officina Thomae Thomasij, 1584), pp. 126-30, et passim.

[2] See infra, Chapter II, pp. **62-66.**

[3] SP, LXXI (1974), 206-24.

[4] Lieb, pp. 212-14. Compare Lieb's characterization

chiefly from an examination of Milton's metaphysical comments in the Artis Logicae and those of George Downame in the Comentarii,[5] upon which Milton relied heavily. Method may be taken as the internal form of a scholarly discourse, the liberal art under discussion as the material cause of the same discourse. This relationship accounts for the observable nature of method, which is not a physical thing or a complete abstraction, but a pattern of order and emphasis that varies in its every expression, although it is always true to certain principles. Method is not identified with the discourse as a whole; neither is it a metaphor for discourse or otherwise external to it. On the other hand it is possible for discourse to irregularly or imperfectly embody method, so that the informed reader can perceive that the discourse has deviated from a standard not intrinsic to it.

A Ramist identifies a liberal art by the presence of axioms, usually statements of definition and explanation, which are presented in a prescribed order. But method does not inhere in any one axiom. A form is not the whole or the part. It is the definable interrelationship of the parts. An analogous concept is presented in Milton's Fifth

---

of Milton's educational theory, p. 217, with Temple's understanding of method, note 1, supra.

[5] Georgio Dounamo, Logicae quondam apud Cantabrigiensis praelectore, & Collegii Christi socio, Commentarii in P. Rami Regii Professoris Dialecticam . . . (Francofurti: Ex Calcographia Wolfgangi Richteri, . . . [1605]).

Prolusion,[6] which seeks to prove that the form of an animal (in man, the soul) is indivisible and inseparable from its "physical, organic" body, though not from the parts of the body before its creation or after its dissolution. The soul is in the man qua man; it is possible to remove a lock of hair or a limb without altering the essential manhood of the remainder and without asserting that the soul is in the lock of hair. So in discourse a fault in method is not the absence of method.[7]

This understanding of a particular book as the local expression of a widespread but immanent form illuminates two areas of related scholarship. The first is the relationship between Milton's work and that of his predecessors on whom he drew heavily for examples, for headings and captions, and often for the wording of extensive passages in his scholarly writings. In the prefatory matter to his recent edition of the De Doctrina Christiana, Maurice Kelley remarks that his earlier study "too carefully understates Wollebius' contribution, direct and indirect, to Milton's treatise."[8] There have

[6] "Partial Forms are not Found in an Animal beside its Whole Form" John Milton: Complete Poems and Major Prose, ed. Merritt Y. Hughes (New York: Odyssey Press, [1957]), 610-12.

[7] On related questions of metaphysics, see also William B. Hunter, Jr., "Milton's Power of Matter," JHI, XIII (1952), 551-62. Where Lieb emphasizes the immediate context of Milton's Artis Logicae, Hunter traces Milton's position from Aristotle through Augustine and Aquinas.

[8] Maurice Kelley, ed., "The Christian Doctrine,"

been several studies besides Kelley's which have made note of the relationship between Milton's texts and those of his sources,[9] but there has also been some reluctance quantitatively to assess the extent of the similarity. As a partial redress, the present dissertation offers a detailed examination of the first half of the Artis Logicae and of the Accedence Commenc't Grammar, with documentation of Milton's borrowings from source texts. Verbatim borrowing, or the use of another scholar's citations, were not necessarily Ramist practices. But the multiplicity of Ramist editions, all using essentially uniform formats, and all restricted to and by the individual liberal arts as the Ramists defined them, encouraged imitation of previous work.[10] If method is the form of a liberal art, then it is impossible to change it significantly without attacking the root conceptual structure of the art; the duty of the writer

---

trans. John Carey, Complete Prose Works of John Milton (New Haven: Yale University Press, 1973), VI, 18, n. 5. See pp. 18-20 for his further discussion of this subject. In fact, the earlier article is unambiguous, and gives many suggestive examples. Maurice Kelley, "Milton's Debt to Wolleb's Compendium Theologiae Christianae," PMLA, L (1935), 156-65.

[9] See infra, p.4 , n. 4, p.192 , n. 4, and Appendices B and C, passim.

[10] See Walter J. Ong, Ramus and Talon Inventory: . . . (Cambridge, Mass.: Harvard University Press, 1958), for a Ramist perspective of the individual work in the context of the tradition. Ong properly arranges the editions according to art (subject), showing a logic as but one in a long series of logics.

is not to revise the form, but to make it more perfectly manifest.

The second area is the study of Milton's ideas about scholarship as a means of access to his broader principles of psychology and perception. The metaphysical status of method was not a large question in the seventeenth century, but the materiality of the soul was a hotly debated issue,[11] and certain propositions of logic (as indeed of theology) reflected upon it. The concept of form provided Milton with a metaphysical apparatus for his mortalism. It enabled him to avoid either a Hobbesian Nominalism or a Platonist realism in his psychology. A form is not material, but it exists finitely; it obeys laws of causation, but its obedience is not determined like that of a physical particle. Taken together, the De Doctrina Christiana and the Artis Logicae define a flexible middle position for Milton. An example of his use of Ramism to establish such a position is his discussion of psychology of perception, in which he uses the same Ramist elements as does Hobbes, but avoids drawing Hobbes' deterministic conclusions.[12]

A philosophical synthesis on this basis has only limited validity, as it is based on two orders of evidence:

[11] See George Williamson,"Milton and the Mortalist Heresy," SP, XXXII (1935), 553-79; Marjorie H. Nicolson, "The Spirit World of Milton and More," SP, XXII (1925), 433-52, and "Milton and Hobbes," SP, XXIII (1926), 405-33, for immediate background.

[12] Chapter III, infra.

circumstantial evidence of Milton's practice in his writings, and the direct evidence of comments which are in some cases intended in a different context from that assumed in the critic's examination. This last is in fact a violation of the Ramist Law of Homogeneity, which would have it that a proposition in theology or in logic is not equivalent to a similar proposition in metaphysics.[13] It is impossible to pursue philosophical questions rigorously on the basis of available evidence. For example, what is the precise relationship between the form of discourse, method, and the form of man, the soul? Milton seems to use the two concepts in a parallel way, but because his references to them are brief and oblique, it is impossible to extrapolate either an absolute identity or an absolute contradiction between the two. This obliquity is an imposed disadvantage of method, which dictates to the writer which subjects are to be covered, and in what order. A digression is a defect. Ramist method discouraged innovation in the presentation of an art, and consequently also in the art itself.

But the limits of synthesis can be extended by a careful sifting of Milton's text in order to isolate his attitudes and remarks from those of his sources. Chapter I and Appendices A and B of the present dissertation present the procedure and results of this sifting in more detail. Much remains to be done in this area. Hopefully, the De Doctrina

[13] See p. 13, infra. Lieb implicitly ignores this law.

Christiana will be more thoroughly surveyed, more of Milton's immediate sources will be identified, and his scholarly writings will more firmly be related to his polemical writings and his poetry. The data now offered, however, are consistent with available scholarship on Milton's educational thinking, the conditions under which he received his own training, and the evidence of his working habits as shown in his manuscripts. The picture of the scholarly Milton that emerges is of a man of quick insight, penetrating argument, and reasonable consistency, content to limit his talents with a useful but narrow uniform method.

NOTE

All translations from Milton's Latin works in this essay are from the Columbia edition. All translations from the works of Downame, Keckermann, Temple, and Seton cited below are by the present author.

TABLE OF CONTENTS

CHAPTER I

THE ARTIS LOGICAE: ASPECTS OF MILTON'S KNOWLEDGE THEORY AND OF HIS RESPONSE TO DOWNAME'S COMMENTARII

The Artis Logicae's relationship to its sources make it an unusually difficult work to read. It is not, strictly speaking, the statement of one man, but rather an anthology of statements which are given unity in part by the author's intention and in part by the theory of method which the work both embodies and expresses. Some of the statements--the Ramist axioms--are by tradition the same in order and wording as in many other books. Some statements occur in the same wording in Milton's text and in that of his immediate sources, with some editorial condensation by Milton, but with no essential change. Other statements are acknowledged quotations of the great authorities on logic, Aristotle in particular, or familiar lines from classical poets and rhetoricians. But these statements are also quoted in much the same form in the Ramist texts which Milton probably consulted, and it is impossible to say finally whether they are included because of his own familiarity with them, or because they are part of the standard repertoire of Ramist examples. Other statements are apparently Milton's, because

there is no prior example of them and because they represent a modification of the standard Ramist position. These last statements are at once the most important and the most difficult to deal with. They cannot fully be understood without understanding the point at issue, and Milton does not or cannot state the point clearly, or even acknowledge that it is an issue. The fact that there is a point can only be established by careful comparison between Milton's text and that of his sources. It is then possible to identify and examine the discussion which Milton has in mind when he composes his own remarks.

The reader of the Artis Logicae, then, is in the position of the mountaineer who must cross a field of fresh snow, knowing that while the surface of the snow is smooth and level, the ground beneath is dangerously broken and irregular. Appendix B, infra, is provided as a partial guide for the reader, in that it identifies quotations and comments which are paralleled in Milton's source texts. (In addition, the reader should remain aware that the axioms in the Artis Logicae set off in italics are not Milton's, but are thus conventionally acknowledged by him to be the essential statements of the art of logic. These constitute and exemplify method in this particular art.) The process of comparison between texts is, of course, a relatively mechanical one. But it does have the advantage of demonstrating objectively not only which texts Milton referred to, but the proportionate use he made of them.

Milton probably relied immediately upon three sources, two of which were Ramist and one Aristotelian. The most useful source was the Commentarii in P. Rami Regii Professoris Dialecticam by George Downame, a former praelector of logic at Cambridge and fellow of Christ's.[1] The resemblance of this work to Milton's has already been noted by scholars working in the area.[2] The order of presentation, chapter headings, and the subdivision of material--in a word, the method--is the same, and Milton imitates much of the commentary with only minor verbal changes. The Commentarii generally presents a fuller and more philosophical exposition of the points which Milton covers. It has the same number of chapters, but it is much longer. Another Ramist work to which Milton may have referred is The Logicians School-

[1] Georgio Dounamo, Logicae quondam apud Cantabrigiensis praelectore, & Collegii Christi socio, Commentarii in P. Rami Regii Professoris Dialecticam, . . . (Francofurti: Ex Calcographia Wolfgangi Richteri, . . . M.CD.V.).

See also, on Downame, Alexander Gordon, "Downame, George (Died 1634)," Dictionary of National Biography, ed. Sir Leslie Stephen and Sir Sidney Lee, 22 vols. (London: Oxford University Press, [1921-22]), V, 1300-1301.

[2] J. Milton French selected Downame from his list of Ramist logicians and said his text was "as near to Milton as any one examined." "Milton, Ramus, and Edward Phillips," MP, XLVII (1949), 82-87. Allen Gilbert, the editor of the Columbia text of the AL, noted its relationship to Downame's work. See John Walker McCain, Jr., "Milton's Artis Logicae," N&Q, CLXI (1933), 56, n. 2. Thomas S. K. Scott-Craig provides detailed notes of the parallels between Milton's preface (Gilbert, XI, 6-18) and the Prolegomena to Downame's Commentarii (Downame, pp. 24-43), and suggests parallels to other sources. See "The Craftsmanship and Theological Significance of Milton's Art of Logic," HLQ, XVII (1953), pp. 1-16.

Master, an English commentary on Ramus by Alexander Richardson.[3] Richardsom was a former fellow of Queen's, and his work was published in one of Milton's Cambridge years, 1629; it is also possible that Milton may have found it interesting during his career as a schoolmaster. The format is the same as Milton's and Downame's, again following method, but the tone of the work and the fact that it is in the vernacular suggest that it may have been intended for younger students. The textual case for Milton's use of Richardson is principally the parallel form of quoted examples. (See Appendix B.)

The third work is the Systema Logica of Bartholomew Keckermann, a logician and philosopher in good repute at Cambridge in Milton's day, who was, however, not a Ramist at all, but may be loosely said to represent the Aristotelian tradition in logic at the turn of the seventeenth century.[4] Milton's specific reliance on and reference to

[3] Alexander Richardson, The Logicians School-Master: or, A Comment vpon Ramvs Logicke (London: Iohn Bellamie, 1629). Examples of parallel citations in Milton and Richardson are set forth in the notes to the AL in Appendix B, infra.

[4] Bartholomaeo Keckermanno, Systema Logicae Tribis Libris Adornatum, . . . (Hanovae: Apud Haeredes Guilielmi Antonii, MDCXIII). For Keckermann's influence at Cambridge, see Harris Francis Fletcher, The Intellectual Development of John Milton ([Urbana, Ill.: University of Illinois Press, 1961]), II, 144 ff., 151-52, 210-12, 598-99, et passim.

"Aristotelian" is employed here to mean, essentially, "non-Ramist." Keckermann draws freely, and apparently authoritatively, from the classic authors, including Plato, patristic and mediaeval sources, and Renaissance writers; so

Keckermann will be discussed further below. In general, where Milton dissented from the Ramist position as expressed by Downame, he tended to take a position closer to that of Keckermann, who was a lucid and careful writer, and who provided satisfactory, if lengthy, explanations for whatever position he established. Keckermann was also more aware of the heuristic applications of logic than were the Ramists. Milton followed Downame in the practice of considering alternatives to the received Ramist tradition.

Sir William Temple's P. Rami Dialecticae Libri Duo[5] has also proved useful in clarifying the technical background of some of Milton's points. This work also follows method, but there is no other textual similarity between it and the Artis Logicae.

The comparison of these works to the Artis Logicae, both in terms of local similarities and of broader attitudes and techniques, reveals an interesting pattern. Where Milton follows Downame closely, he is usually also at his least controversial, and is simply reporting what he finds. Where he deviates from Downame, the reader is obliged to employ Keckermann or Temple to understand Milton's position. In other words, the obscurity of certain

---

do the Ramists cited herein. They all refer to Aristotle frequently and always with respect. On Keckermann's syncretism, see page **42** and note **71**, infra.

[5] Sir William Temple, P. Rami Dialecticae Libri Duo, Scholiis G. Tempelli Cantabrigiensis illustrati (Cantabrigiae: Ex officina Thomae Thomasij, 1584).

passages in the Artis Logicae is itself circumstantial evidence that Milton was seeking a broader context for dealing with the questions in these passages. Four issues in particular seem to reflect Milton's wish to establish a new position: the discussions of modal axioms, of contradiction, of syllogisms (particularly the abridged syllogism), and of the unity or multiplicity of method. In the context of his source texts, Milton's intentions in these passages are always clear and consistent. Without such a context, the passages are more difficult than need be, possibly because Milton wished to give the impression that he was stating an orthodox position, not breaking new ground.

Milton's choice of issues on which to dissent suggests that he was most concerned with the issue of necessary truth, which has a central role in Ramist theory of the axiom, and, indirectly, of method. It may be that Milton wished to modify Ramist logic to make it more amenable to theories and procedures of scientific induction. This is most apparent in his discussion of method, where he proposes that an inductive progression from specifics to universals be accepted as valid. His discussion of axioms suggests that he sought a truth standard that would give more value to the truths of daily observation and experimental verification. As it is, however, his comments are arbitrarily separated and ordered by the demands of method, and it is not really demonstrable that he had any unified theory which

he wished to present. It is perhaps most convenient, therefore, to survey his remarks in the order in which they occur--the order of method.[6]

Logic is commonly perceived in Renaissance logic texts as a progression from simple to complex units of discourse. The simplest units are predications, the next are axioms or propositions, and the most complex are syllogisms or larger units which are dealt with under method. In Milton's Artis Logicae, the lowest or predication order is represented by the argument; it is important to keep in mind that the Ramist use of this word has nothing to do with polemic, but refers to the relationship between a subject (thing of which something is predicated) and an adjunct (the predication).[7] It may be said of a man that he is mortal, a city dweller, rich, and a lover. These exemplify the four modes of adjoining: mortality is "inherent or placed within" a man by definition, urban life is "contained in the subject as located in a place," wealth is "received near to the subject," and the beloved is "the adjunct occupied" or the object. There are four complementary modes of subjection.[8]

[6] See Peter F. Fisher, "Milton's Logic," JHI, XXXIII (1962), 37-60, for a survey of Milton's terminology and theory which in some respects parallels the present discussion. Milton's syncretism is discussed in p. 46.

[7] Milton's definitions: "A subject is that to which anything is adjoined." "An adjunct is that to which something is subjected." Gilbert, pp. 79, 85. A Ramist would tend not to speak of "predication" as this word is associated with the Aristotelian predicaments.

[8] Gilbert, pp. 78-99.

The number of adjuncts and subjects is necessarily infinite, but for practical purposes they can be further classified by varying degrees of exclusivity. Without saying so, Milton uses adjuncts to classify arguments. His whole system is too complex to summarize here. It is based on the common Ramist procedure of establishing dichotomies and subdividing them until a sufficient number of categories for the classification of the known phenomena has been created. It is possible to describe a given item in terms of its position in the ordering branches of method. The argument father is a relative (and not an adversive) because it is complementary to the argument son. It is an affirmative (and not a negative); a contrary (and not a diverse). "Contraries are opposites, one of which is opposed to one only."[9] It is further a dissentany (and not a consentany)."[10] It is a simple (and not a comparative). Each of the successive pairs of terms in this example represents a larger category. The arguments replace the places of invention in the older logic. The logician uses them as a means of focussing his attention on aspects of the subject he wishes to discuss.

Although Milton makes an effort to be concise, the description of all the arguments is a lengthy business and

[9] Gilbert, p. 103.

[10] Gilbert, p. 99.

occupies all of the first book.[11] The second book concerns disposition, or the organization of arguments into higher systems of discourse. The unit of such discourse is the axiom. "An axiom is a disposition of one argument with another, by which something is shown to be or not to be."[12] An axiom has two terms, a minor term, or subject, and a major term, or predicate. Milton refines his definition by identifying three levels at which the axiom may be examined. First, does the "band" of the axiom (a verb in simple axioms) reflect a real relationship? That is, in the axiom "Socrates is mortal," can the major and minor terms be meaningfully related to each other? (Cf., for example, "The pyramids are mortal.") Second, does the axiom conform to the three laws of necessity? Third, is the axiom true or false?[13]

This last question may be more technically identified as the problem of verification, and it is important in axiom theory because it is uniquely the axiom that can be declared true or false. The arrangement of axioms into a syllogism or the larger patterns of method has no impact on the truth value of the individual axioms. These higher levels of discourse, therefore, may be structurally sound,

[11] The two books correspond to the first and broadest division of logic into Invention (predication) and Judgment.

[12] Gilbert, p. 299.

[13] Gilbert, p. 303.

but still completely misleading if their constituent axioms are false. Milton quotes the standard tag used by the Ramists to deal with verification: Axioma verum est, quando pronuntiat uti res est: falsum contrà.[14] Even a naive logician, however, should be able to perceive that this statement is tautological. Ramus' analysts are obliged to provide a more sophisticated analysis of his dictum.

Richardson perceives that the phrase uti res est assumes a great deal, and confronts the problem by drawing a useful metaphysical distinction betweem similia and truth; one may look for similia in language, but truth is only to be found in God.

> What difference is there between the res and the axiom? Much, for axiome is an adjunct to the thing; truth is first in God, then secondly all things are so farre forth true, as they answer to the idaea in God, for so God created all things . . .[15]

He explains his understanding with the example of Cardan, the signet ring, and the impressed wax portrait of Cardan, an example first proposed by Scaliger. Scaliger had argued that truth lies in the exact relationships between the portrait (language) and the ring (mind), whereas Richardson asserts that the truth lies between Cardan (reality) and the wax portrait (language), so that "when I say the thing is as a man speakes it, I mean they are similia."[16] As in Plato's

[14] Gilbert, p. 308, Richardson, p. 250, Downame, p. 525, Temple, pp. 70-71.

[15] Richardson, p. 252.

[16] Richardson, p. 253.

cave, direct and absolute perception is impossible, particularly in axioms, because expressed truth must pass through the ring (mind). Downame suggests that truth exists at four levels: the truth as it is in the divine intellect, as it is in the thing itself, as it is in our intellect, and as it is in words, the "sensorum symbola."[17] The truth depends, in turn, on the correspondence of each level with the higher, "realer" level of knowledge that lies behind it. For practical purposes, however, sense impressions are a most important guide to the truth, not absolutely, "but the measure of truth and falsity is so much in the sense of the soul, as the things themselves are in the words or sensory symbols. . . . Here indeed did Protagoras err, who measured truth and falsity out of human opinion; that is, he called man τὸ μέτρον ἁπάντων that is, the measure of all things."[18] At the very end of the chapter, he quotes Aristotle on the νους, which he describes as the faculty which apprehends propositions without dianoia; it would seem, therefore, that there

[17] "Cum autem veritas multiplex sit, videndum est, qua de veritate hîc agatur. Primò veritas est in intellectu divino, eáque est scientia Dei πρακτική, in qua omnium rerum ideae, juxta quas creatae sunt, continetur atq; haec prima veritas est, omnisq; veritatis causa & canon.

"Secundo, in rebus ipsis quae repraesentant ideas [sic] in intellectu divino: atque haec veritas essentiam comitatur, resq; hoc modo dicuntur verae, quatenus entia sunt.

"Tertio, in intellectu nostro, nimirum in animi sensis, quae sunt rerum similitudines.

"Quarto, in verbis, quae sensorum symbola sunt." Downame, pp. 517-18.

[18] Downame, p. 520.

is a certain intuitive element in the evaluation of the truth of an axiom.[19] Downame identifies three modes of evaluation: sensory perception, self-manifestation ("ut bis duo sunt quatuor"), and prior demonstration.[20] Downame is more optimistic than Richardson, and does not draw his distinction between "truth" and the "information" or statements that constitute the axiomatic structure of an art.

A consequence of these truth theories is that the Ramist must consider the truth of every axiom individually, not with respect to the truth of other axioms. Superficially the theory demands a very inductive evaluation of each axiom, for it must be primarily through the senses and other common sources of information that truth can be perceived. Truth itself, however, can be divided into two categories, the contingent and the necessary, and the distinction is not apparent through the simple inductive act. A contingent axiom is one which may or may not be true at any given time, even though it is generally true--that is, the mind would tend to assent to it as meaningful. Milton and Downame both use the example "Fortune friends the bold," but even an axiom like "Achilles slew Hector" must be considered contingent. Now can the stating of a historical event, which can never be changed, be considered contingent? The test seems to be

[19] Downame, pp. 560-61. "Dianoia" is the Ramist term for "syllogistic argument," with "argument" in its modern sense, and is used here to avoid confusion.

[20] Downame, p. 522.

that before the event, the axiom "Achilles did not slay Hector" was also possible, "for the contradiction of a contingent is a contingent."[21] The kind of truth a speaker has in mind when he makes an assertion about the future, then, is a good model for the truth of a contingent axiom. It is called opinion, and should not be confused with doubt.[22] Another test for the contingency of an axiom lies in the nature of the arguments, but there the distinction must be intuitively understood and applied.[23]

All contingent axioms fail to meet the triple tests of necessity: that an axiom be true always and necessarily in the nature of things (De omni; κατὰ παντὸς), that the terms be drawn consistently from the same art (De lege Homogenii; καθ' αὑτὸ), and that the axioms be reciprocal, avoiding tautology or an inadequate number of terms (De lege Catholici; καθόλου πρῶτον).[24] The application of these laws, particularly of De omni, prevents the inductive testing of axioms from being any more than superficial. De omni excludes singular propositions, which is to say propositions

[21] Downame, pp. 527-28.

[22] Downame, p. 530.

[23] Richardson, p. 257. ". . . when they [the arguments] are absolutely agreeing, and so as they cannot be seuered in nature, then they make a necessarie axiome."

[24] Temple, pp. 75-82; Downame, pp. 538-61; Richardson, pp. 257-64; Gilbert, pp. 316-23. See also Keckermann, pp. 378-89, in which the laws are stated with attention to the Aristotelian theory of predication.

with a unique subject, from the class of necessary axioms. Thus, "The earth goes around the sun" is not a necessary axiom, as there is only one earth and one sun. Temple specifically excludes astronomy from the arts subject to necessary logic.[25] The quoted axiom is true for practical purposes (contingently), but it might also be true that at some time the earth did not, or will not go around the sun. It would be difficult to reconcile even the statistical axioms of inductive science with the law De omni. "One birth out of every eighty-seven is a twin" would seem to be a respectable candidate for a necessary proposition. But this proposition can be resolved into a large but finite number of singular propositions: "X had a boy," "Y had a boy," "Z had a girl," etc., and the modern scientist would point out that, the general statistical law notwithstanding, each individual birth was only contingently single or contingently a twin.[26] Inductive science works up from contingent individual cases to general laws, but it is a Ramist boast that "Vniversalia sunt absoluté notiora: specialia

[25] Temple, p. 79; see also Downame, pp. 544-45. Milton objects to this and somewhat clumsily asserts that a particular axiom, such as that quoted in the text, is "καθόλου . . . quod satis est." Gilbert, pp. 316-19.

[26] Downame on inductions:

"Object. I. Artium praecepta per inductionem colligenda sunt, ergo universalia esse debent.

"Resp. De re speciali per inductionem colligi praeceptum potest, quod ipsum non est generale, sed sicut res ipsa speciale. Deinde praeceptum, quod in compositi axiomatis forma de re universale per inductionem collecta praecipit, nec generale est, nec speciale." Downame, p. 545.

ignotiora. Ab universalibus itaque methodum semper ad specialia progreditur." The existence of a universal implies a particular; never the reverse.[27]

The actual effect of the law De omni, therefore, is to make necessity nondemonstrable, for how can one prove an axiom to be always true, completely true of each individual case, and true of all cases--"de toto, de omni, & semper"[28] --by any number of particular instances? One cannot. In actual practice the three laws seem to be very broadly and generally applied by the Ramists, without resort to the separate tests established for each, and Downame is obliged to defend Ramist practice in comparison with the Aristotelian.[29] Milton seems to have sensed the weakness in the distinction between contingent and necessary axioms, and to have tried to deal with it squarely.

For his first attempt, Milton draws on Keckermann's propositional theory, which differed from Ramist axiom theory in that Keckermann entertains a theory of modal axioms.[30] A modal axiom is an axiom that is true in a certain

[27] Temple, pp. 126-30.

[28] Downame, p. 544.

[29] Downame, pp. 557-59.

[30] The related passages are in Keckermann, book II, pp. 298-393, and Gilbert, pp. 312-17.
The specific references showing that Milton used this particular work are as follows. On p. 315, Milton quotes two of Keckermann's observations on exclusives: "Exclusiva subiecti non excludit concomitia," and "Praedicatum, seu adiectum contradictorum nulla limitatione subiecto

mode; e.g., "It is contingent that Socrates is learned;" "It is necessary that Socrates is learned;" "It is possible that Socrates is learned." None of these is identical to the simple axiom "Socrates is learned," and if Socrates in fact were not learned, the three quoted modal axioms would not necessarily be false. Modal axioms, therefore, promise access to a more sophisticated theory of verification, but for that very reason they are not comfortable for a Ramist, who relies in the first instance on the dogmatic and intuitive three laws of necessity. Milton refers to the modals, but he does not exactly welcome them, and he devotes his discussion of the subject actually to reaffirming the authority of the arguments, which is to say of predication. In the brief paragraph on page 313 ("Haec autem immutabilis veritatis in necessario . . ."), Milton chooses between a theory which would verify axioms by examining their arguments separately ("Socrates" and "learned"), and a theory which would verify axioms by analyzing their modes. He rejects the significance of Keckermann's four primary modals, it is necessary, it is impossible, it is possible, it is contingent, claiming that "the way in which the parts of the

---

conciliatur."--Keckermann, pp. 333 and 338. In a subsequent and less important reference on p. 431, a discussion of reduction by impossibility, Milton mentions Keckermann and refers either to his discussion of reduction by impossibility, pp. 445-46, or to his discussion of indirect reduction, not quite the same thing, pp. 435-36. The remark about scholastic usage which Milton recalls occurs in the latter discussion, but some confusion on this point would be understandable if Milton did not actually have the volume in hand as he quoted.

axiom are affected among themselves . . . can be more rightly judged from the arguments disposed in the axiom." For example, the axiom "It is contingent that Socrates is learned" is tautological, because "Socrates is learned" would of itself be clearly contingent, as learning can only be attributed contingently. Milton further reduces the significance of the modes by discarding Keckermann's distinction between the four primary modes, which Keckermann believed has significance in verification, and the rhetorical modes; according to Milton, "to these [primary] modes many others, easy, difficult, honest, base, etc., can with advantage be added[.]"[31] In Milton's defense, it should be pointed out that Keckermann did not get far with modal theory, and after a description of the nature of modals never refers to them in relation to more complex orders of discourse.

Following Keckermann's distinction, Milton then goes on to discuss the secondary modals, exclusives, exceptives, and restrictives, which he feels might be more useful.[32] This is also a blind alley in both theories, and is complicated by the fact that Milton and Keckermann get into a theological dispute at the end of it. One apparently sarcastic remark should be explained: Milton accuses Keckermann

[31] Gilbert, p. 313; Keckermann, p. 329. There is some careless anthropomorphism here; e.g., "It is base that Socrates was executed." Why not "It is charming . . ."?

[32] Keckermann, pp. 332-42.

of "producing a canon;" the canon is Keckermann's label for a qualifying heading which Keckermann adds to the essential propositions and definitions of his discussion. There is no formal limit as to the number Keckermann may compose with respect to a given subject, and the discussions which he affixes to the canons do occasionally stray from his central line of argument. The technical question is the extent to which the secondary modals can affect the truth value of an axiom; the theological questions, which are not really germane here, are discussed briefly below in an appendix. Milton's obscurity arises not from his failure to grasp the issues, but apparently from the fact that his speculations were set down exactly in the order in which they occurred or were dictated. The chapter is a chronicle of Milton's gropings in verification theory: first he disposes briefly of the questions of truth and falsity according to his Ramist authorities, then takes up necessity, which suggests modal theory to him (there is no theoretical reason for it to be introduced here); he turns to Keckermann for this discussion and rejects the Aristotelian modals; he entertains the secondary modals more optimistically, but is distracted by theological questions and unable in a small space to justify the introduction of any modal system; he pulls himself back to necessity and states the three laws briefly. He almost certainly has Downame before him as he does so.[33]

[33] It is difficult otherwise to account for the

Possibly if Milton had not felt obliged to follow the standard Ramist textbook form, he would have composed a more sequential discussion of verification. As it is, he next takes up the subject in a discussion of the different categories of axioms; he is consistent with his earlier remarks, in that he classifies axioms according to the degree of contrast in their constituent arguments. Among contrasting arguments, contradicta ("black" and "nonblack") seem more important than adversa ("black" and "white") or diversa ("black" and "red"); it is contradiction that is supposed to lie at the heart of a disputation.[34] Milton then

---

similarity of these two passages:

"Fateor equidem utranq; priorem sub tertia quodammodo contineri. ut Aristoteles & Ram. in catholici axiomatic definitione docuerunt. Veruntamen ut trigonum tetragonus, & tetragonum pentagonus comprehendit, quae tamen singulae distinctae figura sunt: ita hae leges distinctae sunt, etiamsi forsitan posterior quaeq; priorem comprehendit. Imo vero perspicuitatis & distructionis gratia melius multo est, tres distinctas leges ponere, quam omnes in una quasi Satura confundere." Downame, p. 558.

"Dices, duas illas priores leges comprehendi sub hoc tertia: & hoc fatendum quidem est: veruntamen ut trigonum tetragonus, & tetragonum pentagonus comprehendit, neque idcirco tamen distinctae figurae non sunt; ita hae leges, etiamsi posterior quaeque priorem comprehendit, erant tamen perspicuitatis causa distinguendae." Gilbert, p. 322.

Further examples of Milton's borrowings from Downame are set forth in Appendix B, infra.

[34] Richardson, pp. 249-50. For different modes of contrast, see Richardson, pp. 147-65 and pp. 159-62 on contradiction specifically. In Downame, see pp. 214-21 for a general discussion of dissentanies, and the material following, to p. 239, for a survey of diversa and disparates. Pp. 239-43 discuss contraria, and the material following, to p. 317, covers relata, adversa, contradicta, and privatives.

applies the concept of contradiction to axioms, but it should be noted that he is here the victim of an amphibologia, as a contradiction in predication (arguments) is not really the same as a contradiction in truth values (axioms). Milton examines the contradiction in two pairs of general axioms. (A general axiom, in his terminology, is one in the form "All A is B" or "No A is B.")

A. Every spot in the city surpasses charming Baiae.
B. No spot in the city surpasses charming Baiae.

A. Every animal is rational.
B. No animal is rational.

If, in either pair, A is known to be true, then it follows that B must be false, but if A is known to be false, B may still be either true or false. (That is, if it is known to be false that "Every animal is rational," it still may also be false that "No animal is rational," since it could be that some animals are rational and some are not." The relationship is reciprocal; if, in either pair, B is known to be true, then it follows that A must be false, but if B is known to be false, A may still be either true or false. The kind of truth expressed in an axiom whose contradiction is known to be false is contingent: an axiom "true in such a way that sometimes it can be false."[35] "Therefore both parts of a general contradiction can be false, but both parts cannot be true, since falsity is manifold but truth is one."[36]

[35] Gilbert, p. 309.

[36] Gilbert, p. 331.

Milton has effectively demonstrated that there can be different kinds of certainty in verifying a proposition. He shows further that the contingency demonstrated above cannot be demonstrated in a proposition of singular quantity (e.g., similar to "The earth goes round the sun.") In pairing "Fabulla is beautiful" with "Fabulla is not beautiful," he finds that if either proposition is known to be false, the other must be true--which perfect reciprocity was not true of the general. Thus the quantity of a proposition can be shown to have an effect on its demonstrable necessity. But there is still another amphibologia which reduces the value of this finding. When Milton says grandly that "truth is one," he is confusing three different kinds of truth. One is the logical truth demonstrated by his paired axioms, which, as the examples themselves suggest, is rather complex. The second is the irrefutable truth which the Ramists define by the three laws of necessity. As has been noted,[37] Milton was none too happy with these three laws, but he does not seem prepared to go so far as to suggest that the kind of truth intended by the Ramists is in fact unattainable by the tools of logic. The third seems to be Truth in some transcendental form; the assertion "truth is one" conveniently ignores various philosophical distinctions, and refers back to the intuition,

[37] See note 25, supra.

which is to say, out of the realm of logic.[38]

The next level of discourse is dianoia, represented particularly by the syllogism. "A syllogism is a dianoetic disposition by which a question is so disposed with its argument that if the antecedant is given, of necessity a conclusion is drawn."[39] Milton does not trouble to define "question," but the definition is given by Temple: "Quaestio nihil aliud est quam axioma dubium." This presumably is the doubt from which Downame carefully separated opinion. Temple further explains that only those axioms which are doubtful, and to which a truth valuation can be applied with a simple Yes or No, are suited to be concluded by a syllogism.[40] Milton later explains that the conclusion should be in the same terms as the question proposed, and the middle term should not be in the conclusion. He is here using "term" in two senses: first, with reference to technical nomenclature, the validity of which should be tested by the law of homogeneity--a word which is a term in Grammar may be quite a different term in Rhetoric, and the two usages should not be confused--second, as a unit of the axiom, and therefore of the syllogism. In the axiom "A is B, B is C; therefore A

[38] Gilbert, pp. 325-35, for this discussion and examples. Temple gives a clearer and more concise exposition of the principles of contradiction, pp. 84-85. For further remarks on verification, see Milton's discussion of connex axioms (conditional statements) and disjunct axioms, Gilbert, pp. 351-53; 360-65.

[39] Gilbert, p. 365.

[40] Temple, p. 97.

is C," B is the middle term, which ties the two first axioms together, but which does not appear in the conclusion.

The syllogism is not as central in Ramist logic as it is in the Aristotelian, and certainly not as usefully connected with theories of predication and verification. Milton's treatment of the subject does not differ materially from Keckermann's, although it is briefer, and his classification system follows the dichotomies of method rather than the more analytical examination of the nature of axioms and the traditional syllogistic forms which Keckermann provides. Two laws particularly govern all syllogisms. The first, "From the place of equals," is perhaps more familiar to the modern reader from elementary geometry: "Things which agree in some third thing agree among themselves; and on the contrary: Things which do not agree in a third thing do not agree among themselves. From the place of genus: What is generally attributed to a genus is also attributed to all the species contained under the genus. In the schools this rule is called the dictum of all and none." Milton quotes from the Prior Analytics to show that Aristotle used the first of these laws.[41]

These two laws allow the logician to formulate "equations" (axioms) in which the equated terms are individuals

[41] Gilbert, pp. 387-89. Keckermann's treatment of the syllogism is an extensive treatise, pp. 396-578 of his volume. He cites Aristotle, "1.Prior.cap.1.δ.9," on p. 397. For "De Omni et Nullo," see pp. 415-16, et passim.

or classes of individuals, or qualities which may be predicated of the subject terms individually or as a class. The example given above to demonstrate the middle term is a formula to which all the valid syllogisms of the Ramist or Aristotelian systems could theoretically be reduced. "Is" in this formula signifies not similar quantities, as in arithmetic, but a valid predication. If an axiom is negated rather than affirmed, it takes the form "A is not B." Milton gives different instructions for constructing a syllogism, depending upon whether the question (i.e., the concluding axiom) is to be affirmed or denied. In the first case, the middle term B must agree with "both sides of the question," A and C. In the second case, the middle term must disagree with one of the sides of the question, A or C, but it cannot disagree with both, for in that case there is no syllogism. The denial of only one of the two premise "equations" always produces a denial in the concluding "equation." The explanation for this is stated somewhat dogmatically: "what is denied is weaker than what is affirmed, the particular is weaker than the general, and the contingent than the necessary."[42] This follows from the Ramist respect for universals, but does not constitute a formal demonstration.

Both these laws are fundamental to the Aristotelian

[42] Gilbert, pp. 389-91. The paraphrase of this section is rather free due to the complexity of the original material.

syllogism. The dictum of all and none is related to the concept of genus and species, and permits dianoia from one level of category to another; what is true of man can be truly stated of Socrates. The permutations of the agreement of the middle term with the other terms, laid down according to the laws of aequippolence and conversion, leads to the establishment of the three figures of the syllogism. But the Ramist system of exposition, with its insistence on formal dichotomies, makes it impossible to pursue these theories adequately, and indeed creates one or two anomalies. The simple syllogism, in particular, is subdivided into two genera, the abridged and the explicated. Milton dutifully gives examples of both, but it is difficult to discern any essential difference--both sets of examples have three axioms. In his very obscure passage on this subject, Milton seems to be saying that the abridged syllogism is not an enthymeme (a recognized variation of the form of the syllogism in Aristotelian logic), but a new variation that is more immediately accessible to the mind. In this explanation Milton has followed his sources without really grasping what was involved. The same material is clearly explained by Temple. Here is his example of a contracted syllogism and of its expanded form:

Quidam homo est doctus, ut Socrates.

Socrates est doctus,
Socrates est homo,
Quidam igitur homo est doctus.

Milton gives examples of syllogisms which may be contracted, as Temple does, but without showing how to go about it. The distinction between a contracted syllogism and an enthymeme may also be stated simply: in the enthymeme one premise is suppressed, while in the contracted syllogism both premises (in Ramist terms, the two axioms of the antecedent), are combined.[43] (An example of an enthymeme based on the above syllogism would be: "Socrates est doctus; Quidam igitur homo est doctus.") The distinction between abridged and explicated syllogisms would not be important in Aristotelian theory, and Milton does not seem happy with the concept. He cites commentary from Aristotle and his own observations which have the effect of restricting use of the abridged syllogism to a very few cases.[44]

A Ramist is much more at home with truth than with validity, and therefore he concentrates more on individual axioms and on method, the arrangement of axioms into an art. Richardson explains this predilection:

> An axiom is such a thing as appeares to bee true at the first sight, or at the second hand: now our reason is to be so glued, as that it may be able to see any truth, ergo, if the truth appears at the first sight,

[43] Temple, pp. 107-09.

[44] Gilbert, pp. 394-401. See also examples of abridged (401-03) and explicated (407-15) simple syllogisms. For a different interpretation of this subject, see Fisher, pp. 53-56. Fisher follows the terminology of J. Lukasiewicz' Aristotle's Syllogistic (Oxford, 1481). Fisher uses "mood" to refer to the figure of a syllogism, and does not intend "mode" or "modal" as used here.

> an axiome will serue ys, else we must haue a candle to make it cleare so that here wee may see, the purpose of syllogistical iudgement is not to make things more true, or more false in themselves, but to make the truth, or falshood more manifest vnto vs: so that cleare per se belongs to a syllogisme and here we may also see, that axioma probabile, as they call it, and axioma subtile belong hither: so that all third arguments are not vsed to make the things more true in themselves, but to make the truth more manifest to vs, . . .[45]

An axiom then is an individual manifestation, a knot of truth, in language. Method is only so much greater a manifestation of truth, and it is praised accordingly. According to Downame's authorities, it is a gift given to men by divinity, in the order of the greatest species of good, and to use it is almost to follow in the footsteps of God.[46] Considering the importance thus attached to the subject, the Ramist treatment of method seems sketchy and unsystematic. The principles of spatial organization and expository order which direct it are not described explicitly. Its relationship to the theories of predication and deduction that precede it are not firmly established, the examples given of it are limited,[47] and the theories which justify it are vague and tendentious.

"Method" is really a scholar's label for "clear and

[45] Richardson, pp. 285-86.

[46] Downame, pp. 750-51; see also Gilbert, p. 471, and Neal W. Gilbert, Renaissance Concepts of Method (New York: Columbia University Press, 1960), passim.

[47] It is only fair to point out, however, as Temple does, that Ramus has published five examples of expositions of liberal arts conforming to method. Temple, p. 125.

systematic expository thinking." A good brief description is given by Downame in discussing the examples of method as it is used in poetry and history:

> Siquidem summam rei primo tanquam definitionem generalissimam proponere solent [Poetae, Oratores], deinde eam in partes tribuunt, quas deinceps explicant atque demonstrant, & ubi opus est, transitionum vinculis connectunt.[48]

Temple gives a more graphic explanation: "Imagine for instance senators, knights, and commoners gathered together. What does the chairman do? He leads the senators to the first seats, as they are first in dignity: he sends the knights to the middle, as they are next to the senators in dignity: he relegates the commoners to the last, since they are of the last kind of condition."[49] In doing the same with axioms, the important distinction is that certain axioms are "notiora," which are to be put in the first and most obvious places, and the others arranged so that the student is gradually conveyed to the less apparent principles. Thus, in discussing logic, one begins with axioms like "Logic is the art of reasoning well" and ends with "Testimony which has a man as its author is human testimony," or "Method is a dianoetic disposition of various homogeneous axioms arranged one before another according to the clarity of their nature, whence the agreement of all with relation to each

[48] Downame, p. 781.

[49] Temple, p. 121.

other is judged and retained by the memory."[50] Despite Ramist optimism that "Truth is one" and that the mind responds to it immediately and spontaneously, method is designed to help the imperfect intellect from principle to principle. The psychological theory behind this practice asserts that the act of perception consists of the systematic distinction of categories. (The reader's attention is drawn to the last three sentences of Milton's important paragraph, which is here quoted in full for convenience.)

> Thence it is to be understood that here is treated the method of presenting or teaching, which is properly called analytic, not the method of inventing. For the method of inventing which by Plato is called synthetic proceeds from single things which are before in time and first offer themselves to the senses, by induction from these general notions are collected; but the method of teaching or of disposing what have been invented and judged is the subject of this section. A contrary way as Aristotle (Metaphysics I.1 and 2) teaches, proceeds from universals, which by nature are before and better known; not since they are known first or more easily, but because after they are known they have precedence by the nature and clarity of the notion in proportion as they are more remote from the senses. Thus the general species of things (as the opticians also teach) strike the senses more quickly than particulars, as when something is coming I judge it is an animal before I judge it is a man, and a man before Socrates. Aristotle in many passages teaches this as the only method.[51]

But if the mind operates naturally according to the relationship of genus to species, is not introspection a sufficient

[50] Gilbert, pp. 19, 285, 471.

[51] Gilbert, p. 475. 1672 was the year of Newton's publication of his important and controversial advances in optics. Milton's optical reference was thus obsolete as it appeared.

This reference is actually taken verbatim from Downame (p. 771). See also note 59 in the present chapter, and further remarks in Chapter III, infra.

test for "notioreity"? Evidently not; it takes some experience to be able to order axioms.[52] In their discussions of theory of method, the Ramists establish and defend general principles which must in fact be used as arbitrary rules designed to assist the logician in finding a useful scheme for ordering his axioms.

Temple provides an important consideration which is familiar from the discussion of axioms: Ab absoluté notioribus ad ignotiora methodus semper progreditur; Universalia sunt absoluté notiora: specialia ignotiora.[53] In method, the effect of the principle is less restrictive than in verification; it simply encourages the logician to begin the arrangement of his material with the broadest possible categories. Thus, Milton's grammar, which is arranged according to Ramist method, is divided broadly into Accidence and Syntax.[54] This division ignores the fact that in the actual act of speech, accidence and syntax cannot be separated, but in Ramist method this distortion is appropriate. The fruits of this method are convenience and memory.[55] A given detail of

[52] Downame, pp. 760-61.

[53] Temple, p. 126. See supra, pp.**14-15.**

[54] George Philip Krapp, ed. "Accedence Commenc't Grammar," The Works of John Milton . . . , ed. F.A. Patterson, et al., (New York: Columbia University Press, 1932), VI, 285-353. P. 287: "Grammar hath two Parts: Right-wording, usually call'd Etymologie; and right-joyning of words, or Syntaxis." Etymology, pp. 287-328. Syntax, pp. 328-353. See also Chapter II, infra.

[55] Downame, pp. 573-575.

grammar can be located easily in the grammar, once the student has familiarized himself with the structure of dichotomies, and the localized detail can then be memorized quickly. This seems preferable to, say, memorizing the complete works of Ovid and abstracting therefrom the forms amo, amas, amat, although the latter process is probably closer to the way in which children actually learn their mother tongues.

To defend the traditional progression from universals to specials, Temple devotes a lengthy debate with an imaginary and rather persistent opponent to proving that Ramus' method is "unica."[56] (If it also permitted progression from specials to universals, it would be "duplici.") His position is not a good one. His "opponent" seems to be aware that the apprehension and application of method is not a single act, but, as Temple's own exposition has very competently shown, the general organizing principle behind a broad range of techniques and concepts. "Postremó quód é Talaei testimonio quintuplicem methodum non concluseris, unam inventionis, alteram enuntiati, tertiam syllogismi, quartam ab universalibus, quintam definitionibus ab inferiore ad superius, sive á specie ad genus procedentis, id sapientiae tuae tertia pars esto,"[57] he declares, intending

[56] Temple, pp. 126-34.

[57] Temple, p. 134.

to be sarcastic, but in fact stating a very reasonable position. That Ramus' method was "unica" seems to have been a sensitive point, but Milton at least perceives that it sacrifices nothing from the Ramist system to provide for method "á specie ad genus procedentis," or as Milton expresses it, "the method of inventing which by Plato is called synthetic." This modification provides for two complementary methods: the classic analysis, in which general statements or definitions are broken down into more detailed systems, and synthesis, in which observed facts or details are arranged into a larger structure. The second is somewhat reminiscent of the scientific induction beginning to be practiced in Milton's lifetime. In making this adjustment Milton is probably again following Keckermann, who presents both systems briefly more or less in the same terms discussed here.[58] Milton's paragraph is cagily worded, and it is difficult to tell whether he is proposing the change or only mentioning it.

The interpolation from Keckermann represents shrewd editorial strategy on Milton's part, as he thus abandons an untenable Ramist position. The example with which his paragraph closes is the same in Downame,[59] but there it is only part of a defense of the conventional Ramist insistance that

[58] Keckermann, pp. 588-92.

[59] Downame, p. 771; Gilbert, p. 474. Milton alters occurrent to incurrent. See pp. 110-11, infra, for Hobbses' use of this passage.

knowledge always begins with universals. In this passage Milton grapples with the objection that individual sensory experiences do sometimes seem to be "notiora" than universals. Downame confronts the problem by quoting from Aristotle a passage in which the Philosopher's belief that sense impressions are "notiora" is set forth with embarrassing clarity. Then, with tenacious subtlety, Downame lights upon Aristotle's use of the phrase to us ("nobis" or "πρὸς ἡμᾶς"); "When he says 'to us,' he does not mean all men, but certain more inexperienced ones."[60] The description of method as an acquired skill, not the spontaneous act of the intellect, does not accord well with the Ramist theories of truth and perception.

The laws which the "experienced" logician knows and applies are simply formulated by Downame: the axioms "debent enim esse varia, homogenea, & pro naturate suae claritate praeposita."[61] The practical logician would probably take up the third of these first, as it is most useful for the problem of ordering axioms. They may be arranged according to

[60] Downame, p. 771: "Nobis autem priora & notiora apello, quae proprius sunt à sensibus: absolutè verò priora & notiora; quae à sensibus sunt remotiora, sunt autem remotissima, quae sunt universalia maximè, proxima verò singularia. Disertis hic verbis ait, universalia esse naturâ & absolutè notiora, specialia verò nobis notiora. Cùm autem (nobis) dicit, non intelligit omnes homines, sed quosdam imperitiores." The italics indicate part of Downame's translated quotation from Aristotle. The parentheses should be read as quotation marks. It is Downame's habit to quote the Greek text, ommitted here, as well as the Latin version.

[61] Downame, p. 754.

their precedence in time; there are some which become apparent more quickly than others, and which therefore can be given a prior position.[62] This is primarily a paedagogical principle, but Downame does not so identify it. Next, axioms may be ordered according to nature, and this absolutely or "modo quodam." This distinction, however, is not made very clear, nor does it seem important. Pressed to explain what is in fact clearer according to nature, Downame retreats into a general discussion of the importance of experience in making these judgments.[63] Once past this distraction, however, he has to admit that those axioms are absolutely clearer and prior "of which the arguments are prior, notiora, more evidently [illustriora] understood."

> Inter prima enim argumenta id natura prius est, cujus in invētionis doctrina Categoria antecedit, ut nos etiam in singulis fere Categoriis docuimus. Sunt ergo causae argumēta clariora effectis, utraque subjectis, omnia haec adjunctis, consentanea, dissentaneis, haec comparatis, in dissentaneis vero inter se & comparatis inter se, nulli notitiae gradus distinguuntur.[64]

But this is an unsatisfactory conclusion. "Truth and falsity," Ramus says, "are examined in axioms, consequence and inconsequence in syllogisms; thus in method is considered whether it proceeds more clearly of itself, or follows more obscurely, and generally it is judged by order and

[62] Downame, pp. 758-59.

[63] "Nam si id praeponendum esset, quod cuique notioris videtur, certe methodorum varietas hominum pene numerum consequeretur." Downame, pp. 760-61.

[64] Downame, p. 761.

confusion."[65] His entire system, this dictum would imply, is based on different interrelated orders of discourse which correspond to different orders of evaluation; if method is simply a ranking of arguments (and an arbitrary ranking at that), then it is hardly worth the claims with which it is ushered onto the stage. The progression from arguments to axioms has already been made clear; an axiom is subject to verification, whereas an individual argument is not. There are distinct qualitative and procedural differences in handling the two genera. It would seem a willful obviation of the peculiar nature of an axiom to classify it according to its constituent arguments. Despite Downame's confidence on this subject, there are no very precise directions, and certainly no guiding theory, on how to decide, for example, which arguments in a particular axiom are the ones which give it methodical precedence over other axioms. Downame would of course reply that such cases must be settled by "experience."

The two remaining criteria of variety and homogeneity are understood in terms of the general structure of the art in which the axiom appears. "Varia" means simply that method cannot be understood to consist in a sole axiom, nor in the disposition of a single syllogism.[66] The criterion of homogeneity depends upon the principle that method must be

[65] Temple, p. 134.

[66] Downame, pp. 754-55.

constructed teleologically--its end is to teach a liberal art, and each axiom included must further this end. There are two useful techniques: the logician should keep in mind Temple's example of the dinner-party, which Downame refers to more abstractly as a "catena" of the highest, the middle, and the lowest, and the logician should apply the law in order to make sure that all the terms referred to are from the same art; e.g., one should not use Geometry terms in Arithmetic.[67] As Miller points out, this procedure implies certain broad assumptions about the nature of the relationship between an art and reality which the contemporary developments in scientific methodology were to invalidate.[68] These principles are useful, and if one considers a liberal art as an acquired behavior pattern, rather than as a proposition about the nature of absolute reality, they remain applicable. Francis Yates reminds one of the Ramist claim, echoed in Downame, that Ramist thinking is an aid to the memory as well as to the cognitive faculties.[69] In a Ramist art, the dual subdivisions of method take the place of the physical "places" used vividly in the older systems she describes; the axioms are remembered more with respect to one

[67] Downame, pp. 755-58.

[68] Perry Miller, The New England Mind: The Seventeenth Century (Cambridge, Mass.: Harvard University Press, 1954), pp. 161-62, 216.

[69] Frances A. Yates, The Art of Memory (London: Rutledge & Kegan Paul, [1966]), pp. 231-86; see particularly p. 276. Downame, pp. 764-65.

another in a graphically conceived scheme than with respect to visual memories drawn from a different order of experience. The distinction between "accidence" and "syntax" may be distorting, but it reinforces and is reinforced by that between "invention" and "judgment"; the confident expectation that all arts may be anatomized congruently leads to the confident assumption that the totality of knowledge may be arranged with a few simple organizing devices.

But in practical terms, Ramist logic has a limited number of applications. It is mostly easily used in discussing a liberal art at length--that is, in writing a textbook of logic, rhetoric, grammar, ethics, and so on. It would be difficult to imagine a convenient Ramist treatment of medicine or law, although one could concede the theoretical possibility. (Abraham Fraunce wrote a "lawyer's logic," but he never wrote a logician's law.) Method is useless for narration, and, as has been demonstrated, the kind of absolute truth which a Ramist thinker sought made it difficult for him to take seriously the contingent observations of inductive science. Ramism is unusable in two important categories of intellectual activity. First, it is not heuristic. Its verification theory and practice are less subtle than that of the contemporary "Aristotelian" logic. Superficially, the Aristotelian predication system, and hence the Ramist arguments, does seem to offer a kind of heuristic; by running through the arguments one "invents" or

"comes into" usable statements about the subject of which one wishes to predicate something. But this is entirely an internal intellectual process--in its own terms, a logical process--and hence not a genuine access to knowledge which the logician did not have before. It is a mnemonic. The arguments classify data, but do not arrange data in any more meaningful way, unless one assumes, as a Ramist would, that the structural pattern of the arguments is itself a useful statement about the interrelationships of phenomena.

Second, despite the considerable amount of controversy with which Ramist thinking was first greeted, it is not itself a polemical system. The Ramists do not suppose that their necessary axioms are to be the subject of debate. The Ramist syllogism could presumably be of some use in detailed demonstration, but it is less flexible than its Aristotelian counterpart. And method as the Ramists understand it is a static device. Once the guests at Temple's banquet are seated, they stay put and keep their mouths shut. The axioms are ranked in such a way that the mind can absorb them easily, but never presented so that there is a choice between them. There is no provision for the possibility that certain given information might be explained by more than one theory. In fact there are no theories in Ramist logic, because the concept of hypothesis is itself based on conditional kinds of truth in which the Ramists have no interest. Ramism is a closed circle in that it provides

systems for the arrangement of received truth, but nothing for the exploration of new areas of knowledge or even for the modification of the established arts. Although Milton seems to have accepted Ramist logic as a whole, he may also have been aware of its radical inconsistency with the aggressive heuristic appropriate to theological investigation and described in, for example, the Areopagitica. This may help to explain why Milton departed from the orthodox Ramist presentation at several points to insert material from Keckermann.

Bartholomew Keckermann was a remarkably prolific writer, who produced substantial works on different subjects raised in the Aristotelian canon before dying at thirty-eight. He was a Calvinist, and he held various academic posts in Germany, including a professorship of Hebrew.[70] An eighteenth-century historian of philosophy identifies Keckermann as one of the syncretists, or as a philosophos mixtos who "seiner besonders beliebten Methode die Aristotelische Philosophie nach Rameischer Ordnung vorgetragen hat."[71] There is, however, little evidence for

[70] For brief biographies of Keckermann, see [Joh. Heinrich Zedler, et al.] "Keckermann . . . ," Grosses Vollstandiges Universal Lexicon . . . , 64 vols. (Halle und Leipzig: Verlegts Johann Heinrich Zedler, 1737), XV, c. 373-374; Jacob Brucker, Kurzer Fragen aus der Philosophischer Historie, 7 vols. (Ulm: Daniel Bartholomai und Sohn, 1735), VI, 1291-1293; [Pierre] Bayle, "Keckerman (Barthelemi)," Dictionnaire Historique et Critique [4 vols.] (Rotterdam: Reihier Leers, 1697), Tome second, Première Partie, H--O, p. 229.

[71] Brucker, p. 1292.

this in the Systema Logicae, in which Ramus is never mentioned by name. Richardson attacks Keckermann frequently, and Milton remarks that Keckermann "is usually rather unfair to Peter Ramus."[72] This unfairness seems to have consisted of a lofty refusal to take Ramus very seriously. Keckermann does insert a brief discussion of dichotomies, a favorite characteristic of Ramist logic, in which he asserts that dichotomies are not always the most natural and accessible way of presenting information, but instead can lead to the unnecessary and confusing multiplication of categories. (This difficulty can be best understood visually. A bracket diagram, representing method, that has only two branches at every fork would stretch much further horizontally than a diagram with the same number of items allowing forks of three or more branches when convenient. It may be the endless extension of brackets that Keckermann has in mind when he speaks of a "processus in infinitum."[73]) But the discussion is not very polemical, and does not occupy a prominent place in the work.

Keckermann shares with the Ramists a broadly humanistic approach to the subject. Like Downame in particular, he tends to go back to the classical logic texts and to quote Aristotle authoritatively. The Ramists draw on literary sources, Virgil, Cicero, and Ovid remarkably, for

[72] Gilbert, p. 431.

[73] Keckermann, pp. 246-48.

illustration and occasionally for precept; Keckermann shows a wide knowledge of Renaissance writings on his subject, and has no particular love for the scholastics. He strives to present his material in a usable, even lively format, and stresses early in the work that the application of logic in actual argument is more important than the abstract study of its forms.[74] Certainly the work is too long in comparison with Seton's briefer manual, which presents most of the same material and indeed (with Carter's notes) presents it twice over. But Keckermann is not randomly prolix. He makes use of his own canon on method, "Omne praeceptum sit Definitio, Divisio, & Canon."[75] The "divisio" provides the structure of the work, corresponding to the axiomatic framework in Ramist discourse. Each book, each section, and each chapter is rationally subdivided. Divisions of subject categories are given in bold type, as are definitions, the smallest formal unit of a discussion. Parallel to the definitions are the canons, which state generally the conditions which apply to a given definition, and under the canons, which are numbered for the sake of reference, is Keckermann's discussion.

[74] Keckermann, pp. 32-35.

[75] Keckermann, p. 587. The rest of this "canon" is as follows: "Qui solis Definitionibus & Divisionib. Disciplinas tradunt, pessime consulunt discentium ingenio ac iudicio: Regulis enim & canonibus (quos illi omittunt) ingenium hominis plus alitur, & iudicium informatur expeditoris quam Definitionibus & Diuisionibus, secūdum vetus illud & sapiens dictum. Vniversalia Regulis singularia experientia iudicantur." This may also be an implicit criticism of the Ramists.

Keckermann is almost always clear and reasonably interesting, but the structure of the work, which is different from a modern discursive exposition, induces him to treat very similar topics fully in more than one place. Like the Ramists, he seems to think of the parts of his subject as all simultaneously present to the mind of the reader. This is demonstrated in the series of tables appended to the 1613 edition, which constitutes one large synopsis libri in which every subject treated in the book finds its place.

The exposition is arranged in the same general order as the Ramist texts, except that three major levels of complexity are separately recognized and discussed: predication, proposition (cf. Ramist axioms), and discourse (dianoia).[76] Predication is the most important of the three, as it is through the predicaments that the congruence of a statement (vox) with a thing (res) can be tested. Keckermann's term vox might more clearly be translated as "vocable" than as "word."[77] The science that specifically treats

[76] Keckermann, pp.)( )(3r-)( )(4r.

[77] See Keckermann's detailed discussion of vox, pp. 8-13. "Sed vox est sonis animalis respirantis, factus per aerem ex pulmonu spiratione ad laryngis cartilagines allisum: vt iterum ex Aristotele colligitur 2. De anim. cap.87. & 9. Et haec quidem iterum duplex est; articulata & inarticulata: inarticulata est, quae scribi non potest, seu quae editur ab animali, qua animal, in significatione affectus alicuius vt est boatus, garritus, grunnitus, crocitatio, latratus: item soni, qui in gemitu, in risu, eduntur; articulata est, quae scribi potest, quaeque adeo editur ab homine, qua homo est, ad significandos conceptus animae rationalis." See also the chapter, "De propositionis constitutione," pp. 298-315, but particularly the discussion of the noun, pp. 305-10. An

"vocem qua vox" is Grammar.[78] But even within logic, it is possible to understand a logical relationship with respect either to the word or to the thing. The first part of Keckermann's work deals with the predicaments "abstractly considered," as it might be phrased today--an extended discussion of the voci genus, species, individual, difference, substance, quantity, quality, action, passion, relation, cause (efficient, material, formal, and final), "caussato," subject, accident, whole and part (known to the Ramists as the argument distribution), and "external terms." Having stated the predicaments abstractly, it still remains for Keckermann to show how they may be related to res, and much of the rest of the work is devoted to this second task. The Ramists pragmatically ignore the fine distinction between res and vox, which of course shortens their "ὅδος."

Keckermann divides the act of predication into "resoluens" or "conferens." A conferring predication may consist of a distinction, a similitude, an opposition--generally, of devices which are not useful to the most formal logic. The resolving predication may be a division (again, a distribution in Ramist terms) or a definition, and the definition may be perfect or imperfect; in the latter case it is more properly

---

example of faulty predication demonstrates concisely Keckermann's understanding of the vox-res distinction: "Mus est monosyllabum; Mus rodit caseum; [E]rgo Monosyllabu rodit caseum." Keckermann, p. 420.

[78] Keckermann, pp. 206-07.

description. The perfect definition is absolutely essential to higher logical structures, as it embodies the irrefutable predication.[79] It has already been stated that definition is one of the three statement forms which Keckermann considers essential to method. In an imperfect world--or, better, in an imperfectly understood world--the definition is as close as one can get to a useful concept.

There are five canons of the perfect definition:

> 1. Omne definitum perfectae definitionis, sit per se ac directe in rerum ordine praedicamentali.
> 2. Omne quod perfecte definitur, est species.
> 3. Definitio informetur verbis propriis, perspicuis & determinatis; i.e., ab omni ambiguitate liberis.
> 4. Definitio sit reciproca & adaequata suo definito.
> 5. Definitio essentialis constet ex simpliciter prioribus notioribus atque adeo in demonstralibus.[80]

Keckermann gives several classical definitions of definition before discussing its canons, but it is only through the canons that one can usefully construct a valid definition. The first canon, he explains, lays it down that whatever is to be defined must be understandable in terms of the predicaments, for as Aristotle says, non cuiuslibet rei quaerenda definitio. Therefore ambiguities cannot be defined, nor nonbeings or privations (i.e., sin), nor concretes, nor incompletes, nor first matter: nor indeed infinite being, "videlicet Deum." He quote Dion on the "triple way" of understanding--via eminentiae, negationis,

[79] Keckermann, p. 229.

[80] Keckermann, pp. 226-31.

& causalitatis; but it would perhaps be easier to sum up this canon by saying that one should not try to define anything that poses complex metaphysical problems.

His note to the second canon adds to it the important information that "species" includes the concept genus, so that the canon demands a complete inspection of the location in the genus and species hierarchy of the thing to be defined; it also excludes from definition any individual thing or any highest genus that does not itself fall under a superior or include an inferior category. Later in the chapter, in a metaphorical discussion of the interrelationship of the genera, he speaks of a via descending and ascending, "quae via homini est accommodatissima,"[81] and Seton

[81] Keckermann, pp. 232-33: "Traditur ab Arist. in citato cap. 2. Post. t. 69. ad 82. duplex via inuestigandae differentiae, quarum altera est διαρετική, seu diuisiua, Socrati & Platoni probata: altera, συνθετική, seu compositiua; quae si recte intelligatur, nulla est alia quam quae in aphorisme traditur, mētalis nimirum lustratio tabulae predicamentalis Substantiarum, & consideratio quid à latere cuique generi adhaereat, ita vt tandem exclusa differentia speciei oppositae (quae exclusio naturali rationis ductu fieri potest) retineantur propositae nostrae speciei propria. Sicut autem via diuisiua à superiori dēscedit ad inferius; ita compositiua, quam Arist. amplectitur, ab inferioribus ascendit ad superiora; hoc processu, vt cōsideratio propositae speciei definiēdae indiuiduis videamus quid illis omnibus **communiter insit, in quo vel cum aliis** conveniant, vel ab aliis diversae speciei indiuiduis discrepant, tandemque, reiecto eo in quo discrepant, retineatur id, quod illis, est commune, & quidem solis, atq: hoc habeatur differentiae loco: cui affinis est processus, qui sit à propriis accidentibus in sensus incurrentibus ad efficientem seu formā, à qua fluunt; quae via homini est accomodatissima; utpote qui a sensibus intelligendi principia ducit, ita vt essentiam cuiusq; rei non per se ipsam cognoscat, sed per eius effectus, qui sensibus ingeruntur;

describes how boys are taught to go up and down the interlocked categories: Cicero, homo, animal, viuens, corpus, substantia; substantia, corpus, compositum, viuens, animal, brutum terrestre, gressibile, quadrupes, equus, Bucephalus.[82] This framework seems to have been assumed as we assume a knowledge of simple syntax in teaching a language. The third canon warns against careless use of language and against metaphor in defining. "Nec tamen ita rigide interpretandus canon est."[83]

The fourth canon is particularly important, as it makes three points (formally, five) important to the understanding of predication. The first point is that the definition must be καθόλου, that is, "non restricta & limitata certis conditionibus aut circumstantiis singularibus;" if a logician seeks an accident for his definition, for example, he would do better to use a proper accident, which would be "reciprocal with the subject of a certain species," than a common accident, which would be "commonly and contingently present to diverse species."[84] This first point refers to

---

imo cum certum sit hominem internas rerum formas perfecte non cognoscere; ideo loco differentiarum seu formarum propria accidentia, tanquam scilicet sensibut vicinora, in definitione sumimus. Vnde Philosophus I, De anima, text I, Accidetia, inquit, propria maximum momentum conferut ad cognoscendum quid est. Sic nempe in maxime periculo sumus, ne pro definitionibus substantiarum accuratis & perfectis, meras descriptiones habeamus, longe feliciores circa essentiam & definitionem accidentium futuri."

[82] Seton, C7^{v}.

[83] Keckermann, p. 228.

[84] Keckermann, pp. 180 and 185. The difficulties

the second canon. The second point is that the thing defined should not be "angustior" or "laterior" than the definition, that (quoting Damascenus), Perfectio definitionis est in recipricatione; sanitas in eo, ne quid desit, ne quid redundet. This seems to mean that a definition should be congruent with a genus, as well as appropriate to each individual within it. Third, the definition should be so designed "ne quod in generis definitione sumptu est, resumatur in definitione speciei." The reader may wish to compare this canon with the Ramist discussion of necessary truth.

---

involved in this distinction should not be glossed over. A perfect proper accident has three canons: "1. Subjectum sive contradictione non potest concipi sub negatione proprii perfecti . . . 2. Impossibile est propria perfecta vel ad momentum temporis suis subiectis separari. . . . 3. Perfecta propria primo insunt vniuersalib." Keckermann, pp. 183-84. To take the last point first, it is better in Keckermann's example to predicate risibility of the species man than of Peter. The distinction between a perfect and imperfect proper accident elucidates the second canon: risibility may always be predicated of man, but actual laughter only occurs sometimes, although each time in man and nowhere else. The first canon means that the subject cannot even be understood without the aid of the particular accident--as, man cannot be properly understood without perceiving his characteristic accident of risibility. On the other hand, common accidents may be removed without damaging the understanding of the subject--Keckermann quotes an example from Porphyry, Potest intelligi coruus albus sine interitu subiecti. The canons for the perfect proper accident would seem to provide a tough test for a καθόλου prediction. As Keckermann says in discussing reciprocity, "Axioma est Logicum pene tam manifestum naturae, vt illud: bis quatuor esse octo; . . ." In terms of the pragmatic validity of definitions, this would seem to be true. But all predications must in the first instance be made of individuals. If a white crow is still a crow, then a crow cannot be identified as a black bird, although one could still say that it was nigribile. The authority for the hypothesis that a given crow is black is statistical only. "De Accidente Proprio & Communi," Keckermann, pp. 178-87.

The final canon is cognitive: the definition should consist of "quid nobis sit notius . . . quid natura prius & secundum essentialem rerum ordinem notius." This suggests that a successful definition would have an internal order agreeable to the "rules" of method. It unfortunately cannot be said that Keckermann has given attention to the concept "nature," at least within the confines of this work; the Systema Logicae does not include a psychology. But it is possible to rank, or at least to classify, the information arranged in a definition, and thereby presumptively to distinguish different modes of knowledge. A distinction or a "differentia" between two things may occur with respect to substance or to accidents. A differentia in substance has to do with the place of the definitum in the structure of genera and species; it may be considered a fork in the via. A differentia in accident, although both useful and valid, is understood in relation to individually known objects. Keckermann quotes Aristotle to the effect that a definition through Accident consists of form and matter; the form indeed is genus, but the matter is merely subject.[85] The knowledge of common experience, of course, would tend towards the understanding of subject. Of the two propositions, "the man laughs," and "Man is risible," the first applies to a subject, or by persistent induction, to subjects; the second applies to a genus. The

[85] Keckermann, p. 233.

validity of the reasoning, "A man laughs; ergo Man is risible," is nowhere proved, but Keckermann does confess that induction is the only road to understanding of some general truths--"Impossibile est universalia contemplari sine inductione."[86]

Comparison between the Aristotelian predicament and the Ramist argument is exceedingly difficult. Both are dangerously unexamined concepts. The central role of genus and species, however- is conspicuously absent in the Ramist system. Definition through genus and species makes the definitum (Ramist "subject") understood in relation to other definita, whereas definition through accident in the Aristotelian system, or through argument in the Ramist system, makes the definitum understood through other arguments ("modo quodam"). This is made clear by Temple in his discussion of arguments, in which he shows how one argument is used to define another--cause declares and argues an effect, genus demonstrates and proves species,[87] subject has a "mutual

[86] Keckermann, pp. 452-53. The important material on definition is on pages 224-38, and has been followed and quoted passim in the above discussion.

On the point of perceptual accessibility, see also Seton, C2^{V}: "Regula: Proprium secundum intellectum primò convenit speciei secundùm nostram cognitionem, primùm convenit individuis: nam nostra cognitio oritur ex sensibus extremis.

"Accidentia primùm convenirint indiuiduis, quia haec sensibus extremis proxima sunt.

"Omne superius in eodem ordine praedicamenti est genus inferioris, secundum inventionem."

[87] A Ramist would make no theoretical distinction between "genus and species" and the other arguments.

affection" to an adjunct, definition with the defined thing, and so on.[88] This is, partly, the traditional Ramist love of dichotomies, but it must be confessed that the Aristotelian predicaments work in rather a similar manner. They tend to be paired concepts (quantity-quality; action-passion; cause-"caussato"; subject-accident) which suggest parallel predications. Action: The man wears a hat; Passion: The hat is worn: Efficient cause: The man makes a hat; Caussato: The hat is something made by a man, etc. The advantage of the Aristotelian system is that its insistence on more elaborate canons--in effect, higher standards--in predication force the logician to use the predicaments more systematically. A definition that does not establish the definitum in the hierarchy of genera may be useful, but it must be considered imperfect, and is subject to certain ambiguities. The definition "a flat object designed to catch the sunlight," for example, applies equally to a leaf or a parasol. The definition could be patched up by inserting other predicaments--"a living green flat object designed to catch the sun"--but it would be more fruitful to think about the distinction between artifacts and living organs, both of which may be teleological, but in radically different ways. The Aristotelian system is much more conscientious on this point.

It does not seem necessary to reproduce here in detail

[88] Temple, pp. 12-14.

Keckermann's propositional and syllogistic machinery. Milton's borrowings from this part of the Systema have already been discussed, and the use of Aristotelian deduction is adequately explained in a number of modern logic texts.[89] The most important distinction between Keckermann's system and the Ramists' lies in the detailed relationships between apparently different axioms which may be demonstrated to be equivalent by aequippolence or by conversion.[90] In the Aristotelian system, a properly stated proposition immediately implies a number of similar propositions which have the same truth value.[91] As these propositions may differ in quantity or order of terms from the original proposition, they may be used in syllogisms of diverse forms, and therefore conduce to the connection of one syllogism to another in longer and more complex deductive discourse. The conclusion of a syllogism is itself a proposition, and it or its aequippolent or its convertant may act as a premise in

[89] See above, pp.15-18 . For an example of modern treatment of this material, see Irving M. Copi, Introduction to Logic, 2nd ed. (New York: The Macmillan Co., [1961]), pp. 133-54 and 168-74.

[90] Keckermann, "De propositionum aequipollentia," pp. 342-47; "De Conuersione," pp. 347-54. See Gilbert, pp. 334-39 for Milton's treatment, apparently following Keckermann.

[91] Some examples from Keckermann: If the proposition "Not every man is elect" is true, then the proposition "A certain man is not elect" is true by aequippolence. If the proposition "No man is a stone" is true, then "No stone is a man" is true by conversion.

another syllogism.[92] Further, as aequippolence and conversion provide systematic comparisons between propositions, so may the syllogisms which they constitute be compared as wholes. Keckermann recognizes three figures, or classes of syllogisms, containing respectively four, four, and six modes, of individual syllogistic forms. These syllogisms are all valid, but the modes of the second and third figures can be shown to be equivalent in value to the four modes of the first figure; this demonstration is known as "reduction."[93] Keckermann gives complex, but clear and useful directions for working out these equivalents.[94] As in the Ramist system, three quantities of proposition, universal, particular, and singular, are recognized.[95] The three figures include all the significant permutations of modes constructed from universal and particular propositions. A syllogism from singular propositions is also possible, but Keckermann does not assign these to a figure.[96]

[92] Keckermann, pp. 422-25.

[93] Keckermann, pp. 410-15.

[94] Keckermann, pp. 430-37. The rules of reduction are embodied in the famous mnemonic verses, "Barbara, Celarent, Darii, Ferioque. . . ." Each of these "words" schematically represents one of the modes, encoded according to the quantity of its propositions and their interrelationships.

[95] Milton's terms are general, particular, and proper.

[96] Keckermann's example: Judas is not saved: Judas is an apostle; therefore, not every apostle is saved. It could be argued, however, that the conclusion, "Non omnis

It is possible to join syllogisms in the Ramist system, for example in a sorites, but this seems to be an unusual procedure, and the Ramists do not provide any theoretical justification for it. In Aristotelian deduction, however, the extension of knowledge by the valid multiplication of propositions is expected. This is clear in Keckermann's definitions of discourse:

> Discursus est actus mentis humanae a noto ad ignotum, priorum & posteriorum congrua collatione sese promouentis.
> Estque vel inferens, vel ordinans.
> Discursus inferens, est actio mentis humanae ex certis praemissis propositionibus aliam propositionem probantis, vel improbantis admuniculo praeceptorum Syllogismi.[97]

It is also clear in his discussion of the Aristotelian dictum, Ex veris nihil, nisi verum: ex falsis autem interdum verum. The second clause is only realized in peculiar cases.[98] But the optimism of the comment is more significant than its literal application. Used properly, discourse should be true; if its initial premises are true, and if the rules of logic are followed, the conclusions will also be true. The Ramists do not explicitly deny this, but their logic does not seem to be designed for the generation of new propositions. They see

---

Apostolus est salvatus," is only grammatically singular. Keckermann, p. 413.

[97] Keckermann, pp. 396-97.

[98] Keckermann, p. 422. His example of truth from the false: Every stone is animal, every man is a stone; therefore every man is animal.

logic as primarily a guide through the established terrain of the liberal arts, and the syllogism as a staff to help the logician over the rough spots. The Aristotelians, however, seek certainty rather than clarity. The Ramist interest in necessary truth must be evaluated in the light of the relatively restricted opportunities for change and expansion which they are prepared to accept.

Keckermann claims broadly that the syllogism "regitur principiis humanae menti insitis."[99] But perhaps Milton was impressed by his claim; at any rate, he employs the same two basic principles in explaining how the syllogism works.[100] Keckermann's treatment is more thorough, however, in that he attempts to apply standards of demonstration to the principles, rather than to lay them down as obiter dicta. He shows not only that they work, but why they should work. The first principle is the Dictum of All and Nothing: whatever is stated or denied about a universal must be stated or denied by particulars contained under it. To revert briefly to Seton's example, if it is true that animal is mortal, it follows that irrational creatures (brutum), creatures who live on the ground (terrestre), stepping creatures, (gressibile), four-footed (quadrupes), horses, and Bucephalus also are mortal.[101] The validity of this

[99] Keckermann, p. 415.

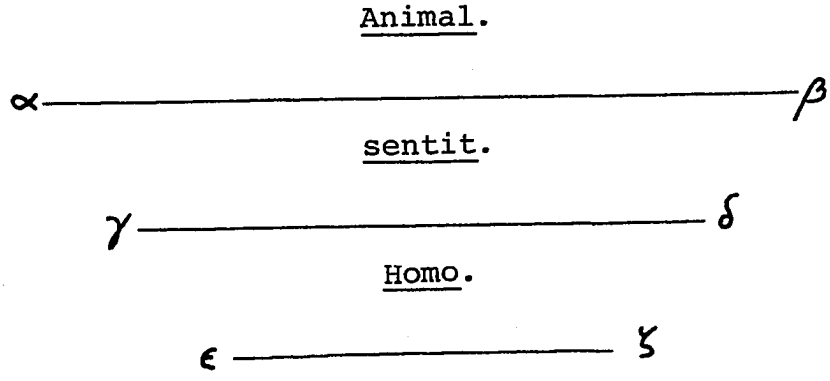
[100] See supra, pp. 17-18, and notes.

[101] See Seton's example, supra, p. 46.

assumption is most easily demonstrated graphically. It is clearest in a syllogism in the mode Barbara, the first and most perfect of the modes. Barbara consists of three universal, positive propositions:

> Omne animal sentit;
> Omnis homo est animal:
> Ergo omnis homo sentit.[102]

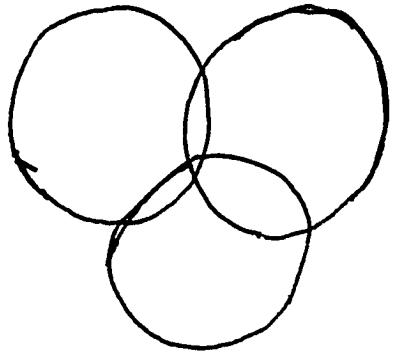
In his discussion of the characteristics of the first figure, Keckermann diagrams this syllogism as follows:



A modern textbook, on the other hand, would represent this syllogism with a Venn diagram:[103]

[102] Keckermann, p. 411.

[103] The Keckermann diagram is reproduced accurately, although it seems to suggest that "sentit" is the middle term of the syllogism--i.e., the term that appears in both premises, but not in the conclusion. In fact "animal" is the middle term, and this is reflected in the second diagram. For Copi's discussion of Venn diagrams, see pp. 159-67, and 176-87; the example of a diagrammed syllogism analogous to Barbara is on p. 179. The Venn diagram is mentioned briefly as a byproduct of the development of Boolean algebra on pp. 420-21 of William Kneale and Martha Kneale, The Development of Logic (Oxford: The Clarendon Press, 1962). See Richardson, p. 268, for another approach to a graphic representation of the syllogism.



(After Copi, p. 179)

The principle in the two diagrams is the same. Every individual case of Homo must share the characteristics of the larger categories in which it is included. The Dictum of All and Nothing is the principle which makes possible the "via accommodatissima."[104]

"[A]lterum vero principiū ex Mathematicis disciplinis (vnde multa praecepta Logica nata sunt) ad doctrinam de Syllogismo recte accomodatur; . . ."[105] The reference to mathematics is a good indication of the standards of certainty which Keckermann has in mind. The second principle establishes the concept of equality: if two things are equal to a third thing, they are equal to each other. Keckermann's example is an architect who compares two columns individually to a third column; finding that they are

[104] Keckermann, "Proprietates Speciales primae Figurae," pp. 425-30.

[105] Keckermann, p. 416.

both the same as the third column, he concludes that they are equal to each other.[106] In a syllogism, the third column is the middle term, or medium. In the example above the middle term is "animal"; it does not appear in the conclusion, but its relationships to the terms of sentience and man make the syllogism possible. The relationships are expressed in propositions, and the validity of the propositions depends on the standards of predication. It is this principle of equality, therefore, which explains the insistence upon a thorough and careful study of predication. At the syllogistic level, the choice of a middle term must follow standards as rigorous as the drafting of a definition. This rigor prevents the syllogism from becoming a merely theoretical exercise in the mechanical manipulation of terms. The predicaments are of course not theoretically irreproachable as an exhaustive catalogue of the ways in which the world may be perceived. But they are reasonably well adapted for identifying syllogistic terms. Keckermann devotes several chapters to the different kinds of middle terms, which, as they derive from predication, follow the predicaments in name and nature.[107]

It wouldnot be desirable to overemphasize the distinction between Keckermann and the Ramists on detailed

[106] Keckermann, p. 416.

[107] Keckermann, pp. 501-42.

syllogistic theory. The detailed system leading up to the necessary syllogism is well worked out, but in this discussion it has been excerpted from a larger mass of material dealing with contingent syllogisms, testimony, inexact and imperfect types of predication, and so on. Like the Ramists, Keckermann is concerned to present the complete survey of the possible modes of discourse. It is true that he ushers in the discussion of science, and relevantly of the necessary proposition, with considerable éclat.[108] But this interest should be weighed with Keckermann's general definition of logic in mind: ars rigendi mentem in cognitione rerum[109]--the art of stiffening the mind in the understanding of things. Logic is the indagatrix rather than the ancilla of the arts.[110] Certainty is not always possible, but some intellectual activity always is, and logic must account for it, whatever its quality.

[108] Keckermann, pp. 501-02.

[109] Keckermann, p. 1.

[110] Keckermann, p. 471.

CHAPTER II

MILTON'S USE OF RAMIST METHOD IN THE ACCEDENCE COMMENC'T GRAMMAR AND IN THE DE DOCTRINA CHRISTIANA

The importance of method in Milton's Ramist work is underlined by the fact that in ordinary exposition predication and dianoia do not play a central role. Both are useful only in the most careful and rigorous polemical analysis and neither the Accedence Commenc't Grammar nor the De Doctrina Christiana (in most passages) calls for this. Moreover, although Milton's use of method is occasionally elided or simplified, these modifications have no apparent theoretical point. He has simply modified his commitment to method with a healthy pragmatism.[1] These considerations have conspired to make it easy to overlook Milton's Ramism, or to conclude, as does P. Albert Duhamel, that Milton's Ramism does not extend beyond the Artis Logicae.[2]

Duhamel interprets the textual and circumstantial evidence in the light of the assumption that Milton, as a humanist, could not have been attracted by the mechanical and

[1] See the example of a conscious digression from method, cited p. 88, infra.

[2] "Milton's Alleged Ramism," PMLA, XVII (1952), 1035-53.

repetitious aspects of Ramism. The Ramists, he contends, preferred to assume that epistemological problems were relatively simple. Ramus felt that truth was accessible "by spontaneous and untutored acts." Therefore, ". . . for Ramus the intellect is a much simpler instrument than for Aristotle . . . . This easy kind of logical optimism made profound epistemological assumptions which seem to have escaped the Ramists."[3] Duhamel concludes that these attitudes would have been unacceptable to Milton, who was a man of broad intellectual interests, and would have rejected Ramist simplicities out of hand.

Intellectual complacency and self-sufficiency is, admittedly, a possible extrapolation of the Ramist system, and the narrow Ramist theses composed throughout Harvard's first century show some of the dangers of a careless applicataon of Ramist principles. It does not of course follow that Milton would have endorsed the Harvard practice. Duhamel quotes further from the Artis Logicae to establish Milton's logical humanism:

> For as the form and end of logic is not so much the methodical arrangement of logical precepts as it is good debating itself, . . . so in the genus not merely the arrangement of precepts but the actual teaching of a useful theory is at once the form and the end of an art.[4]

[3] Duhamel, pp. 1036-38. This tendency is also noted by Perry Miller, The New England Mind: the Seventeenth Century (New York: Macmillan, 1947), pp. 148-152, et passim.

[4] Duhamel, p. 1040, n. 13. See preface, supra, on "form."

The quoted principle suggests only that discourse is ideally so designed that its purpose ("end") and its observable nature ("form") are the same--as Duhamel indicates, an exciting idea. But its implication for the logician is primarily that he not become blindly devoted to any particular device or practice, and Milton seems to have retained a mature reserve towards the Ramist devices he uses. His pragmatic reshaping of method for two otherwise disparate works on grammar and theology is evidence of this. Milton's humanism per se, assuming that it can be so isolated, need not have inclined him towards any particular logic system, but rather would have encouraged the tolerant search for new positions reflected in the Artis Logicae.

Duhamel attempts further to discriminate between Milton's practice and the Ramist on technical grounds, but his examination is not satisfactory. He attempts to show that Milton used the Aristotelian rather than the Ramist syllogism, ignoring the implications of his own quotation, which suggests that Milton prefers to conceal the details of the logical structures he uses.[5] This being so, Milton might use

[5] Duhamel, pp. 1045-53. Duhamel is, generally, unsatisfying on Ramist technicalities. His most serious error is to read "argument" in its modern sense of "polemic," rather than the Ramist sense of "predication." He then attempts to draw a distinction between Milton and the Ramists on the basis of their different understandings of what an "argument" is, but he merely produces a string of solecisms. (Duhamel, pp. 1038, 1041-42, 1043.) On the question of forms of syllogism, he refers to the minor premise as the "middle term," and his first example would not be included in the three figures of the syllogism, as its second proposition, "But the

either Ramist or Aristotelian devices (which are not always radically different) without leaving any clear evidence of which in his text.

In more general terms, Duhamel's objection is based on incompatible definitions of Ramism and humanism which were not necessarily Milton's. His assertion that Milton was not a Ramist cannot stand. But his article does serve to draw attention to method, as the aspect of logic which was most complex, flexible, useful, "humanist," and therefore apparent in Milton's work. The smaller devices of logic were for particular occasions and special problems, but were ordinarily only implicit in the discourse; method governed the whole of the work, and was explicit.[6] Once its principles are stated, its use in particular works can be easily demonstrated.

Ramist method attempts to structure exposition in such a way that no effort of attention is necessary in learning; the student masters one simple pattern which he then applies to discourse in whatever subject. He does not have to search for details or infer which direction the writer's mind is taking, because each detail has its proper place and there is

---

law that all men should submit to one man as superior to law overthrows all law," is particular--that is, refers to a unique example.

[6] For an example of Milton's use of Ramist arguments (predications) in Biblical exegesis, see J. H. Hanford and Waldo Hilary Dunn, eds., "De Doctrina Christiana," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols. (New York: Columbia University Press, 1933-34), XIV, 309, 313. Hereafter cited as DDC, with volume and page references to the Columbia edition.

only one direction. The simple pattern is the division of phenomena into two opposing classes. The writer first divides his subject into two large categories (e.g., "Grammar is accidence plus syntax," or "Logic is invention plus disposition.") Each category forms a book. He begins the first book by subdividing the first category into two. ("Accidence is declined or undeclined.") He then discusses the first category at length, if necessary taking its subdivisions in order, and then the second category. When all the relevant categories and subcategories of the first book have been disposed of, the writer begins the second. It is of course conceivable that a work could consist of more than two books, or that any given subdivision could have more than two branches, and this last does happen in Milton's arrangements.

If this description is not immediately clear, the reader may find it helpful to refer to the two examples of "synopses libri" appended to this thesis. The synopsis libri is a printed realization of the pattern which the student internalizes. It is a graphic representation of a spatial model for arranging information. To a user of Ramist method, the synopsis is a more accurate arrangement of information than the text of the book it represents because the synopsis presents data simultaneously, whereas the text does so sequentially. The whole synopsis represents a liberal art. (Grammar and theology are the two present examples.) All the axioms in a liberal art exist simultaneously. They draw their validity not from their position in sequential discourse,

but from their conformity to the three laws of necessity. The arrangement from left to right represents not deductive reasoning, but a hierarchy of the generality of the axioms, with the most general at the left and the least general at the right. In the synopsis the axioms are represented by single nouns or noun phrases, but in the text each is represented by a sentence, or axiom, which in almost all cases is a definition of things or of their categories. The distinction between the things described (e.g., in grammar, letters, sounds, words) and the axioms which describe them is blurred, and both are uncritically treated as substantives.[7]

The rules governing the construction of a synopsis libri, or the composition of a text according to method, have not been very clearly formulated by the Cambridge Ramists. The following list of five directives has been composed by the prsent writer on the basis of a close examination of several Ramist texts. The directives may be used to construct a synopsis, to compose a text, or to "translate" from one to the other.

(1) All categories of the subject at hand must be conceived as substantives.

(2) Where possible, each subdivision must consist of two polar opposites, which must exhaust all cases of the subdivided category.

(3) All other subdivisions, into however many subcate-

[7] Walter J. Ong, Ramus, Method and the Decay of Dialogue (Cambridge, Mass.: Harvard University Press, 1958), p. 242.

gories, must exhaust all cases of the subdivided category.

(4) No category may be discussed before all its larger supercategories have been defined.

(5) Once a category has been taken up, all its subdivisions must be exhausted before its coordinate category (or categories) may be taken up.

A hypothetical example may make this clearer. Suppose an art to exist in which the following statements are found to conform to the three laws of necessity:

1, a, A, 2, b, c, B, I, d, e, 3, f, 4, g, h

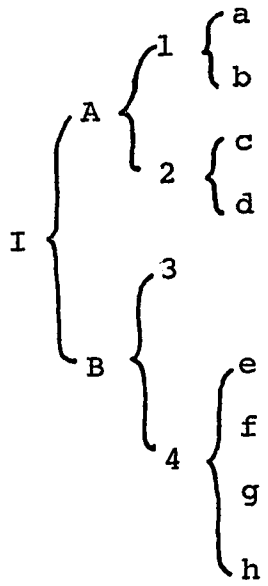
By arbitrarily representing statements with characters, the example assumes directive (1). The logician first classifies statements according to generality:

I, A, B, 1, 2, 3, 4, a, b, c, d, e, f, g, h

As in the final synopsis, the more general axioms are to the left, the least general to the right. Mindful of directive (2), the logician establishes dichotomies wherever possible:

A--B; 1--2; 3--4; a--b; c--d

For the sake of example, the axioms e, f, g, and h are assumed to be incapable of dichotomy. The logician then applies directives (2) and (3) to create the following synopsis:



(2) and (3) collectively assume that, if the logician has done his work properly, no further axiom (e.g., "5", or "C") is possible or necessary. Directives (4) and (5) govern the order in which the accompanying text would be written, which would be as follows:

I, A, 1, a, b, 2, c, d, B, 3, 4, 3, f, g, h

In a sense the order is nonfunctional; B could be discussed before A or 4 before 3. But if B came before A, then 3, 4, e, f, g, and h would also have to precede A.

The modern reader may find it difficult to take such arbitrary arrangements seriously, or to believe that they sufficed for the organization of serious works of scholarship. In fact the axioms represented only the skeleton of the work. Milton's De Doctrina Christiana exemplifies the use of this skeleton to organize long passages of standard exposition, some of which are complex and not particularly

Ramist in their internal arrangement. Another consideration is that a very great number of subdivisions is possible, particularly if the polarity principle (2) is widely applied. Mathematical readers will recall that continued doubling of a base figure, even of one, produces large numbers very quickly.

A few simple typographical and textual innovations helped the Renaissance reader through the text. Axioms were set in italics to distinguish them from the general discussion. Transitions were marked by the formula, "Hitherto of A, now of B," which in the hypothetical example on page 66, would be inserted between d and B in the text, as d would be the last word on A. And the synopsis itself (which Milton, unfortunately, did not supply for his Ramist works) would be of some assistance. These innovations were made easier by the invention of type, and they may represent some of the experiment which, in Ong's theory, surrounds a new medium.[8] Eventually, the problems to which method was one solution were further resolved by the table of contents and the index. Like the synopsis libri, these are graphic devices for organizing levels of attention and for enabling the reader to locate information in the body of a text. They are, however, more reflective of the inductive or deductive sequences

[8] See Ong, pp. 78-79, 313. See also Walter J. Ong, The Presence of the Word: Some Prolegomena for Cultural and Religious History (New Haven: Yale University Press, 1967), passim.

of modern expository writing. The modern writer relies on his intuitive understanding of dramatic timing, and on his assessment of a hypothetical reader's attention span, to arrange his subject artistically. A Ramist writer, following method, had a preset solution to the problem. Books written according to method are of course much more uniform than a given selection of modern works on a single subject would be.

Duhamel's question might well be restated in this context: would Milton have found the discipline of method congenial? Milton submits to the discipline, although some readers might feel that he is not always comfortable with it. There are, however, some positive aesthetic considerations. The patterns of methodical exposition have some of the predictable complexity that is associated with the baroque in graphic arts and in music. A complete Ramist work evokes some of the feelings about universal rankings and plenitude evoked by E. M. W. Tillyard, who draws on Milton's writings, in The Elizabethan World Picture.[9] Perhaps the sense of completeness and certainty were as important to Milton's sensibility as the sense of disorientation and doubt are to the modern. It is, at any rate, possible to demonstrate the detailed use of method in Accedence Commenc't Grammar and De Doctrina Christiana.

[9] ([Harmondsworth, Middlesex]: Penguin Books, [1963]).

Discussion of the Accedence Commenc't Grammar[10] is somewhat beclouded by the book's anomalous position in Milton's biography. The book was published late in Milton's life, but it is difficult to say when it was composed.[11] Masson suggests that "there can be little doubt that the substance of the thing had been lying among Milton's manuscripts since the days of his pedagogy in Aldersgate Street and Barbican, when the possibility of a far swifter attainment of the Latin tongue than by the ordinary school methods was one of his favourite ideas."[12] But there is an accidental quibble in "the substance" as a textual analysis shows that the Grammar was specifically indebted to the popular Lily's Grammar (here referred to by its title, "A Short Introduction of Grammar . . .") and to Alexander Gill's extended essay on English grammar, the Logonomia Anglica.[13] Masson's

[10] George Philip Krapp, ed., "Accedence Commenc't Grammar," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols. (New York: Columbia University Press, 1932), VI, 285-333.

[11] See David Masson, The Life of John Milton . . ., 6 vols. (New York: Peter Smith, 1946), VI, 640-641, and William Riley Parker, Milton: A Biography, 2 vols. (Oxford: The Clarendon Press, [1968]), I, 294-5; 609; II 920-921; 1128-1129.

[12] Masson, VI, 640.

[13] [William Lily,] A Short Introduction of Grammar Generally to be used: . . . (Cambridge: Cantrell Legge, Printer to the Universitie, 1621).

Otto L. Jiriczik, ed., "Alexander Gill's Logonomia Anglica," Quellen und Forschungen . . . (Strassburg: Karl J. Trubner, 1903), Vol. 90.

For textual details, see Appendix C, infra. For Milton's early exposure to Lily and Gill, see Donald Leman Clark, John Milton at St. Paul's School: . . . (Hamden, Conn.: Archon Books, 1964), pp. 69-75, 132-142.

speculation suggests that Milton sat down to the Short Introduction when he was actively interested in teaching, composed his Grammar from it, and then put the manuscript away for nearly a generation, after which he published it as a significant innovation. The textual borrowings from the Short Introduction and from Gill argue an early date of composition. Milton must have known both works fairly well, so that he could turn easily to the appropriate passage for translation or transcription. It would have been difficult for Milton to select passages for transcription to the extent that he has if he were blind when he did the work. In many cases he has reassembled and slightly recast longer passages, or interpolated verbatim transcriptions into his own discussion. Milton would have had to refer constantly to the Short Introduction and the Logonomia, a tedious job under most circumstances, and very time-consuming if accomplished through an amanuensis. Whatever the history of the manuscript, its quality indicates that it was brought to the printer under some kind of pressure, if only a mild public demand for Miltoniana or Milton's ambition to see all his works in print.

Despite William Riley Parker's flattering description,[14] Milton's is not a very good grammar. Like the Artis Logicae, it is at times obscure, and omits much useful material which comes easily to hand in its source. It cuts its quoted examples mercilessly, and leaves the novice to con unusual phrases

[14] Parker, I, 294-295.

(drawn indirectly from classical authors) without context. It is difficult to believe that Milton would have composed the Grammar for use in his own classroom, since a teacher of whatever competence would have found more useful Lily's Short Introduction, available in multiple editions.[15] The Short Introduction is a work in two parts, both covering the same material, the first and shorter in English, the second and longer in Latin. The first section is very simply written and is designed to lead to a reading knowledge of Latin. The second provides more detailed information and examples, and adds sections on prosody and orthography. The book therefore economically serves through several phases of the student's progress, and provides ready reference backwards and forwards. It incidently refutes Milton's implied claim to originality in writing the Grammar in English.

To give Milton his due, however, he states clearly what he has done in his preface, although some attention must be given to the technical terms he uses. The Short Introduction provided him with two alternative formats, an English grammar in two books, or a Latin grammar in four (both formats Ramist[16]), and, in the interests of brevity, Milton assumed that he could present the material of both formats

[15] British Museum Catalogue of Printed Books (London: Trustees of the British Museum, 1962), CXXXVII, columns 652-659. The Catalogue lists sixteen editions between 1608 and 1674: 1626, 1638, 1641, 1641, 1642, 1650 (Charles Hoole), 1651, 1653, 1654, 1657 (Comenius), 1659 (Hoole), 1660, 1665, 1669, 1671, 1672.

[16] See Appendix C, pp. 192-93, and notes 5 and 6, infra.

within the scope of the first. This is manifestly a false assumption because Milton's work is only about a quarter of the length of the complete Short Introduction, but Milton does borrow some material from both formats. Milton's prefatory note raises a major education problem: the length of time it takes an ordinary student to master Latin.

> Which tardy proficience may be attributed to several causes: In particular, the making two labours of one, by learning first the Accedence, then the Grammar in Latin, ere the Language of those Rules be Understood. The only remedy of this, was to joyn both Books into one, and in the English Tongue; whereby the long way is much abbreviated, and the labour of understanding much more easie: A work suppos'd not to have been done formerly; or if done, not as may be found of moment. That of Grammar, touching Letters and Syllables, is omitted, as learnt before, and little different from the English Spelling-book; especially, since few will be perswaded to pronounce Latin otherwise than thir own English. What will not come under Rule, by reason of too much variety in Declension, Gender, or Construction, is also here omitted, least the course and clearness of method be clog'd with Catalogues instead of Rules, or too much interruption between Rule and Rule: which Linaker setting down the various Idiomes of many verbs, was forc't to do by Alphabet; and therefore, though very learned, not thought fit to be read in Schools.[17]

Milton's intention "to joyn both Books into one" is his modulated announcement that he is working from someone else's texts. The two books referred to are most likely the English and Latin versions of the Short Introduction, not the Etymologie and Syntaxis of his own text. The "learning first the Accedence, and the Grammar in Latin" can be taken as a clear reference to the Short Introduction; "Accedence" would refer (slightly inaccurately) to its first part, and

[17] Krapp, VI, 285.

"the Grammar in Latin" to its second. Milton objects, in other words, to having the student first learn elementary Latin in order to master more sophisticated rules of grammar.

Some further question may arise as to Milton's second use of "Grammar," in the clause, "That of Grammar, touching Letters and Syllables, is ommitted, . . ." He may in this case be using the word in the sense employed by his old teacher, Alexander Gill, who applied "grammar" to the first of the four sections in his work, the general title of which is "logonomia."[18] Today this section would probably be entitled "orthography." It deals with the written alphabet and its correct pronunciation. This meaning of "grammar" coheres to Milton's stated intention, in the rest of this sentence, of giving up the attempt to teach a pure Latin pronunciation. On the other hand, it differs from the general definition of "grammar" which begins the Accedence Commenc't Grammar.[19] In three not widely separated places, therefore, Milton seems to give three meanings to this technical term.

Parker speculated that the preface "may or may not have been contemporaneous with the text,"[20] and the possibility that it was not lends some slight support to these admittedly

[18] Jiriczek, pp. 19-40. "Logonomia" means "the science of language." The OED does not recognize any use of it in an English work until the nineteenth century. See The Philological Society, "Logonomy," Oxford English Dictionary (Oxford: Clarendon Press, n. d.), VI, 404, column 1.

[19] Krapp, p. 287, but see p. 75 of text, infra.

[20] Parker, II, 920.

tendentious readings. If the preface were composed hurriedly, at some subsequent date when Milton did not have the substance of the Grammar fresh in his mind, he might have uncritically employed technical vocabulary with different meanings from different sources. At any rate, he does insist that "the course and clearness of method" is a high consideration in this work, perhaps higher than the amount if not the accessibility of the information presented. The clear presentation of "Rule and Rule"--the grammatical equivalent of axioms--is a characteristically Ramist priority. Milton's additions, and to a greater extent his subtractions, are devoted to clarifying and emphasizing the methodical essentials.

The Grammar is a short work, and Milton's additions to the Short Introduction are not substantial. They consist of a series of interpolated transitional paragraphs and general definitions which underline categorical distinctions not made clear in the original. The actual order of presentation is substantially the same in both works, but in the Short Introduction there is no explicit reference to this order. To locate a particular example in the Short Introduction, the student would have to look over the headings of the individual paragraphs. At one point, it is explained that the paradigm for sum is inserted before the paradigms of the deponent verbs because its forms are needed for conjugating deponents.[21] Milton disrupted this sequence, placing the sum paradigm in

[21] [Lily], B7^{r}.

his section on the persons, where it seems to enjoy no particular pedagogic advantage.[22] If this incident means anything, it means that students of the Short Introduction were expected to go through the work in roughly the paginated order, whereas Milton expected his students to reach and use material according to Ramist method.

Milton's basic definitions, drawn substantially from Gill, are as follows:

> Latin Grammar is the Art of right understanding, speaking, or writing Latine, observed from them who have spoken or written it best.
> Grammar hath two parts: Right-wording, usually call'd Etymologie, and right-joyning of words, or Syntaxis.
> Etymologie, or Right-wording, teacheth what belongs to every single word or part of speech.
>
> Now followeth Snytaxis [sic] or Construction, which is the right joyning of these parts together in a sentence.
> Construction consisteth either in the agreement of words together in Number, Gender, Case, and Person, which is call'd Concord; or the governing of one the other in such Case or Mood as is to follow.[23]

The openings of both of Milton's books are quoted in order to show that in Method the two major divisions of an art begin in a sense simultaneously. The word "art" would mean to a Ramist "a subject susceptible to treatment by Method," so that the reader is cued appropriately at the very beginning of the work. The shape of the art, grammar, is a very broad-based pyramid, with a few dichotomies dividing the

[22] Krapp, 305 - 08. See appendix C, pp. **200-03, infra.**

[23] Krapp, 287 and 328.

whole and many divisions in higher multiples to accommodate the clusters of declined forms and irregular numbers of constructions. Milton actually simplifies the number of categories in the Short Introduction, as when he cuts the varieties of adverbs and conjunctions.[24])See the reconstructed synopsis libri, Appendix D.) Most of these categories are so obvious that Milton does not bother to frame axioms for them. He does crystallize a few distinctions:

> Hitherto of Concord or agreement; the other part followeth, which is Governing, whereby one part of Speech is govern'd by another, that is to say, is put in such Case or Mood as the word that governeth or goeth before in construction requireth.
>
> Hitherto of Transitives governing thir Accusative, or other Case, in single and direct Construction: Now of such as may have after them more Cases than one in Construction direct and oblique, that is to say, with an Accusative, a Genitive, Dative, other Accusative, or Ablative.[25]

The first of these represents a useful and interesting distinction. Concord describes relationships that are dictated by the structure of grammar--for example, the agreement of a plural noun subject with a plural verb form. Governing describes relationships worked out in the custom and spirit of a language, as when a certain verb takes the accusative for some meanings and the dative for others. Governing includes a broad tangle of possible relationships, and Milton uses method to impose some order on this difficult subject. The second example above is one of the distinctions he uses to do

[24] Krapp, 326-27. Appendix C, pp. **207-08, infra.**

[25] Krapp, 331, 338-39.

so: he treats first verbs which take one complement, then verbs which take multiple complements.

Distinctions are stated or implied between the etymology (accedence) of declined and undeclined parts of speech (Krapp 328, diagram 287-8), between verbs with active and passive voices and verbs with deponent or neuter forms (Krapp 308), between concord and governing (Krapp 328, 331), between the three parts of concord (Krapp 329), between the governing of verbs "that signifie Being," or intransitives, and of transitives (Krapp 336). As far as it goes, Milton's thinking on categories of forms seems sound, if unoriginal. But his grammar is inadequate in two related respects. First, in the interests of brevity, he omits much of the material even in the English Short Introduction. Second, he does not adequately categorize the material he does present. Both faults may be demonstrated by comparing Milton's treatment of "Figures of Speech," which consists of hasty page or so, to Gill's extensive fourth section, entitled "Prosodia," in which he discusses English poetry intelligently and at some length.[26] Milton's treatment is so sketchy that it would be useless to any student who had a real interest in the subject. It is also classified carelessly, tacked on to the end of the book on accidence. If Milton was unwilling to treat prosodia as a subject coordinate with accidence or syntax, he should have eliminated it completely.

[26] Krapp, 327-28. See Appendix C, pp. 209-10, infra.

No legitimate definition of accidence could include any part of prosodia as a subcategory. However, Milton puts it in, probably to anticipate a possible objection that the work says nothing about poetry.

Gill's Logonomia Anglica is an instructive alternative to Milton's treatment. Its arrangement is relaxed and casual; different subjects invoke different treatments. The language is conversational, and the writer is obviously informed in many areas, including Anglo-Saxon, the classical tongues, history, and contemporary linguistic theory. There is no note of the pedantry that occasionally distorts Milton's academic works. Despite this relaxed surface, the book is designed according to the general principles of method, and is reduced comprehensively to a one-page "Libri Synopsis."[27] It would be more difficult to find a remembered passage in Gill's work than in Milton's, but Gill's work is more readable.

Style is primarily a question of temperament, but secondarily it becomes one of pedagogy. For Milton, recall is the thing: the student must be able to turn to the correct example, first in the book, then in his mind. For Gill, the understanding must be tutored first. The forms are all presented, but they are presented in a context philological, or even philosophical. It is true that Gill directed his work at maturer students, Continental readers of Latin whom he wished to motivate to learn English. But this does not

[27] Jiriczek, p. 17.

entirely explain the different approaches.

Milton's preface would have us believe that the Grammar is fashioned with rigorous functionalism. Milton does accomplish what he says he intends, but the preface has a certain ingenuousness; it gives the impression that the work is much more innovative than in fact it is. Nowhere does Milton examine his assumption that "the course and clearness of method" is in fact an effective aid in language learning. It is possible that an attentive student, already well trained in the Ramist method, would perceive Milton's arrangement and so would be able to find a particular passage or discussion more easily. This perhaps is not a consideration to be depreciated in a book which lacks a table of contents or an index, and one could hypothesize in an Ongian vein that Ramist method represented an early alternative to these now more widely accepted typographical devices. If all grammars were to follow method certain difficulties would vanish; the student could locate the treatment of a particular question, in a work he had never seen before, in a matter of seconds. And an advanced student, wishing to compose his own work, would find the problem of organization already solved. But there is of course a distinction, neglected in Milton's preface, between the theoretical study of language or of the art, grammar, and the actual mastery of the language, Latin. The Short Introduction is unambiguously dedicated to this second task. By introducing method to his grammar, Milton clouded

this distinction, and did not thereby demonstrably expedite the process of learning a language.

The Ramists were the first to divide grammar simply into accidence and syntax.[28] This is a distinction that persists today. A recent printing of William W. Goodwin's Greek grammar, written in 1879 by an American, follows the same general order that Gill uses: I. Letters, Syllables, and Accents; II. Inflection; III. Formation of Words; IV. Syntax; V. Versification.[29] (Sections II and III comprise Gill's "Etymologia," or accidence.) These works, Goodwin's grammar particularly, are designed primarily for reference. They have inherited the general divisions that the Ramists used, and an underlying assumption of spatiality, but they also use nonmethodical typographical devices (numerical cross-references, diagrams, indexes) to make their mass of information accessible. They have survived longer in Greek pedagogy because of the large number of inflected forms which must be inspected visually by students of that language.

All grammars designed on the accidence/syntax principle seem to be based on sound theoretical thinking. They assume that an actual language form represents the conjunction of two abstractions. One abstraction is the individual word

[28] Ian Michael, English Grammatical Categories and the Tradition to 1800 (Cambridge: Cambridge University Press, 1970), p. 37.

[29] William W. Goodwin, "Contents," A Greek Grammar ([London: Macmillan Education Ltd., 1894]), ix-xxx. The copy consulted was printed in 1971, in Suffolk, U.K.

understood as "langue" in the Saussurian sense.[30] The concept usually rendered "father" in English is represented in Latin by the paradigm "pater, patris, patri, patrem, patre"; the langue for "father" consists of all five of these forms existing and understood simultaneously (although recited in the classroom in a conventional order[31]). Because the printed paradigm does present forms simultaneously, it is a more accurate representation of the langue is drawn from the accidence. The second, or syntactic abstraction, is presented by the immediate context of the utterance, and may be examined by the student in the form of a general statement in the syntax. The syntax might say, for example, "The preposition ad takes the accusative." "The accusative" is simply a referent to one of the forms in the paradigm. The actual locution "ad patrem," therefore, represents the conjunction of the accident abstraction, or paradigm, and of the syntactic abstraction, or rule, and is parole. In this theory, and to some extent in actual discourse, the isolated form "patrem" would be meaningless.

This is sound logic, and there certainly must be a definable relationship between Goodwin's grammar and the Greek language, or even between Milton's and the Latin language.

[30] Ferdinand de Saussure, Course in General Linguistics, ed. Charles Bally and Albert Sechehaye, trans. Wade Baskin (New York: McGraw-Hill Book Company, [1966]), pp. 9-15.

[31] Which is not always the same. English students learn Nominative, Accusative, Genitive, Dative, Ablative. Americans learn Nominative, Genitive, Dative, Accusative, Ablative.

But this is not demonstrably the same relationship as that between the language and somebody's using it. (That is, langue relates both to grammars and to parole, but in different ways.) The grammar is a blueprint for the language; a blueprint is symbolic, graphic, and two-dimensional, but the finished building is not, and the process of construction of the building is not the same as the construction of the blueprint. The question is whether the grammar (blueprint) can actually be used to teach the language (building). Construction workers do not learn their skills from blueprints.

Modern grammars seem to recognize more clearly that language use is a question of habit, and that language learning takes place over a period of time. The poet who sits to write a verse epistle "ad patrem" might be theoretically aware of the grammatical constructs behind his expression, but if he has mastered the language he produces the phrase automatically, without reflection. The Ramist would probably assume that the speaker's knowledge of method makes this possible (Ramists do not distinguish between habit knowledge and conceptual knowledge). The modern pedagogue would assume that the habit has been acquired by some form of conditioning, a slightly more demonstrable hypothesis. In both cases, the grammars used by contemporary teachers reflect the prevailing theory.

The modern grammar[32] has retained some of the blueprint devices (as, most frequently, a set of paradigms in the form of an appendix), but has arranged them according to a dramatic model. The text as a whole represents the development of the student's knowledge over a period of time.[33] The student at first learns some elements of vocabulary, accidence, and syntax, and is drilled in these skills. The grammar adds material progressively in all three categories. The information is so arranged that the most frequently used (and, usually, the simpler) locutions may be generated early in the learning process. Thus the modern grammar parallels and imitates the observed language learning of children. The work is subdivided into units, each of which contains material which can theoretically be acquired within a short time. The unit is also a dramatic device, and seems designed to re-create in the privacy of the study some of the advantages of a teacher-student colloquoy. It is a docemecum. It not only lays out manageable reading passages for the

[32] For example, Alston Hurd Chase and Henry Phillips, Jr., A New Introduction to Greek, 3rd. ed. (Cambridge, Mass.: Harvard University Press, 1966).

[33] The literary potential of the modern grammar has not been sufficiently explored. Perhaps inspired by the order of the learning process, some textbook authors write continuing stories in which the same characters explore different situations and relationships. Unfortunately, although the characters sometimes are globe-trotting adolescents, their insipidities reveal in them our old friends Dick and Jane. The textbook could conceivable emerge as a Bildungsroman in which the reader's knowledge of grammar is itself a plot element.

student, but asks him questions about them, provides drill in translation, lists and explains references and vocabulary, shows pretty pictures, and occasionally adds an anecdote for a touch of authenticity. The basic idea, however, is to arrange physically the material that the student will encounter chronologically, so that the printed order of the material is the same as the order of learning experiences.

The actual relative effectiveness of these two approaches is a moot point. The shape of the modern textbook is in any case probably more a product of economic forces that of rational design. Because the Bildungslehrbuch presents material in smaller, digestible doses, it takes some of the burden off the teacher, and makes cheaper teaching possible in an era of popular education. A single teacher can handle more students in the same time period. Programmed instruction is but the next logical response to this economic pressure. In Milton's day the educational resources available were much larger in proportion to the predictable demand, and, if anything, Milton's tendency was to make them even more generously available to the student. William Riley Parker notes in his interesting essay on the Tract on Education that Milton's scheme provides for a teacher-student ratio of 1:6 or 1:7.[34] This also represented a long-range commitment, as students would attend the academy throughout

[34] William Riley Parker, "Education: Milton's Ideas and Ours," College English XXIV (1962), 1-14. The ratio is quoted on page 9.

their adolescence, covering the same ground that historically has been divided between secondary school and university. Under such circumstances the relationship between student and teacher would be much closer than is normally possible in modern secondary and undergraduate education.

Parker's essay uses biographical sources to emphasize that Milton's curriculum was practical and in fact had been realized in his own teaching. It may be that Milton relied on the affective link between teacher and student as his central motivating device. Probably he and his students worked directly on moderately difficult texts, with only occasional resort to grammar for elucidation. It is only on some such assumption that Milton's achieved success in teaching languages can be reconciled to the fact that "he would give little time to grammar." According to Parker, he in fact gave a great deal of attention to pragmatic reading skills. In such a teaching environment, any textbook becomes ancillary, or indeed negligible. If Parker is correct, Milton would reject the textbook because its inevitable effect is to depersonalize the learning process.[35]

The ancillary textbook, however, is not completely inconsistent with humanist teaching, as it retains its role as an aide memoire. For the odd moment when the student turns to his book, for the rote answer to the routine question, or even for a brief general survey of the whole subject, the

[35] Parker, "Education: . . .," pp. 8-9.

textbook still has its use. Milton's textbooks are consistent with this approach. They are simple, and they are organized according to a uniform mnemonic design--method--that saves the student time, although at the expense of a more profound exploration of the subject.

It would be unfair to conclude, however, that method necessarily encourages a superficial treatment of a subject. In the De Doctrina Christiana, Milton applies method to an "art" of considerable complexity. The subject of the work is "that DIVINE REVELATION disclosed in various ages by CHRIST,"[36] and in addition to Milton's sustained and usually mature commentary, it embodies approximately seven thousand Scriptural proof texts,[37] quoted in full with citations. This material is shaped by the same techniques which Milton used in the Artis Logicae and the Grammar. His intention in so ordering the book is specifically mnemonic. He says at the beginning:

> In this treatise then no novelties of doctrine are taught; but, for the sake of assisting the memory, what is dispersed throughout the different parts of the Holy Scriptures is conveniently reduced into one compact body, as it were, and digested under certain heads.[38]

[36] J. H. Hanford and Waldo Hilary Dunn, eds., "De Doctrina Christiana," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols. (New York: Columbia University Press, 1933), XIV, 17. Hereafter cited as DDC, with volume and page references to the Columbia edition.

[37] Maurice Kelley's estimate. Maurice Kelley, This Great Argument: . . . , Princeton Studies in English, Vol. 22 (Gloucester, Mass.: Peter Smith, 1962), p. 216, n. 89.

[38] DDC, XIV, 21.

This comment doubtless serves as a red herring, deflecting attention from the heterodox aspects of the work, but in the context of Ramist text design it might be acceptable as a serious intention. The riches of the Scripture are, as they stand, organized as a broken narrative interspersed with occasional essays. This is not much of a barrier to a serious student of the Bible, but in Milton's work he can find the same material "digested under certain heads"--under what would today be called subject headings, but were in Milton's original phrase "perque certos digesta locos"[39]--"digested through certain places." Maurice Kelley remarks that "The articulation of the complex treatise is remarkable for a blind man; and the cross references indicate that Milton had a complete and comprehensive knowledge of the whole."[40] The work is, in short, a good demonstration of the application of method to complex and difficult materials.

The De Doctrina, however, ought not to be too incautiously associated with the Artis Logicae and the Grammar. It resembles them in that it seems to have been left until Milton's old age for completion, or at least for publication,[41]

[39] DDC, XIV, 20.

[40] Kelley, p. 70.

[41] For the manuscript history of the De Doctrina, see Kelley, pp. 25-71, and Arthur Sewall, A Study in Milton's Christian Doctrine (N.p.: Archon Books, 1967), pp. 3-10, et passim. Greater care has been expended on dating this work than on the other academic writings, as the extent of its relevance to Paradise Lost might depend upon finding a date. The manuscript is also accessible, which raises questions of the form and order of composition.

and in that it is a scholarly work in the Ramist form. It differs in that it was not, in fact, published in the seventeenth century, and that it does represent a serious philosophical commitment, and in some respects sums up Milton's intellectual achievement as Paradise Lost summed up his poetry. If it was intended for students, they would have been mature. At one point, wishing to digress momentarily from the normal order of method, Milton suggests that as his readers may be "competently acquainted with the outlines of Christian doctrine" he may "anticipate the natural order of arrangement" ("bona cum venia methodi hoc argumentum anticipamus").[42] He thus has a gentleman's agreement with his audience; method is to be a tool, but not an obsession. In the Tract on Education, Milton said that theology and philosophy are to be postponed until the student can approach them more flexibly.[43]

Because Milton uses method flexibly, it is possible for the modern reader to get through the De Doctrina without paying much attention to the Ramist structure. Parts of the work, at any rate, seem to have been composed consecutively, with only casual preconsideration of their expository form. The reader very frequently becomes aware of dichotomies only

[42] DDC, XV, 69, 69. Italics inserted.

[43] Merritt Y. Hughes, ed., John Milton: Complete Poems and Major Prose (New York: Odyssey Press, [1957]), p. 636. "[Time] may be now understandingly spent in the highest matters of theology and church history ancient and modern; . . ."

as he begins the second of two coordinate subjects. Milton has apparently decided to create a new dichotomy rather arbitrarily; the resulting structure can be represented in the Ramist manner (see Appendix E), but is not very clear in the process of reading. For example, in Book II (Volume XVII of the Columbia edition), he begins to analyze a heading called "OUR DUTY TOWARDS MAN," which he subdivides into duties owed to the self and duties owed to neighbors (XVII, 193, 195). Under duties towards neighbors he enters such virtues as HUMANITY, GOOD WILL, BROTHERLY LOVE, and so on. After describing this material rather fully, however, Milton has more to say on social responsibilities, so he inserts the following paragraph:

> The SPECIAL VIRTUES, or VARIOUS MODES OF CHARITY OR JUSTICE AS REGARDS OUR NEIGHBOR, relate to him either under the general acceptation of the word neighbor, as denoting proximity; or under some special acceptation, where our relationship arises from special circumstances. The discharge of our special duties towards our neighbor includes the regulation not only of our actions, but of our affections, as concerns him . . . .[44]

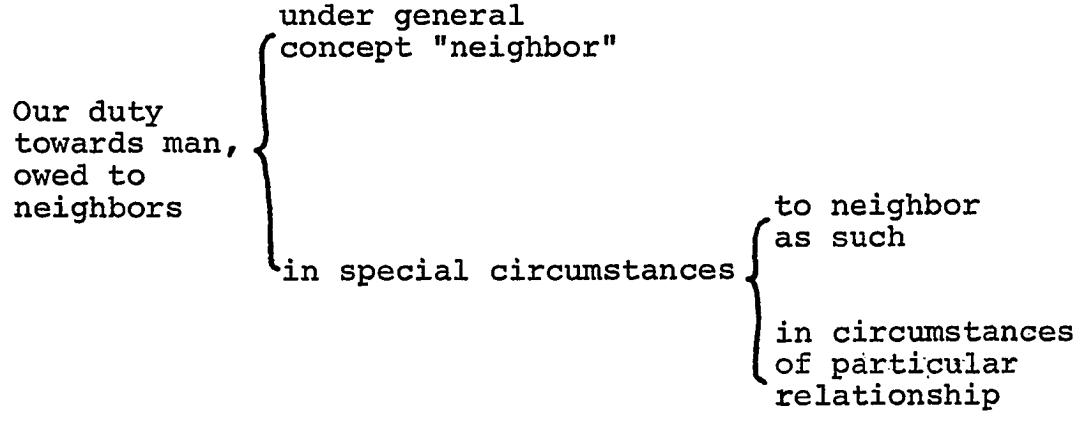
One does not commonly assume that the neighborly virtues would be significantly altered by physical circumstances. The virtues classified under "special acceptation" include INTEGRITY, MODERATION, HONOR, the neighbor's GOOD NAME, and so on. The true distinction is that virtues "under the general acceptation of the word neighbor" reflect private feelings, whereas those "arising from special circumstances" reflect reputation and a public stance. These are not, how-

[44] DDC, XVII, 281-83.

ever, mutually exclusive in actual experience. Milton now draws another distinction.

> Thus far we have treated of the virtues or special duties which man owes to his neighbor simply as such; we are next to consider those which originate in circumstances of particular relationship. These duties are either private or public.[45]

The "circumstances of particular relationship" are today called "roles"; these virtues are defined by the role husband, father, teacher, etc. Again, they are by no means mutually exclusive of either of the two prior categories. Also, the second distinction becomes arbitrarily "less important" than the first, simply because it comes second: strict application of methodical principles (2), (4), and (5) requires that these categories be ranked as follows:



An alternative procedure would be to invoke rule (3) and create three coordinate categories under "our duty towards . . . neighbors": public duties, private duties, and duties dictated by a role. Even here, the implied parallels between the three might not be strictly accurate. But Milton, rather

[45] DDC, XVII, 349.

mechanically following Method at this point, regards no such niceties. The actual order in which he has arranged the social virtues seems to be an order of absolute value. It is more important to regard the true feelings of another than his social status; it is more important to regard his social status than his successful enacting of a role. Consideration of these priorities in social behavior probably would enable an individual to live more humanely and "virtuously" in a social context. The movement of the discussion is therefore valid, but it does not derive its validity from method.

Milton actually handles method with considerable freedom. He is obliged to devote some space to every subdivision which he creates, but he can vary the amount of space. Subjects which interest him, such as divorce and Christology, receive treatment in lengthy essays, separately organized and independent of the general movement of the work. Other subjects are treated more shortly, with greater reliance on copious quotation from Scripture, which Milton doubtless kept at both physical and mental fingertips as he worked. Milton is at his most brilliant when he works between the interstices of method, at his most mechanical when he is grinding out transitions and axioms in the approved manner. As the first book draws to its close, the axioms tend to get longer and longer, until they bear a considerable proportion of the exposition.

> THE FINAL PERSEVERANCE OF THE SAINTS IS THE GIFT OF GOD'S PRESERVING POWER, WHEREBY THEY WHO ARE FOREKNOWN, ELECT AND BORN AGAIN, AND SEALED BY THE HOLY SPIRIT, PERSEVERE TO THE END IN THE FAITH AND GRACE OF GOD, AND NEVER ENTIRELY FALL AWAY THROUGH ANY POWER OR MALICE OF THE DEVIL OR THE WORLD, SO LONG AS NOTHING IS WANTING ON THEIR OWN PARTS, AND THEY CONTINUE TO THE UTMOST IN THE MAINTENANCE OF FAITH AND LOVE.[46]

At this point Milton is simply capitalizing certain passages, without any serious regard to the structure they represent. He seems to begin Book II in a contrite mood, as the arrangement shows a much more correct method. The controversial passages, however, which give the work its interest to modern scholars, are all in Book I.

The subjective effect of the constantly smaller categories enjoined by method is analogous to a plunging shot with a motion picture camera, in which the motion of the lens or of the camera itself takes the spectator from a panoramic view to a detailed closeup. The De Doctrina is also in some ways reminiscent of the Divina Commedia, except that the individual encounters are more abstractly conceived, and the order of presentation is reversed. Milton begins with a survey of the attributes of God, proceeding from the transcendent Father to the more controversial Son, and concluding briefly with the Holy Spirit. The problem of the Trinity is avoided in Milton's Ramist system by discussing the Father under the Nature of God, and the Son and the Holy Spirit under his Efficiency; the Trinity is never discussed as a

[46] DDC, XVI, 75.

whole. God's Efficiency is divided into GENERATION, CREATION, and GOVERNMENT OF THE UNIVERSE, or Providence. The Son is explained under Generation, the physical universe, which does not concern Milton much, under Creation, and the rest of Book II, which includes much of human religious experience, under--in a sense within--Providence. The Special (as distinguished from General) Providence includes first the FALL OF MAN, then his RESTORATION, which in turn includes his REDEMPTION and RENOVATION. Discussion of Redemption is the occasion for an extended examination of Christ in his mediatorial capacity. Renovation is less controversial, as it centers on the effect of Christ's experience on the individual, but Milton, who possibly considered himself a type of renovated man, creates an impressive complex of subdivisions to handle this subject. Among more formal effects of Renovation are NEWNESS OF LIFE and INCREASE; Increase includes JUSTIFICATION, ADOPTION, UNION, and FELLOWSHIP (various aspects of the living body of the Church) and finally GLORIFICATION. But with canny narrative skill, Milton discusses only imperfect Glorification at this point. He discusses first law, the Covenant of Grace, and further aspects of the Church. Finally he composes a vivid narrative chapter describing the Last Judgment, which follows his Ramist typographical conventions, but which is not particularly Ramist. It shows instead strong imaginative

coloring, and is worthy of comparison with Blake or Michelangelo on similar themes.[47] It is a fitting climax to the first book.

Book II inevitably has a da capo air; it probably would not have been composed at all but for Ramist convention. The general subject is WORSHIP, but this is immediately redefined into GOOD WORKS, and next, by a little legerdemain, into VIRTUES. (The Efficient Cause of Good Works is God, but he has already been discussed, so the book is devoted to the Proximate Causes, the Virtues.) Some indication of Milton's treatment of the virtues has already been given. Formal RELIGION is not a very important subdivision, and Milton says very little about ceremonies and the management of the church in the world. He treats the public and political virtues last of all. The work closes without any distinctive note; Milton gives a cross-reference to Book I in his last topic (DUTIES OF THE CHURCH TOWARDS MINISTERS[48]) which creates a curious effect, as if the book were turning in upon itself.

The arbitrary division, or rather doubling of the work, required by method, is probably its most serious expository defect. Otherwise it reflects Milton's considerable intellectual powers--now broadly, with epic perspective and horizon, now narrowly, with the intricacy of a Chinese puzzle.

[47] DDC, XVI, 336-81.

[48] DDC, XVII, 419.

Such an extensive survey, however, inevitably includes some dull passages. Sewell says of the De Doctrina Christiana, perhaps too cruelly, that even for Milton it was solely "a work of obligation."[49] Maurice Kelley's scholarship had underlined the ambiguity of the work: he traces it through mechanical parallels to Milton's imitated sources on the one hand, through thematic echoes to the profound conceptual commitments of Paradise Lost on the other.[50] It therefore forms a meeting ground for Milton's academic habits and his creative energies. The critic cannot claim to have defined the fusion of the two, if any, but the work retains its significance in exploring either aspect of Milton's thought.

[49] Sewall, p. 161.

[50] For Kelley's textual estimate, see p. v., note 8 supra; for his philosophical survey, This Great Argument. See also Sewall, p. 38, for evidence of Milton's debt to Ames and Wollebius.

CHAPTER III

METAPHYSICAL ASPECTS OF MILTON'S PSYCHOLOGY: DOWNAME AND HOBBES

At this point Milton's understanding of method may be simply formulated. Method has two aspects. It is a diagram: space organized according to dichotomous branches which represent alternative but coordinate categories. It is an order: discourse arranged according to subjects of greater or lesser importance, with transitions and rankings indicated by typographical conventions, and the most important statement distinguished as axioms which conform to the three laws of necessity. The diagram and the order are simultaneous and interchangeable. They function as a mnemonic of universal applicability.

The diagram aspect of method is given particular significance by Walter J. Ong, whose Ramus, Method, and the Decay of Dialogue[1] has become the principal conduit of the Ramist tradition for English-speaking scholars. Ong's thesis is that Ramism is one important consequence of the introduction of printing to the West. Ong assumes that modes of expression affect, or reflect (the distinction isn't made clear), modes of conceptualization and modes of

[1] (Cambridge, Mass.: Harvard University Press, 1958).

perception. The printed book made possible the execution and distribution of detailed graphic models of intellectual processes; these models in turn shaped the processes themselves.[2] Ramism is part of the effort to adapt the procedures and content of the Aristotelian corpus of ideas to the needs of the new medium. The new medium was graphic; the Aristotelian tradition was verbal. The "dialogue" of the earlier tradition inevitably "decayed" under the pressure of printed forms of thought. The conscious use in Ramist method of a printed diagram as a model for communication is convincing evidence that the Ramists represented the visualist tradition that flourished during the Renaissance. Ong's historical thesis is stated more fully in his The Presence of the Word,[3] and some of its implications will be discussed in Chapter IV. In Ramus, Method and the Decay of Dialogue, he puts his thesis philosophically, not historically. The thesis may be summarized as follows. Page references are in parentheses.[4]

> (1) "all intellectual cognition must be treated by analogy with sensory cognition." (107) Italics inserted.
>
> (2) Formal logic is "fundamentally" spatial. (107)

[2] See the section "Logic in Space," Ong, Ramus . . ., pp. 74-91.

[3] Walter J. Ong, The Presence of the Word: . . ., (New Haven: Yale University Press, 1967).

[4] Ong, Ramus . . ., pp. 107-112.

(3) "Human knowledge for Aristotle exists in the full sense only in the enunciation . . . the saying of something about something." (108)

(3a) "[Aristotle's] categories are at root (although not always explicitly) conceived of as parts of enunciation." (107)

(3b) The enunciation embodies a visual-aural tension, as the subject--" (sub-iectum, something thrown under)"--being a substantive, is visual; the predicate more aural. (108) (But Ong muddies this latter point.)

(4) The tendency in Western thought is to reduce things to the visual. (108-109)

(5) There is, however, a residue of significance in the vox that cannot be reduced to the visual. (109-111) "Although there are occasional protests against nominalism which show that perhaps its chief objectionable feature was the neglect of the full implications of the enunciation, these protests were ineffectual with regard to the arts course tradition as a whole." (110)

Each of these five general propositions involves broad claims, and they cannot be exhaustively discussed in the present essay. The third, for example, assumes that the subject/verb distinction is valid philosophically as well as grammatically, and, more significantly, that there is in fact a tension in discourse, and that a sentence will call for a perceptual response embodying two distinct and competing perceptual modes. The fourth statement has historical, perhaps anthropological import, and should be examined in these disciplines. But if such difficulties were dealt with fully, it would be possible to agree that Ong's account represents accurately a stage in the evolution of subjective human experience. Ramist method would not only be a facet of Renaissance cultural history, but also a symptom of

profound and perhaps irreversible changes of the ways in which reality was understood.

The wide and successful use of method in many different disciplines does suggest that it is a valid model of symptoms of thought, not simply a guide to them.[5] This suggests further that the visualist, or diagrammatic aspect of method, is also a valid model, and hence that ideas are themselves graphic or spatial. The validity of a model does not of course argue that the model is what it represents. Ong silently admits this fallacy between the first and the succeeding four statements in his hypothesis. In the first statement, Ong acknowledges that sensations and ideas are not the same, but analogous. In the subsequent statements, most clearly in points (2) and (4), he allows this distinction to sink out of "sight"--out of the discussion. Milton, on the contrary, insists on retaining awareness of the analogy. In his terms, he draws a sharp distinction between physics (which deals with spatial and measurable phenomena) and logic (which deals with subjective phenomena that Milton insists are not spatial or measurable). He maintains this distinction because a materialist description of human thought would be unaccept-

[5] Perry Miller, The New England Mind: The Seventeenth Century (Cambridge, Mass.: Harvard University Press, 1954), pp. 161-163. The term "technologia" refers to the universal scope and applicability claimed by the Ramists for the full range of the liberal arts.

able to him for theological reasons.

There are some considerations which urge that the physics-logic distinction be passed unnoticed. If "all intellectual cognition" consists essentially of the intellectual devices embodied in method, the student can hope ultimately to master the ἐγκυκλοπαιδεία --the totality of human knowledge.[6] The Commonplace Book is evidence that Milton may have worked along these lines at one stage of his career. Milton's Commonplace Book shows that he developed the habit of classifying ideas by both physical and philosophical association; a page in the notebook represents a thread of association. This arrangement is not specifically Ramist, as there is no subordination or didactic arrangement of ideas. But then, with respect to method, a collection of commonplaces is a magazine, not a discharge. The broad range of subjects covered in the Book also suggests that Milton may have had "encyclopaedic" ambitions. The Book is related to the more mature academic texts in two respects. First, it shows Milton's habit of retaining for reference the exact texts of other authors.[7] Second, the evidence surrounding the composition of the De Doctrina

[6] Allan H. Gilbert, ed., "Artis Logicae," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols. (New York: Columbia University Press, 1933), XI, 8.

[7] As in his Ramist texts, Milton breaks off quotations with an "&c." See Ruth Mohl, John Milton and His Commonplace Book (New York: Frederick Ungar Publishing Co., [1969]), p. 8. In the DDC itself, Milton mentions that

Christiana suggests that it was developed in stages from an early commonplace book on theology, still undiscovered.[8] The commonplace book, as a genre, represents a pre-methodical stage of arrangement, not intended for teaching or publication, but sharing with the Ramist texts the concept of spatial design. If this seems a naive device today, it should be examined in the face of the fact that the seventeenth century did not have a highly developed system of information recall.

But Milton's endorsement of the practice of method was based on carefully selected theoretical premises. Briefly, the problem which Milton confronted was this: he wished to make use of graphic models without implying any tolerance for a materialist or determinist approach to psychology, or for a transcendent neo-Platonic account of the nature of ideas. The first difficulty may be exemplified by the work of Hobbes, the second by Milton's

---

although his first work in the subject of theology was a collection of passages from "the shorter systems of divines," he eventually outgrew the practice. James Holly Hanford and Waldo Hilary Dunn, eds., "De Doctrina Christiana," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols. (New York: Columbia University Press, 1933-34), XIV, 5-7.

[8] Maurice Kelley, This Great Argument: . . . , Princeton Studies in English, vol. 22 (Gloucester, Mass.: Peter Smith, 1962), pp. 67-68, and notes. On this point, see also John T. Shawcross, "A Survey of Milton's Prose Works," Achievements of the Left Hand: . . . (Amherst: The University of Massachusetts Press, [1974]), pp. 369-374.

most important source, Downame. Both represented distortions of the understanding and application of graphic models. Hobbes's materialism was particularly annoying because to an undiscerning critic it might have appeared an extrapolation of Milton's own mortalism. Downame, on the other hand, blurred the useful concept of "locus" so as to eliminate any real distinction between physical and mental events. Both difficulties will be discussed below in greater detail.

Milton's longest statement on the relationship between the tools of logic and the metaphysical context of logic occurs in the chapter of the Artis Logicae on Subjects. "Locus" is one of the four modes of subjection. Milton inserts the following comments, apparently a digression:

> The second mode is of the subject containing the adjuncts in itself, that is, the mode of place. Thus the place is the subject of the located thing, or is that in which the located thing is contained. Thus the philosophers attribute place to divine beings though lacking body and magnitude. Thus the geometers consider place and differences of place in geometric concerns. The physicists also consider place much more diligently in physical things, in the the world, in simple elements, and in composite things. Hence some dialecticians in their zeal for increasing the scope of their art contend that the doctrine of place as well as that of motion should be treated in logic. Certainly since place is an external affection of some nature or other, whether corporeal or incorporeal, I wonder what has come into the mind of the logicians, especially the disciples of Ramus, that although they teach that arguments, that is, not things but reasons, are the subject of logic, yet they decree that things or affections of natural things, motion, place, and time, should be treated in logic. Place they say is common to all

> things of every sort. Therefore I saw that it pertains to some universal art concerned not merely with bodies but with all natural things, that is to physics, but not to logic. For logic considers not what place is, whether a limited space or the surface of an encompassing body, but merely in what way place argues a thing is located, just as the subject argues the adjunct.[9]

Both the tone and matter of the passage can be explained by the fact that it is a reply to a discussion by Downame ("the disciples of Ramus"), who devotes a substantial part of his chapter on Subjects to an effort to prove that "place" is relevant to logic in all its senses, including the physical.[10] Downame first attempts to choose between the Platonic doctrine that locus is "spatium rei locatae," and the Aristotelian doctrine that locus is "ambientio corporis superficiem rei locatae contiguam."[11] He prefers the Platonic doctrine because the more general definition permis him to include abstract ideas and immaterial entities in the combined studies of logic and physics. He points out that Aristotle himself does this when the Philosopher locates the "prime mover" in the "highest heaven."[12] "Est ergo locus non corporum physicorum proprius, sed omniū omnino entium communis, nec entium solummodò, sed

[9] Gilbert, XI, 81-83.

[10] Georgia Dounamo, "De Subjecto," Commentarii in P. Rami Regii Professoris Dialecticam (Francofurti: Ex Calcographia Wolfgangi Richteri, Impensis omnium haeredum Nicolae Bussaii, [1605]), pp. 179-95. The section on place occurs on pages 183-93.

[11] Downame, p. 190.

[12] Downame, p. 190.

etiam non entium, . . ." Downame concludes. But he qualifies his position by recognizing two orders of beings, one of which is in its locus "circumscriptivè," and one not.[13]

Downame's passage is a good example of the Platonizing or Realist tendency in Ramism. (Ong's work reflects this also.) Downame actually thinks of himself as an Aristotelian, but excuses himself on this issue on the ground that it is all right to disagree with Aristotle when he goes against his own first principles.[14] It is one thing to show that physics can be dealt with through logic, and quite another to show that logic can be considered a branch of physics. The distinction between these two positions is lost in Downame's discussion. Milton rejects his comments with some asperity, on the valid grounds that terms and axioms are not interchangeable in the liberal arts, even if these arts are all discussed in Ramist terms and arranged according to method. This is an application of the law of necessity, Homogenii.

If Downame's opinion on this point represented a Realist extreme for Milton, Hobbe's work possibly represented the Nominalist extreme. Hobbes's ideas on psychology are clearly epitomized in the De Corpore, or the "Elements of Philosophy: The First Section, Concerning Body," and in

[13] Downame, p. 191.

[14] Downame, p. 187.

the De Homine, or "Human Nature: or the Fundamental Elements of Policy."[15] Milton did not reply directly to these essays, and his knowledge of them is conjectural.[16] A possible link between Hobbes and Milton's Ramist interests is provided by Walter J. Ong and by W. S. Howell, who have pointed out an edition of 1651 entitled "A Compendium of the Art of Logick and Rhetorick in the English Tongue Containing all that Peter Ramus, Aristotle, and Others Have Writ Thereon: with Plaine Directions for the Understanding and Practice of the Same."[17] This volume contains three works: a Ramist logic by Robert Fage, which was subsequently adapted and republished by Milton's nephew Edward Phillips, an Aristotelian logic by Hobbes, and a Ramist logic by Dudley Fenner, which was mistakenly attributed to Hobbes until Ong and Howells examined the

[15] The English Works of Thomas Hobbes of Malmesbury, ed. Sir William Molesworth, Bart. ([Darmstadt], Germany: Scientia Verlag Aalen, 1966), I, 3-532; IV, ix-76. Hereafter cited as Hobbes.

[16] For Milton's possible knowledge of the De Cive, see S. I. Mintz, The Hunting of Leviathan: . . . (Cambridge: Cambridge University Press, 1969), p. 60.

[17] (London: Thomas Maxey, 1651). See Walter J. Ong, "Hobbes and Talon's Ramist Rhetoric in English," Transactions of the Cambridge Bibliographical Society, Vol. III, Part I (Cambridge: Bowes and Bowes, 1951), pp. 260-269, and W. S. Howell, "Ramus and English Rhetoric: 1574-1681," The Quarterly Journal of Speech, XXXVII (October, 1951), 299-310. On relevant bibliography, see also Walter J. Ong, Ramus and Talon Inventory: . . . (Cambridge, Mass.: Harvard University Press, 1958), pp. 184, 272-73.

work more closely. Despite Ong's attempt to make Hobbes a Ramist (he bases his case largely on the fact that Hobbes agreed with the Ramist approach to the enthymeme), there is no evidence that Hobbes committed himself substantially to Ramist ideas.[18] But he does employ certain Ramist elements in his work, and it may be fruitful to attempt to reconstruct Milton's attitude towards Hobbes by examining Hobbes's adaptations of Ramist devices.

Hobbes was fascinated by geometry, even to the exclusion of other branches of mathematics,[19] and this interest reflected his Ramist interests in several ways. First, Euclidean geometry was, like Ramism, a system of interrelated axioms, which had to endure high standards of proof. Second, geometry is the branch of mathematics dealing most clearly and graphically with spatial relationships. Third, the body of Euclidean demonstration resembles Ramist method as a didactic system molded by the nature of the material to be presented, and by the nature of the learning process. Its order is both a demonstration and a necessary progression. Euclidean demonstration was Hobbes's model for demonstration in the humane sciences. Following the analogy of Euclidean demonstration, Hobbes

[18] Fenner's book is available in R. D. Pepper's modern edition, Four Tudor Books on Education (Gainesville, Florida: Scholars' Facsimiles and Reprints, 1966), pp. 143-180. The style is not reminiscent of Hobbes, and the examples are all aggressively Biblical.

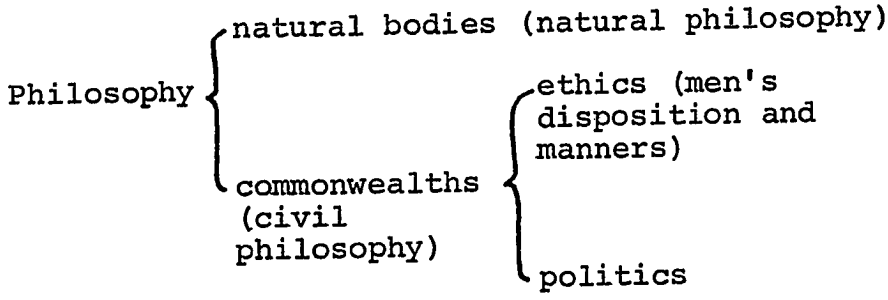
[19] Mintz, pp. 7-8.

began with certain fundamental physical principles, from which mechanical behavior, human behavior, and finally social behavior were to be conclusively deduced. Hobbes follows Keckermann in considering deduction as irrefutable as mathematical demonstration.[20]

There are some procedural aspects of the De Corpore Politico and the De Homine that would appear familiar to a student of Ramist dialectic. The general plan of the work itself resembles a Ramist synopsis libri.[21] Hobbes uses Ramist diagrams to show the multiple subdivisions of the four predicaments he recognizes (body, quantity, quality, and relation).[22] His central theory of causation is developed from the predicaments actio and passio--but these are of course not exclusively Ramist concepts.[23] His "Discovery of the Faculties, Acts, and Passions of the Soul of Man," includes a survey of the materials of the traditional logic in much the same order as a Ramist would take them, except

[20] Hobbes, I, 54.

[21] Hobbes, I, 11-12. It is stated in prose, but could be expressed in this form:



[22] Hobbes, I, 25-28.

[23] Hobbes, I, 120-127, 348-350.

that he calls predication "naming" and the syllogism "ratiocination."[24] These similarities show the influence of Ramist habits, but are not intrinsic to what Hobbes is trying to do.

An area in which Hobbes seems to rely on the Ramist tradition for more substantial assistance, and which brings him closer to Milton's position, is his theory of perception. On the one hand, Hobbes must account for the causes of perception. On the other hand, he must account for certain qualitative epiphenomena, which he calls accidents after the traditional logic.[25] It proved possible to account for the motion or weight of an apple in the Newtonian physics, but not to account for its color, flavor, or subjectively perceived texture. But it is precisely these unquantifiable characteristics that make the apple distinguishable from a tomato. Hobbes had to explain the common ability to make such distinctions, but was confronted by the fact that contemporary physical science did not deal with them at all.

The pinch of the predicament may be observed in Hobbes' indiscriminate use of the term accident. At one point he defines an accident as "the manner of our conception

[24] Hobbes, IV, 19-26. These changes in terminology themselves exemplify the Baconian attempt to purify the language. To an extreme Nominalist, like Hobbes, "naming" is a safer term than "predication," which could imply the Real existence of the predicaments.

[25] Hobbes, I, 102-105.

of body."[26] This would imply that the accident exists as a by-product of the act of perception, and is not to be construed as a true phenomenon. In discussing causation, however, he comments, "But a CAUSE simply, or an entire cause, is the aggregate of all the accidents both of the agents how many soever they be, and of the patient, put together: which when they are all supposed to be present, it cannot but be understood but that the effect is produced at the same instant: and if any one of them be wanting, it cannot be understood but that the effect is not produced."[27] It is not clear whether Hobbes means that the accidents redness, hardness, roundness, etc., taken together will always produce the effect "apple," understood, or that if an object having these accidents is planted, it will always grow an apple tree. The first would make the statement useful in psychology, the second in natural sciences. In either context, however, the statement consistently implies that the accidents operate independently of a given observer, that an apple will always produce the effect "apple" on observers, and the effect apple tree in the soil. It is but a step from this to the assertion that there is such a thing as "appleness," but this is a step which Hobbes prefers not to take, as "appleness" cannot be described in physics. Hobbes would prefer to occupy a safer middle

[26] Ibid.

[27] Hobbes, I, 121.

ground. The succession of accidents which the observer interprets as the apply turning into a tree is not, Hobbes would say, intrinsic to the event itself, but only the manner of human perception of it; on the other hand he concedes that if certain of these accidents are absent, the event does not occur, or occurs differently.

Hobbes would doubtless prefer that the perception of the event, as well as the event itself, could be described as a sequence of explicable physical causes, and in some passages he draws a direct line from the external object to the human heart.[28] He turns to logic to deal with some of the more difficult aspects of this progression. The reader will remember a passage quoted at length in Chapter I of the present study, in which Milton, borrowing from Downame, distinguishes between synthetic and analytic method. The passage concludes,

> . . . Thus the general species of things (as the opticians also teach) strike the senses more quickly than particulars, as when something is coming I judge it is an animal before I judge it is a man, and a man before Socrates. Aristotle in many passages teaches this as the only method.[29]

This is a brief statement of the perceptual theory presented

[28] See Hobbes, I, 78-79, 390-391, and the chapters on the different senses at the close of the De Corpore, I, 445, et seq. "SENSE is a phantasm, made by the reaction and endeavor outwards in the organ of sense, caused by an endeavor inwards from the object, remaining for some time more or less." Hobbes, I, 391.

[29] Gilbert, XI, 475.

at the beginning of the De Corpore. Using a similar example, Hobbes shows that the perception of man is an analytic reduction of the perceptions body, animated, and rational, which occur sequentially as the object enters and leaves the perceptual field.[30] Hobbes's explanation is more elaborate than Milton's, but the principle is exactly the same.

The inclusion of this theory is of course not a systematic answer to the conundrum posed by Hobbes' ambiguous discussion of the accidents. But it does provide a mechanism to explain why the mind can, for example, recognize the faces of individual friends. The recognition seems to be in the face, but actually it is in the categories which the mind applies to the signals it receives. This process, called ratiocination, takes place "without words,"[31] and thus it is not a part of formal logic, but it is related to formal logic. The syllogism

> All men are animals
> Socrates is a man
> Therefore Socrates is an animal

is a deductive, and therefore synthetic equivalent of the analytic perception which Milton and Downame give as their example. In fact, Hobbes uses this same example in his own discussion of the syllogism.[32]

[30] Hobbes, I, 3-5.

[31] Hobbes, I, 5.

[32] Hobbes, I, 49-50.

It is just here, however, that Milton's difficulty lies. The theory of perception through categories implies that the mind itself works on physical principles. If the predication "animated" is somehow "in" the predication "body," or if a particular perceived example is put "in" or kept "out" of a particular category, and particularly if this happens (as Hobbes asserts) informally and "without words," then this must be the mind itself at work. And Milton has endorsed this very theory as a part of the Ramist system. But the balance of Hobbes's theory, after he gets through psychology and goes on to the more overt aspects of human behavior, suggests that all these phenomena are interrelated, that the interrelations can be demonstrated with scientific rigor, and that by following up these demonstrations one can predict behavior with scientific certainty. It is true that Hobbes does not provide any demonstration of the connection between his borrowed (or at any rate shared) perceptual theory and his theory of volition. But he does use the plausibility of the one to lend authority to the other. One imagines Milton's chagrin in reading Hobbes's cool conclusions.

> 5. Appetite, fear, hope, and the rest of the passions are not called voluntary: for they proceed not from, but are the will; and the will is not voluntary: for a man can no more say he will will, than he will will will, and so make an infinite repetition of the word; which is absurd, and insignificant.
>
> . . . and consequently, our wills follow our opinions, as our actions follow our wills; in which sense

> they say truly, and properly, that say the world is governed by opinion.[33]

Even those who find Hobbes's psychology intellectually satisfying may feel that it does not adequately reflect the known variety and spontaneity of human behavior. Hobbes recognizes only one class of cause: the mechanical. Milton, on the contrary, uses the four causes of traditional scholastic analysis, which in the Ramist system are considered arguments. This enables him to explain behavior more flexibly, but does not require him to make any unreasonable metaphysical claims.

In a building the four causes are as follows: the formal cause is the design of the building, the efficient cause is the construction crew, the material cause is the brick, metal, etc., and the final cause is shelter. Of man it might be said that the formal cause is the rational soul, the efficient cause is nature, the material cause is dust, and the final cause is God and human salvation. Not all of the causes can be perceived by the ordinary senses. The formal cause, for example, can be perceived in the individual building, and in the blueprint for the building, but these are both mere manifestations of the form, not the form itself. If a builder were to build the same building twice,

[33] Hobbes, IV, 68-70. "From materialism Hobbes passed easily to determinism," Mintz, p. 110. See The Hunting of Leviathan, passim, particularly the chapter, "Hobbes's System in Retrospect," pp. 23-38.

the form of the two buildings would be the same, but the two buildings would have to differ, if only because they occupied different sites. On the other hand the form need not be imagined to exist independently of any particular building or set of blueprints. The idea of formal cause does not necessarily imply Ideas existing separately, either in a "locus" (as Downame would have it) or not. The form is always expressed physically, but is not itself physical.

For Milton, as for Blake,[34] the mind and the body are a unit. The "breath of life" is not intrinsically transcendental, but only "that measure of the divine virtue or influence, which was commensurate to the capabilities of the recipient [Adam]."[35] "Soul" and "man" are synonymous, and defined as "a body, or substance individual, animated, sensitive, and rational."[36] This simplification leads Milton to

[34] See Northrop Frye, Fearful Symmetry: A Study of William Blake (Boston: Beacon Press, [1947]), pp. 20-21, 38-39. Blake makes a brief but cogent statement on this point in The Marriage of Heaven and Hell. See the section "The Voice of the Devil." The first half of this passage is Blake's assertion of the unity of the "body" and "soul"; the second half is Blake's critique of Paradise Lost, which he reads as an allegory, in which Satan represents libidinous desire, and God "the restrainer of reason." Milton, then, according to Blake, consciously accepted a facultative psychology, but "he was a true Poet and of the Devil's party without knowing it." It would be interesting to have Blake's comments on the DDC, particularly on Milton's eloquent vision of the Last Judgement at the end of Book I. Northrop Frye, ed., Selected Poetry and Prose of William Blake (New York: The Modern Library, 1953), pp. 123-124.

[35] Hanford and Dunn, XV, 39.

[36] Hanford and Dunn, XV, 39-43. The definition is on page 41.

the ingenious solution of two knotty theological problems. First, it enables him to explain how the propagation of the human species occurs by almost entirely natural means. "It is acknowledged by the common consent of almost all philosophers, that every form, to which class the human soul must be considered as belonging, is produced by the power of matter."[37] The physical act of generation generates the whole man simultaneously. No undignified divine intervention is necessary, and the transmission of original sin from the first parents to the rest of the race is no longer a philosophical problem. If God were to intervene in the act of generation, however, it would be necessary to explain why this event, participating closely in the divine nature, still produces an impure soul.[38] The second and parallel solution arises in Milton's discussion of death. Of the four degrees of death, the third is physical dissolution at the end of one's mortal term. Milton suggests that the dissolution of the spirit and body are simultaneous, indeed identical. He postpones man's transcendental consciousness until the Day of Judgement. The interval passes without sensation, instantaneously as far as the dead are concerned. Milton summons extensive Scriptural authority to support his thesis,[39] but it still must be considered somewhat

[37] Hanford and Dunn, XV, 49.

[38] Hanford and Dunn, XV, 43-53.

[39] Hanford and Dunn, XV, 215-237.

heterodox.

To put Milton's hypothesis most simply, he asserts that the soul is not a thing, itself describable through four causes, but only the formal cause of the thing "man." He therefore does not have to consider what "material" the soul consists of or what its "efficient cause"--that is, its immediate natural source of being--might be. In the example of the building, the form of the building does not itself consist of anything, and is not created by any one person. It is simply implicit in the common experience of buildings. A material cause, on the other hand, might be subject to further causation analysis. Thus, of mortar it might be said that the form is the recipe for mortar, the material cause is sand, plaster, water, etc., the efficient cause is the mason, and the final cause adhesion; the mortar itself becomes one of the material causes of a building. In the case of man, one might argue further that the dust, or flesh, of which he is composed consists of such and such elements. Milton would have no objection to such analysis. The formal cause, however, would not itself be subject to further analysis.

> But there is no true distribution of form. For the distribution of internal or external which some hold will not apply to all things but merely to the corporeal; and the external is not less essential to each artificial thing than the internal to each natural thing.[40]

[40] Gilbert, XI, 63.

Milton's chapter on "Matter" in the Artis Logicae establishes that soul is not to be thought of as a material cause.[41]

The advantage of this position is that it enables the philosopher to think about natural causes intelligently, without being obliged to explain everything through natural causes. Two buildings built following the same form differ from each other. The buildings have explicable natural causes. So do the differences. But the form itself is unchangeable. So the same man might react differently to the same temptation at different times. A natural explanation ("He felt guilty because he remembered the last time.") remains valid and useful, but it does not imply a materially determined event. The soul is based on matter but is not matter. Hence not even a detailed physiological reaction can be accepted as the final explanation for any decision.

The form of a thing is its definition, in the sense that to reduce it to another level of organization changes its form. A pile of bricks is not a building. So a man

[41] Gilbert, XI, 51-53. The following passage should be read as a further comment on Downame's remarks on locus. Milton's distinction of matter into primary and secondary parallels Downame's distinction of beings into two classes.

> Matter is commonly divided into primary and secondary; the secondary into proximate and remote. This distinction is indeed rather suitable to physics. The logician is concerned with the material only as the thing is from it, and especially as it is proximately from it, for the proximate argues with the greatest strength. (Gilbert, XI, 53)

without free will is not a man. The freedom does not inhere in his physical parts, and could not be demonstrated from them. Only the whole man is free. So it is debatable exactly when a particular brick becomes part of a house rather than of a pile. The fact that the brick continues to retain a separate identity is not evidence that the building as a whole does not accomplish larger ends.

William B. Hunter has sought to show that Milton's psychology derives from the Hermetic tradition, with some debt to the writings of Gregory and to Spenser's sources.[42] It is at any rate clear that Milton's psychology looks back to a more vital and humane cosmology than that Hobbes suggested. Milton finds both the natural and supernatural worlds to be sources of positive energy. Without necessarily positing a neo-Platonic metaphysic, he suggests that the world is both anthropo- and theocentric, or perhaps just biocentric. It is also a polarized world, in which acts can be classified as good or evil. The second book of the De Doctrina Christiana is devoted to a detailed analysis of the moral energy and polarities of society. In the apocalyptic chapter at the end of his first book, there is a curious stylistic event. Milton is discussing the scene which Michelangelo depicts in the supreme mural in the Sistine Chapel. At the end of the description of hell, Milton

[42] William B. Hunter, Jr., "Milton's Materialistic Life Principle" and "Milton and Thrice-Great Hermes," JEGP XLV (1946), 68-76, 324-336.

comments, "Thus far of the punishment of the wicked; it remains to speak of the perfect glorification of the righteous."[43] This is just the form of the Ramist transitions which Milton uses frequently in his textbooks. It is the Final Dichotomy. Quoted out of context it does seem to be a pseudo-scientific attempt to dissociate the speaker from the realities of moral suffering. But the chapter is not as a whole dispassionate. It is Milton's most personal vision in the De Doctrina Christiana, although it may also represent the Puritan attitude that saw the laws of morality and the laws of physics as different expressions of a single phenomenon.[44]

Milton's Hell is a place not so much of physical torment as of the moral disorientation which occurs when such clear polarities are no longer possible. Northrop Frye summarizes some of the philosophical elements of the hellish world view.

> In the Ecclesiastical Polity, Hooker, in attempting to deal with the question of why some angels revolted in the very presence of God, says that it could only have happened as the result of some sort of "reflex of their understanding upon themselves." In Milton, the rebel angels go through a similar kind of reflex, which takes the form of a curious abstracting quality in their minds. . . .
>
> In the first place, they abstract the will of God into fatalism. . . .
>
> Secondly, as just implied, the rebel angels abstract the personal creative power of God into an impersonal

[43] Hanford and Dunn, XVI, 375.

[44] Miller, pp. 213-214, et passim.

> creative power, whose affiliations are with the physical and material. . . . Third, and most important, they abstract the two aspects of God's creative power, energy and form, into the categories which we know as time and space. Thus in the later demonic theology time and space are the official creative forces of the world. Space, says Satan in the council of devils, may produce new worlds. . . .[45]

In this view, a significant consequence of the Fall is the denial of personal energy in the universe, and a cowardly retreat from the moral obligations which that energy implies. The character of Satan in Paradise Lost and Paradise Regained progressively exemplifies the degeneration of a personality which cannot be guided by the perception of things or acts as better or worse. Satan's career clearly demonstrates that self-interest is not a satisfactory standard for making decisions. It may be that Raphael's admonition to Adam to "be lowly wise"[46] reflects Milton's belief that too exact an understanding of second causes--Hobbes's central concern--can distract man from the contemplation of the values he should live by.

But it would be possible to debate endlessly whether Paradise Lost represents a reply to Hobbes in any respect. Not the least of the relevant issues would be whether an imaginative work, no matter how great its impact, properly

[45] Northrop Frye, The Return of Eden: Five Essays on Milton's Epics ([Toronto]: University of Toronto Press, [1965]), pp. 34-35.

[46] PL VIII, 173.

respects the decorum of a philosophical debate. The answer which Milton offers in Hobbes's own terms, it must be admitted, is fragmentary and only indirectly polemical. There is, nonetheless, a coherent Miltonic position on psychology and logic, and the distinctions between it and the Realist and materialist positions which Milton rejected are sufficiently clear.

CHAPTER IV

MODERN VIEWS OF SPATIAL THINKING, AND MODERN THEORY OF ANTECONCEPTS

The modern critic who has most systematically and seriously applied the findings of modern Ramist scholarship to the reading of Renaissance peotry is Rosemond Tuve.[1] Ramism is a major theme in her influential Elizabethan and Metaphysical Imagery, where it forms part of her reconstruction of the interpretive techniques implicit in the Metaphysicals' construction of images and image sequences. Briefly, Miss Tuve argues from the prevalence of Ramist thought in the education of the Metaphysical generation to an assumption that it formed part of the contemporary poetic. She asserts that because poets were thoroughly trained in Ramist techniques, particularly in techniques of predication, they tended automatically to resort to them in composition.[2] However, she does not always specify which Ramist techniques are involved, but prefers to discuss "the presuppositions that become current as Ramist conceptions of the

[1] See Rosemond Tuve, Elizabethan and Metaphysical Imagery: . . . (Chicago and London: The University of Chicago Press, 1961). Hereafter cited as EMI. See also R. Tuve, "Imagery and Logic: Ramus and Metaphysical Poetics," JHI, III (1942), 365-400.

[2] Tuve, EMI, pp. 283-84, 303-04, 329.

two disciplines of logic and rhetoric became prevalent."[3] These "insinuatingly important general conceptions," she feels, " . . . altered men's attitudes and . . . made those Ramists who had never read Ramus' books."[4]

This influence is seen most clearly in the area of predication theory, and Miss Tuve quite properly deals most comprehensively with this subject.[5] Predication is the subdivision of logic that deals with the question of what qualities may validly be attributed to a subject. It is related to definition and to the establishment of useful categorical distinctions. Exercise in accurate predication, therefore, is what Miss Tuve has in mind when she comments that "A large number of the processes taught in the study of logic naturally produce images."[6] Her broader hypothesis in Elizabethan and Metaphysical Imagery is that precise predicative description plays the same role in Metaphysical poetic that associative, nonobjective description plays in Symbolist poetic. In both cases, contemporary knowledge theory (logic

[3] Tuve, EMI, p. 332, n. 1.

[4] Tuve, EMI, p. 341.

[5] Tuve, EMI, p. 321, n. 41.

[6] Tuve, EMI, pp. 283-84. It should be noted that the Ramists avoided the terms "predicament" and "predication" in favor of the term "argument." The distinction is admittedly not very clear--see pp. 53-54 of Chapter I, supra. But it is undiplomatic for Miss Tuve to entitle her section on this subject "The Predicaments as Springs of Imagery," EMI, p. 284. See p. 285, n. 7, for her comment on the distinction.

in the Renaissance, psychology in the twentieth century) produces common modes of thought that are reinforced in creative activity by conscious employment or by the influence of habit.

One caution is necessary when one considers Miss Tuve's hypothesis. NonRamist logic stressed predication quite as much as the Ramist did, and therefore Miss Tuve's demonstration of the influence of predication on Renaissance poetry does not prove a specifically Ramist influence. It would be preferable if one could also clearly show the influence of Ramist syllogistic theory and of Ramist method, which are more clearly distinguishable from their nonRamist counterparts. But such forms of discourse simply are not employed in the genres which Miss Tuve discusses, and she wisely does not attempt to establish a case for Ramist influence on these grounds.

Miss Tuve's evidence for a specifically Ramist influence, therefore, is to some extent circumstantial, and is based on the contemporary popularity of Ramism and Ramist training.[7] There is a curious anomaly in the way she discusses a reader's assumed reaction to Ramist. She assumes impatience with its technical detail in the modern reader,[8] a reaction boldly exemplified by George Watson, who complained

[7] Tuve, EMI, 283-84, 299, 303-04, 332, 351-52, et passim.

[8] Tuve, EMI, 320, 329.

that "no student of metaphysical poetry wants to feel bound to read Ramus and the Ramists."[9] On the other hand, she asserts that "Nothing in all this [logical analysis] was unpalatable to the sixteenth- and seventeenth-century poet; quite the contrary."[10] Tastes do change, but Miss Tuve is positing an almost absolute reversal in the prevailing attitudes towards Ramism, with relatively little direct testimony from the Renaissance community or from the modern. She is more reassuring when she suggests that logical study was "as common-ordinary as the multiplication table" to the Renaissance poet.[11] This analogy avoids any assumption of widespread personal enthusiasm, but accounts for the demonstrable popularity of Ramist texts in the period.

Miss Tuve's hypothesis raises some general questions which are outside the scope or intent of her essay but which may be considered here. The largest problem is the extent to which a system of philosophy, and an epistemology in particular, may be said to influence the contemporary work of poets and imaginative writers. Individual demonstrations of influence aside (as in the case of that "known Ramist," Sidney[12]), Miss Tuve assumes a substantial influence on all wri-

[9] George Watson, "Ramus, Miss Tuve, and the New Petromachia," MP, LV (1958), 260.

[10] Tuve, EMI, p. 311.

[11] Tuve, EMI, p. 330.

[12] Tuve, EMI, 331-32, 351.

ters who were exposed to Ramism, or even on those "who had never read Ramus' books."[13] She does not suggest the possibility of a negative influence on any Renaissance author, although she perceives a negative reaction in her own contemporaries. What would seem to require refinement is, first, the understanding of the different ways in which strands of thought may be implicative, or perhaps may not be implicative, and, second, the standards of proof by which such implication may be established. To put the question another way, what is required is a theory to account for simultaneous developments in knowledge theory and poetics, and if possible also to account for long-term historical changes in both.

There are obviously many such theories, but for the present discussion it seems most useful to examine that proposed by Ong and reflected in some other essays on modes of perception. This theory assumes that human perception operates according to certain internalized models, which are analogous to sensory experience, but which enjoy a certain existential independence from the mind. For example, they alter more readily with historical circumstances than with individual experience. They can be understood as physical objects, or as forces, to the extent that they "compete with" or "succeed" one another. According to Ong, they have an impact on philosophy, on literature, and on daily communication

[13] Note 4, supra.

habits. This theory is related to Ramism in two important respects. First, it is a theory analogous to Ramism, and to Ramist method in particular, in that it attempts to explain cognition as a spatially conceived operation. Second, it represents Ong's attempt to explain Ramism as an historical phenomenon, as part of a "shift" in modes, an explanation which is also possible, although in different terms, in Thomas Kuhn's theory of scientific paradigms.[14]

Ong suggests that man's senses provide the most important internal perceptual models, and that these models interact with ordinary communication experiences, so that information is sorted and transmitted to the mind more or less according to the media man uses. Early man communicated verbally, and for a long time, even after the invention of script, verbal communication remained the most compelling model, so that even written communications assumed the advantages and limitations of the spoken word. After the invention of printing, the eye, which according to Ong views things more analytically and statically, became the most compelling model, and it is possible for Ong to "view" aspects

[14] Relevant bibliography suggests that this approach is derived from the broadly influential work of philosophers and social scientists writing through the First World War. The present writer confesses to only an indirect knowledge of these sources, and offers the subsequent remarks tentatively. They are valid only within the purview of the studies cited.

For Ong, see Walter J. Ong, S. J., The Presence of the Word: . . . , The Terry Lectures (New Haven and London: Yale University Press, 1967). Many aspects of his theory are foreshadowed in his Ramus, Method, and the

of the scientific revolution and of the Reformation as expressions of the visual mode. Ong also suggests the possibility of a third, post-electronic age, analogous to that proposed by Marshall McLuhan, which to Ong involves a return to the oral-aural mode, but the historical evidence for this is less clear.[15]

For present purposes, Ong's most "telling example is his rather hostile critique of Locke's Essay Concerning Human Understanding.[16] Locke sees the mind as a camera obscura --a dark room into which nothing can enter if not admitted by the senses. This is a visualist's dream of the mind; it is a static, empty space, designed only for the perception of a static, empty universe. Of course the mythological impact of the metaphor is reinforced by the subsequent development of an actual camera obscura, which does function like an eye. Eye equals mind equals dark little room. Locke's position is disturbing for Ong, as the latter is to some extent concerned with the rehabilitation of Catholic thought,

---

Decay of Dialogue (Cambridge, Mass: Harvard University Press, 1958).

For Kuhn, see Thomas S. Kuhn, The Structure of Scientific Revolutions, 2nd edition ([Chicago]: University of Chicago Press, [1970]). The second edition should be consulted for the Postscript, which contains a summary of the critical reactions to the first appearance of the essay, with appropriate modifications.

[15] For McLuhan, see Ong, The Presence, 90-91, et passim.

[16] Ong, The Presence, pp. 66-69.

and his reaction to Locke is analogous to Milton's reaction to Hobbes.[17] There is no room in Locke's world for spiritual phenomena, because there would be no way to perceive these phenomena even if they did exist. Ong is particularly concerned with what he calls the "Devitalization" of the universe.[18] Not only is the visualist thought static, but it tends to be prosaic, factual, and nonpolemic. The gradual ebbing of polemic, in particular, represents a threat, as value judgements, in Ong's view, are intrinsically polemical.[19] The devitalized universe is an amoral universe.

Ong is ambiguous towards Ramus, since he must recognize Ramus' use of graphic models and his wide influence, but prefers to think of him as an example of the aural vitality which persisted into the Renaissance. He avoids the difficulty by saying little about Ramus in The Presence. (He does mention him as an example of a very polemical--hence, verbal--man.[20] In Ramus, Method and the Decay of Dialogue, on the other hand, he demonstrates Ramus' vigorous reaction to the potential of the new print medium. The road from Ramus to Locke may be a long one, but it is one that can be traced, particularly if the Ramist influence on Hobbes is considered established. But Ong neglects the essentially static visual nature of Method and of the arrangement of

[17] Whom Ong also mentions in this connection. The Presence, p. 67.

[18] Ong, The Presence, pp. 162, 227, 231.

[19] Ong, The Presence, pp. 193-231, et passim.

[20] Ong, The Presence, pp. 216-17.

axioms, and prefers to concentrate on Ramus' defensive writings. A further complication should be noted. Ong apparently thought out some aspects of his theory while working with Ramist texts. In some respects, his own theory is "visualist" and "Ramist" both; he pretends that perceptual modes are cultural constants, as long as they persist, and that the individuals in a culture can be considered as internalizing a given mode of perception at any particular time. If there be a visual or oral-aural model, surely that model must "exist" in some persistent sense, even as the categories of Aristotelian logic, or the dichotomies of Ramism, had an independent conceptual identity. Ong is a modern Realist. He overestimates the intensity with which his hypothetical modes can grip a culture, and consequently ignores contradictions--as when he says in one place that logic is the product of the alphabetic (visualist) Middle Ages, and in another that logic is the tool of the polemical (oral-aural) Middle Ages.[21]

A similar theory, although one based on a very different set of models, is proposed by Thomas S. Kuhn in his essay, The Structure of Scientific Revolutions. Kuhn's work is based on his earlier unpublished survey of the history of science, particularly of the conditions surrounding broad

[21] Ong, The Presence, p. 45; 212-15. If the reference on p. 45, "It appears no accident that formal logic was invented in an alphabetic culture," is actually to classical Greece, the contradiction is even more glaring. Greece may have been "alphabetical," but was more "oral-aural" in Ong's terms than the Middle Ages.

changes in scientific theory and the opening of new phases of discovery. Kuhn distinguishes between "normal science," which is the relatively routine solution of "puzzles" proposed by the terms of widely accepted theories, and "revolutions," which are the discarding of such theories and the difficult evolution of completely new conceptual frameworks, often in an atmosphere of uncertainty and intellectual trauma. (Kuhn does not say, but suggests, that not all scientists are capable of dealing with a true revolutionary crisis in their subject.) Behind each revolution lies a shift in what Kuhn calls "paradigms," anteconceptual mechanisms analogous to Ong's visualist and oral-aural modes.

The paradigm is not a completely defined phenomenon and has to be studied primarily through its effects. It is, first, social in that it operates throughout the scientific community. Each scientist may individually decide whether or not to accept a new theory, but the effect as a whole is that the community reaches a new consensus and adopts a new paradigm.[22] "The decision to reject one paradigm is always simultaneously the decision to accept another, and the judgment leading to that decision involves the comparison of both paradigms with nature and with each other."[23] Subject-

[22] This presupposes a scientific community capable of independent and unbiased decision. See Kuhn, pp. 167-69, for a useful definition of the scientific community.

[23] Kuhn, p. 77.

ively, the shift in paradigms may be compared to the successive imposition of different Gestalten on sensory phenomena, particularly in the way in which phenomena previously not amenable to scientific analysis are perceived, but Kuhn hesitates to conclude that paradigms are intrinsically related to Gestalten.[24] Paradigms are never taught explicitly (although there is, Kuhn implies, some necessary relationship between paradigm and explicit theory), but communicated in the laboratory from master to student in the process of examining particular examples.[25] It is only in times of revolution that scientists resort to philosophical analysis, perhaps in an attempt to crystallize and deal directly with the internal reorganization they feel to be taking place.[26]

It would be pointless to present in detail the various approaches which Kuhn makes to his central subject, and in any case his essay is certainly worth independent examination. Among his tentative conclusions, he suggests that "knowledge" would be a fair word for the paradigm--not knowledge that we know, but how we know. It involves the neural interface between sensation and cognition, and at present cannot be more precisely defined.[27] But it is just because of this limita-

[24] Kuhn, pp. 85, 114-15.

[25] Kuhn, pp. 45-46; "Tacit Knowledge and Intuition," Kuhn, pp. 191-98.

[26] Kuhn, pp. 87-88.

[27] Kuhn, pp. 192, 196, et passim.

tion on his understanding of the operations of the paradigm in the individual that Kuhn must resort to historical examination. Like Ong, he succeeds in creating the impression that he is talking about independent entities. For although the conflict and succession of paradigms first takes place in individually creative minds, these minds are after all dealing with statements about an observed external world. The revolution is therefore projected outwards, on to the phenomena or on to the "laws of nature," and the paradigms themselves seem to shift in ways not subject to individual control.[28]

Historically, one may define a science as a sequence of related paradigms. Kuhn recognizes a pre-scientific state in which there are many competing hypotheses about a given set of phenomena, all of which enjoy comparable prestige. However, after a certain amount and kind of definitive work has been presented, a single hypothesis occupies the whole speculative field and establishes the conditions under which subsequent work is pursued. As it happens, Kuhn's first example of such a development is the work on optics which the young Newton was developing at Trinity College when Milton published the Artis Logicae.[29] Once such a theory

[28] This is not Kuhn's position, although he might endorse it. For a related discussion, see Kuhn, "Paradigms as the Constellation of Group Commitments," pp. 181-87.

[29] Kuhn, pp. 11-13.

(and its paradigms) is established, normal science begins. One indication that this has occurred is that the generally cultivated reader, with no special training, no longer can follow technical arguments in the new science.[30] It is possible to date clearly, if not very precisely, when normal science begins in any particular field. Astronomy and mathematics have been normal sciences since at least classical times. Economics and psychology possibly, sociology and history certainly are not yet normal sciences. In Milton's day, in the years between the publication of Hobbes' De Corpore and Newton's Principia, the emergent normal science was physics.

Ong's and Kuhn's theories suggest not only that internalized models change with historical circumstances, but also that these changes are irreversible, and that therefore there is no progress in human epistemological systems. In fact, although Ong has no love for Marx,[31] his view of intellectual history has strong analogies with the Marxist view of political history. The modes of perception substitute for economic forces, but the progression they cause is logical, universal, inevitable, presently incomplete, but ultimately apocalyptic, like those in Marx.[32] It is easy to ex-

[30] Kuhn, pp. 19-22.

[31] See Ong, The Presence, p. 241, for a marginal reference to Marx. Where other traditions are "oral-aural," Marx is "feudal."

[32] Ong's last chapter, "Man's Word and God's Presence,"

plain the significance of Milton's work in this historical framework. He wrote at a time which is recognized as transitional in both theories. Ong would say that the perceived universe was being "devitalized" in the shift to the visual; Spragens, applying Kuhn's theory, calls this "the disappearance of a logos from nature," and describes Hobbes's reorganization of Aristotle's metaphysic, in a Gestalt-like paradigm shift, so that all descriptive devices except the teleological are retained.[33] Milton perceived the contemporary revolution, translated it into philosophical terms, and set himself against it, rather as the intellectual of some ancien regime might set himself against the dialectic of history. The Artis Logicae, and perhaps the other writings as well, were gestures against the new mode of thought, outmoded even as they appeared. In the process, Milton's Ramism became an inconvenient piece of baggage, as it had affinities both with the ebbing oral-aural tradition of the Renaissance (Kuhn: the pre-Newtonian metaphysic) and with the rising visualist sensorium (Kuhn: the Newtonian metaphysic and paradigm). Milton attempted to modify the work meaningfully, but, hampered by age, blindness, and perhaps by more important claims on his energies, produced careless and incon-

---

attempts in somewhat general and evasive terms to connect Ong's sensorium theory with his understanding of the revealed Word. The Presence, pp. 287-324. Homiletics creep in.

[33] Thomas A. Spragens, Jr., The Politics of Motion: (N. p.: The University Press of Kentucky, [1973]), pp. 41-47, 63, 70-73, 81, 82, 199, et passim.

sistent texts, which he published.

Such an analysis works well in terms of Milton's philosophical thinking, and is very helpful in view of the fact that his thought is fragmentary and arranged in subjects which are not always central to a post-Renaissance scholar. Milton's work on logic is also his epistemology; his theology is also his metaphysic. The analysis also helps the critic to examine Milton's poetry as an historical phenomenon. The epic is, for Ong, consistently a verbal form in its conception and execution, designed originally as a complex mnemonic formula to aid the unassisted speaker or singer.[34] Milton writes in this tradition, but with great concessions to the visual. (The division of the work into books and the provision of a plot summary, the Arguments, are the most obvious examples.) The richness of the imagery, the complexity of the vocabulary and syntax, and the range of the conceptual framework suggest that Paradise Lost is a work to be mastered with book, even for those devoted readers who may choose to commit it verbatim to memory.[35] Because of the prestige of the central myth, Paradise Lost cannot be told and retold with free variation like (in Ong's example) the surviving Yugoslavian epic

[34] Ong, The Presence, pp. 29-31, et passim.

[35] "Milton . . . seems to have no ideal of reciter and audience in mind for Paradise Lost; he seems content to leave it, in practice, a poem to be read in a book." Northrop Frye, Anatomy of Criticism: Four Essays (New York: Atheneum, 1966), p. 247.

or the Homeric epics. A more convenient system would be to master the Arguments first, and then to use the scene references and character names as visual keys to individually mastered passages.

But Milton's epic is powerfully drawn back to its oral ancestry by virtue of its historical subject and narrative form. All narrative takes place in time, and though one may recall a narrative as a series of related static states or images (as when one speaks of "the so-and-so episode in such-and-such a work"), it is necessarily a fluid experience in the reading or telling. This tendency is exaggerated by the sweep of events in Paradise Lost, which is not only history but a statement of the context of history.[36] There is therefore an intrinsic tension between the subject matter and the genre on one hand and the highly organized, contemplative style on the other. In De Doctrina Christiana, Milton has to deal with exposition, which can be fitted into a spatial framework more convincingly, but even there he resorts on occasion to narration. Paradise Lost is on the contrary a narrative slowed by complex expository devices (e.g., epic similes, abstract debates, lengthy set-place descriptions), still moving powerfully and unmistakably along its central plot line.[37] Readers who fail to come to terms with

[36] This feeling for the emotional thrust of events is to some extent expressed in The History of Britain.

[37] This expression is itself a visualist metaphor, and was perhaps not the terms in which Milton thought of plot.

the epic are those who approach it as a collection of devices without any unifying dynamic. Ong would probably call them readers of the visualist sensorium.

Paradise Lost, then, could be considered a work that bestrides two modes, or two eras, and succeeds in both. In this respect, as in so many others, it is unusual. If Ong's view of the historical development of the sensorium is valid, it seems reasonable to attribute the death of the epic, and of the serious stage tragedy, to the growth of visualism at the end of the Renaissance. Both epic and tragedy are genres with a traditional dependence upon the spoken word, and both ceased after 1700 to have broad appeal outside the scholarly community. The decay of both is exemplified by the heroic play of the Restoration. Milton was the last English writer who could write an epic without irony. The next great work in this form is Tom Jones. The picaresque novel, significantly, is a narrative genre much more adapted to the needs of a visualist audience. Because it is episodic, it becomes possible for the reader to think of each episode as occurring in a different "place," and this spatial metaphor is legitimized by the central metaphor of the novel, the journey. It may yet fall to Ong to trace analogies to Ramist method in the plots of the great novels of the eighteenth and nineteenth centuries.

The historical analysis thus establishes the problem which the literary critic must deal with: a tension between the visual and aural elements in the composed (not recited)

Renaissance epic. Ideally, the critic should be able to describe the anteconceptual elements and show in detail their effect on the work.

Some relevant suggestions are offered by Northrop Frye in his series of essays on Milton's epics.[38] Frye places Paradise Lost in the tradition of the Odyssey and the Aeneid, but not of the Iliad. The three epics share a circular movement from an ideal state (Ithaca, Troy, the presence of God) through a series of dangers and errors, back to the original state. (In the Aeneid, or course, Rome substitutes for Troy.) This movement does not appear circular because the epic begins in medias res, and only the last half of the cycle is shown in direct narrative, with the rest offered in flashbacks or predications. The epic epitomizes fallen man's double view of time. On the one hand, he views time as a linear progression, in which only the immediate present is knowable. On the other, he views it as a circle of renewal (as, for example, in the seasons of the year), a vision which is hopeful and positive.[39] In the telling, the epic narrative is linear, but retrospectively the experience can be contemplated as cyclic.

Frye summarizes his conception with the metaphor of a disk divided into twelve segments--the face of a clock, in fact, although he does not say so. God is at twelve. Seg-

[38] The Return of Eden: Five Essays on Milton's Epics ([Toronto]: University of Toronto Press, [1965]).

[39] Frye, The Return, pp. 14-15, 36, et passim.

ments one through four represent the two epiphanies of Christ, the creation of the natural order, and the creation of the human order. This first third of the cycle is embodied in Raphael's speech. Five represents "the conspiracy of Satan, ending in his pact with Sin and Death." This is of course also the beginning of the epic as read. Six is "The nadir of the action, . . . the tragic catastrophe, the fall," and is of course also the furthest point from God (twelve). Seven is the fall of the natural order, and also the end of the epic as read. Eight is the "re-establishing of the natural order at the time of the flood," nine the "re-establishing of the human order, when the law is given to Israel," and eleven the third and fourth epiphanies of Christ, the Incarnation and Last Judgment. Segments eight through eleven are presented in Michael's speech. The left and right, or ascending and descending halves of the disk mirror each other.[40]

This image, or rather the double understanding of time which it represents, makes it possible to reconcile the visual and aural elements in the epic. It also shows, however, that the anteconcept built into the structure of Paradise Lost--cycle--is emphatically not Ramist. In Ramism the arrangement of information is always open-ended, if not clearly linear; one returns arbitrarily to the starting point only to set out in a different direction. Method is supposed to exhaust the whole of a liberal art, but by cutting it into manageable units, so that the conceptual field is divided and

[40] Frye, The Return, pp. 19-21.

static. The important assumption in Ramist exposition is that time is an illusion. The reader seems to progress from point to point, but actually there is no progression; as was demonstrated earlier in the discussion of Method, the order of presentation is essentially arbitrary. The ideal of truth expressed by Ramists in the three laws of necessity stresses self-evidence and quick demonstrability. Narrative, however, is a slow and imperfect heuristic device, which assumes that complex states of emotion can be induced in the reader only by long and systematic exposure to the author's statement. The reader of Paradise Lost is like an ant at the tip of the hour hand on Frye's clock face. After he examines the whole face at length and in order, he may choose retrospectively to reconstruct the whole synthetically. But that is only an intellectual postscript to the reading experience.

Frye is, however, a conscious follower of Aristotle,[41] and, like the Ramists, he assumes that his classifying concepts have an independent existence which may be described with graphic models. The disk or "clock face" of Paradise Lost also figures as Frye's central metaphor of the Theory of Myths, and as the focus of analysis for each of three genres (drama, epos-lyric, and prose narrative). All of Frye's disks, of course, do not mean the same thing. The "clock face" of Paradise Lost describes a genre; the cycle of myths describes an order of genres. Frye's treatment does not em-

[41] Frye, Anatomy, p. 13.

phasize the distinction between these two kinds of abstraction, but it should be clear that the ordering of imaginative narrative space within a work, and the "orientation" of different works with respect to a general typography of literature are distinct concepts. With some qualifications, it is possible to apply both concepts to Milton's thinking about genre.

C. S. Lewis' reading of the Reason of Church-Government shows that Milton, like Frye, conceived of genres as self-existent entities, although he does not suggest a graphic model for arranging them. Most of the distinctions which Lewis finds in Milton's speculations are dichotomies, and this suggests that Milton would have found method a convenient mode of arranging them.[42] The poet must at any rate make a choice among those entities, and the choice implies commitments both positive and negative. Lewis suggests that these entities may be considered forms in the philosophical sense related to "formal cause." The word also implies a graphic metaphor--for Lewis, even, an anthropomorphic one.

> [E]very poem has two parents--its mother being the mass of experience, thought, and the like, inside the poet, and its father the pre-existing Form (epic, tragedy, the novel, or what not) which he meets in the public world . . . . Materia appetit formam ut virum femina. The matter inside the poet wants the Form: in submitting to the Form it becomes really original, really the origin of great work. The attempt to be oneself often brings out only the more conscious and superficial parts of a man's mind; working to produce a given kind of poem which will present a given theme as justly, delightfully,

[42] C. S. Lewis, A Preface to Paradise Lost (New York: Oxford University Press, 1961), pp. 3-4.

> and lucidly as possible, he is more likely to bring out all that was really in him, and much of which he himself had no suspicion.[43]

The reader may recall that, as quoted by Duhamel, Milton also refers to "the form and end" of an art, particularly of logic.[44] "End" would refer to final cause. If Lewis's use of "form" may be accepted as reflective of Milton's intent in the Reason of Church-Government, it seems reasonable to conclude that Milton thought of literary genres and of the liberal arts as similar orders of being. Both are abstract, independent entities called into realization by purposeful ("and end") human activity. For Milton, then, the liberal arts of discourse would play towards poetry, and, possibly, the individual directives of method would play the same role as the individual conventions of a genre.

Frye's analysis of the internal imaginative space of the epic has already been described. Paradise Lost exemplifies Frye's "clock face," but it also shows some spatial conventions which may have been drawn from dramatic sources. The "clock face" is essentially a closed line, on which linear progress implies moral progress, but tangential motion is immoral and disobedient. Thus it is wrong for Odysseus to linger with Circe or Aeneis with Dido. Frye shows that the moral motion in Paradise Lost parallels that in the Odyssey and Aeneid, but does not account for the fact that, if the epic

[43] Lewis, p. 3.

[44] See Chapter II, p. 60-61, and Preface, supra.

is taken as a closed line, there is no single progatonist. The story of Adam and Eve is emphatically not a closed line, but open-ended. The epic does not end on a note of triumph, as do the Odyssey and Aeneid, but on a masterly note of mature ambiguity.

It is possible to explain this distinction between Paradise Lost and its classical models if one recalls that the cosmology of Paradise Lost is an imperfect one. Ideally, so to speak according to the original blueprints, there should be only two realms: heaven and earth, with free intercourse between. Actually there is a third, hell, and the downfall of the natural order on earth is at least potentially implicit in it. It at first seems difficult to move from hell to earth or vice versa, but by the end of the narrative that difficulty has been erased, while heaven has become far more inaccessible. Adam and Eve's free choice, however, is expressed graphically by their approximately equal access to the two transcendent zones. After they make their choice, of course, one way lies more open than the other.

This imperfect three-part space is analogous to that which Roland Barthes describes in his discussion of Racinian tragedy. Heaven is Racine's Chamber. "[V]estige of the mythic cave, it is the invisible and dreadful place where power lurks." The Eden where Adam and Eve make their fateful decision is analogous to Racine's Antechamber.

> The Chamber is contiguous to the second tragic site, which is the Antechamber, the eternal space of all subjections, since it is here that one waits. The antechamber (the stage proper) is a medium of transmission;

> it partakes both interior and exterior, of Power and Event, of the concealed and the exposed. Fixed between the world, a place of action, and the Chamber, a place of silence, the Antechamber is the site of language: it is here that tragic man, lost between the letter and the meaning of things, utters his reasons. The tragic stage is therefore not strictly secret; it is rather a blind alley, the anxious passage from secrecy to effusion, from immediate fear to fear expressed. It is a trap suspected, which is why the posture the tragic character must adopt within it is always of extreme mobility . . . .

Racine's third space, the Exterior, is more generalized, and Barthes identifies three subdivisions: death, escape, and event, the last also described as "the trivial kitchenry of doing."[45] Milton's hell represents the first, and the fallen earth represents the other two. To put Adam's problem in Racine's terms, he has the choice of leaving the Antechamber for the Chamber, or for the Exterior, which has various inessential subdivisions. As in a play, Adam must ultimately go somewhere. The decision-making process cannot be postponed indefinitely. In that respect, his question is "Where shall I go?" But as he was apparently first placed in the Antechamber in order to mature his decision-making capacity, the short-run question is "Shall I go?" and the preferred answer, which he rejects, is "No."

Barthes' and Frye's spatial metaphors are complementary. The distinction is that to perceive Paradise Lost as parallel to the Aeneid and Odyssey, one must do what Frye does: dissect the epic and reassemble it strictly according

[45] Roland Barthes, On Racine, trans. Richard Howard (New York: Hill and Wang, [1964]), pp. 3-8.

to chronology. The analogy then becomes clear. In its actual narrative order, however, the epic has more in common with the Iliad, and hence with tragedies set in a single place, in which the journey does not figure as a plot element. It is true that Paradise Lost starts in medias res, and that one of the first actions described is Satan's journey, but this is of great importance only if Satan is taken as the protagonist of the work. What Milton has done is to relate an epic through a tragedy, or, more precisely, to fit the design of an Odyssey within the compass of an Iliad. To do so he has to adapt tragic conventions to the epic--for example, Messengers (literally, ἄγγελοι) who relate offstage events, and a heavenly Chorus of which God is the principal voice. In Ong's terms, all the genres involved in this complex are oral-aural, but Ong might have added that the work represents a new level of complexity achieved through a partly "visual" synthesis. That is, Milton would probably not have attempted to draw so freely and richly from different traditions, had he not known that his poem would be presented in a form in which it could be studied and restudied carefully.

Milton's generic experiment, however, has in common with Ramism only the very general principle of equating physical space with internal phenomena. If, as Frye's analysis suggests, this principle was accessible to Milton through literary examples, it is not even necessary to assume that

Milton learned it through Ramism, although he conceivably could have recognized it there. The reverse actually is more likely: Milton became interested in Ramism because it appealed to tendencies which had been established in him after studying classical literary texts. But even this would be a tenuous connection. The best that can be said is that there is evidence of Milton's interest in spatial relationships in both his philosophical writings and in his master work. The prior cause of this interest remains undetermined.

Before Milton's attitude towards Ramism can be finally defined, several large contextual questions, all of them too ambitious for a dissertation, must be authoritatively resolved. The first is the difficulty that the critic must at present deal with anteconceptual phenomena in a vocabulary that is ill defined, and dangerously metaphorical, since the phenomena themselves are really metaphors. When the critic speaks of "paradigm," "sensorium," or "myth," he may claim to be able to recognize an example of the species, but the definitions are not satisfactory. The terms are simply tags, partly visual, partly conceptual, and no more solidly related to a theory of psychology than is Ramus' method. It is at least clear that an anteconcept perceived by a student of anteconcepts (Ong, Kuhn, or Frye) is not the same as an anteconcept unreflectively employed by a thinker (Homer, Newton, or Milton). The process of thinking about anteconcepts

has created a new order of abstraction, which may possibly itself be defined as an anteconceptual shift. The differences between "paradigm" and "theory," "sensorium" and "perception," "myth" and "story" have not been sufficiently explored.

The working out of these complex problems will probably also involve some resolution of the question of the historical progression of anteconcepts. Both Ong and Kuhn recognize such a progression, but because they examine different traditions they find that the conceptual shifts lie at different points and take different forms. Frye prefers to assume that his proposed structure of myths and genres, or at any rate some such structure, is universally valid.[46] Changes do obviously occur in anteconcepts, but the extent to which they are intrinsic or superficial, reversible or irreversible, attributable to this or that set of historical circumstances, or attributable to none, is yet to be determined. The difficulty is enhanced by the fact that all three approaches cited to some extent examine the evidence selectively. Frye, for example, consigns a vast section of the written heritage to "Non-Literary Prose," a category which it does not seem urgent to fit closely into the rest of his system.[47] Kuhn deals with science as understood by a small, well defined community of scholars, and not with the

[46] Frye, Anatomy, pp. 343-48.

[47] Frye, Anatomy, pp. 326-31.

culture at large.[48] Ong is the most eclectic, but he makes startling omissions. For example, he cites 1700-1900 as the period of the predominantly visualist sensorium, but forgets even to mention that this was also a period of great achievement in music. Granted that the achievement was made possible by visualist innovations in the inscription and distribution of music, the complexity and popularity of the art form still must be accounted for.

A study of Milton's Ramism also raises the more specific issue of the relationship between philosophy and poetry. If both are in part the products of anteconceptual thinking, are these necessarily the same anteconcepts in each case? Can philosophical propositions be transmuted into poetic statements? The evidence seems at present to indicate that the transition between these two realms is difficult, and that the materials involved are distorted beyond certain recognition.[49] But Milton's work deserves further reading in the light of this problem, particularly as the work of other poets and thinkers is subjected to a similar analysis.

[48] Kuhn, pp. 167-69, et passim. Cited in note 22, supra.

[49] This remark is itself a spatial metaphor, couched in the contemporary clichés of criticism. See next sentence for a visualist cliché.

APPENDIX A

MILTON, KECKERMANN, AND UBIQUITY

It was noted briefly in Chapter I, supra, that some theological questions intrude themselves into Milton's discussion of secondary modals. This is so because both the theological and logical issues are different aspects of the same question. That question is, to what extent can something predicated of a subject also not be true of the subject? The three secondary modals which Milton recognizes (exclusives, exceptives, and restrictives) are designed to cope with that difficult class of phenomena which are true of the subject only under certain conditions but are true to the extent that they seem to conform to the laws of necessity. For example, "the only pleasure of a philosopher is to speculate" is an exclusive; "the emperor Frederick is red with respect to his beard"[1] is a restrictive.

In theology, however, many qualities and relationships are transcendental, and this makes application of the secondary modals more difficult. Keckermann, for example, objects to the proposition "Only the father is true God"

[1] Bartholomaeo Keckermanno, Systema Logicae Tribus Libris Adornatum, . . . (Hanovae: Apud Haeredes Guilielmi Antonii, MDCXIII), pp. 333 and 338.

because this seems at first to suggest that the Son and the Holy Spirit are not true God. The proposition, he asserts, excludes only "those things to such an extent opposite, that is, idols and false gods," but not the "concomitantia" of the subject.[2] Milton, on the other hand, asserts that the truth of the proposition is not conditioned by such distinctions. He is apparently motivated on Christological grounds to draw a distinction between the Son and the Father, and he does so by claiming that the Son is not a concomitant. He bases his objection on John 17.3.[3]

A similar question is raised by the doctrine of Ubiquity, which held that Christ's risen and glorified body was everywhere at all times. The metaphysical difficulty is that this implies that Christ's body was body except in so far as it is ubiquitous (an exceptive). Put more generally, it asserts that Christ's body was immanent, except to the extent that it was transcendent. The doctrine of

[2]Keckermann, p. 333: "Huius [exclusives] Canon unicus est: Exclusiva subiecti non excludit concomitantia.
"Vt: Solus pater est verus Deus; hic non excluditur concomitans, filius & Spiritus sanctus, sed tantum vero Deo opposita, id est, idola & falsi dii. Sic cum dico, Tantum homo loquitur, non excludo infantem vel alios in singulari, sed tantum ea quae non sunt homo."
Compare Milton's briefer quotation, Gilbert, p. 314.

[3]"17. These words spake Jesus, and lift up his eyes to heaven, and said, Father, the hour is come, glorify thy Son, that they Son also may glorify thee. . . . 3. And this is life eternal, that they might know thee the only true God, and Jesus Christ whom thou hast sent." The Parallel New Testament Greek and English: The New Testament of Our Lord and Savior Jesus Christ (Oxford: Oxford University Press, 1882), pp. 468-70. The text quoted is the 1611 version.

Ubiquity was related to the nature of the Host, and attracted much attention. It is impossible to pinpoint Keckermann's theology on the sole basis of the Systema Logica, but he does inveigh frequently against the Ubiquitarians and uses their arguments as examples of fallacies. The first and most important canon of restrictives is that "Praedicatum, seu adiectum contradictorium, nulla limitatione subiecto conciliatur."[4] That is, "something contradictory added or predicated cannot be reconciled to the subject by any limitation." This statement is in a form opposite to Keckermann's canon cited just previously, but the implications are the same: as the subject implies its identities, so does it not imply its non-identities.

> Idem sentiendum de limitationibus seu distinctionibus Ubiquitariorum, quando explicaturi; Quomodo quaedam creatura, videlicet humana Christi natura, sit aeterna, omnipotens, infinita & omni praesens, dicunt non esse quidem talem per se, sed κατ' ἄλλο , & vi unionis personalis: nō τῷ εἶναι , sed τῷ ἔχειν : non κτήσις ; sed χρήσις ; non naturaliter, sed personaliter; non modo naturali, sed modo maiestatis, non φυσικῶς , sed ὑπερφυσικῶς ; non subjective, sed communicatiue; & si quae possunt esse eiusmodi aliae distinctionum inanitates, omnes natae ex ignorantia huius utilissimi canonis; . . .[5]

More simply, if the subject of an axiom is Christ's human nature, no restrictive can validly predicate anything transcendental of it. Milton does not disagree with Keckermann's stated principle--"What more obvious can be said?" Instead

[4]Keckermann, pp. 338-40.

[5]Keckermann, p. 339.

he switches his irritation to those "who by interposing some little distinctions contend that in the Lord's supper an accident can exist without a subject, which is contrary to reason."[6] In this discussion Milton seems to be assuming a premise like the following: Just as in an axiom the subject ("Christ's human nature") cannot be alienated from the things appropriately predicated of it ("mortality," "finiteness"--the quotation marks emphasize that these are terms in an axiom), so in real life the subject (Christ's blood and body) cannot be alienated from the accidents inherent in it (the Sacrament). Milton then more clearly rejects the premise of the Ubiquitarians: "Christ can have a human nature and an infinite body."[7] Milton therefore agrees with Keckermann on this theological point, but sneers at the simplicity of his approach. Theologically, Milton asserts the force of the distinction between Christ and the Father and Holy Ghost, and argues that the limitations of Christ's human nature must be emphasized. Metaphysically, he asserts the inalienability of a subject from its accidents. Logically, he affirms the independence of things from the manipulations of language, and rejects an application of an otherwise useful device which has the apparent effect of creating a logical paradox.

[6]Gilbert, p. 315.

[7]Gilbert, p. 317.

APPENDIX B

THE ORIGINALITY OF THE ARTIS LOGICAE

If the Artis Logicae is closely derived from other Ramist sources, as has been assumed and to some extent demonstrated above (Chapter I), to what extent can it be considered a product of Milton's own hand? J. Milton French, Allan Gilbert, and T.S.K. Scott-Craig have made note of the relationship between the Artis Logicae and Downame's Commentarii.[1] But it should be noted that Ramist assumptions about the nature of a liberal art or of the axioms that compose it encourage the scholar to imitate work that has already been done in the field. The axioms are considered established. The scholar adds further remarks and clarification, making allowance for the fact that the pure axiom, although instantly recognizable as true, is not so easily applied to practical affairs of the imperfect intellect. So although there is an abundant outpouring of Ramist logic textbooks, they should all be similar in structure, and competitive only with respect to the usefulness and accessibility of the explanations. This emphasis is reflected in the typographical convention which Milton and his sources use: the axioms are quoted in

[1] See Chapter I, p.3, note 2, supra.

italics, while the explanatory material is in ordinary type.

One should therefore not be surprised to find that Milton's table of contents and chapter headings are similar to Downame's. But just how far did Milton's borrowings go? A partial answer to this question is embodied in the notes set forth below. They should be used in conjunction with Gilbert's still useful volume XI of the Columbia Milton. The numbers on the left margin refer to pages in this edition of the Artis Logicae. All the numbers are even, as the Latin text is printed only on the verso pages of the edition.

The notes cover Milton's and Downame's chapters on predication, chapters III to XXXII in both works. This section has been selected because the problem of predication is theoretically important and because the subject calls for many examples and for relatively straightforward explanation. Two kinds of similarity between the two texts are recorded in the notes. First and most important, scholarly quotations and references which are similar or identical in Milton's and Downame's texts have been listed; hopefully, all the important scholarly references which are similar or identical in Milton's and Downame's texts are accounted for in these notes. Second, passages in which Milton has obviously imitated or copied Downame's exact use of words are cited. These are not intended to be

an exhaustive comparison, as the section which has been surveyed is fairly lengthy, and there are many cases of phrases which may or may not be deliberate imitations. Debatable cases and very short parallels have been ignored. Ramist axioms, quoted conventionally in italics, have been considered as "attributed," and not cited. Short sentences are quoted as a whole. Longer passages are indicated by the first and last two or three words, separated by an ellipsis. This has made the notes shorter, but has the disadvantage of making it difficult to estimate the length of the borrowing. The length of Milton's passage can of course be ascertained from Gilbert's text, but the reader will be obliged to return to Downame's edition to see how the material is arranged there. The assumption is that the whole of the cited passage has been borrowed from Downame, with only minor editorial revisions, or none at all. In many cases, however, the phrases or sentences which Milton uses are separated by other material in Downame's work, which is much fuller and more leisurely than Milton's. Every effort has been made to note accurately the pages in Downame's text (1605 edition at Frankfurt) on which the cited phrases occur. A few examples from Downame's text have been quoted at length to give the reader a partial basis of comparison without the trouble of referring immediately to Downame. The final refinement of this comparison would hopefully be the work of

the forthcoming Yale edition of the Artis Logicae.

The reader will note also occasional references to Richardson's The Logician's Schoolmaster, particularly with respect to Downame's quotations from classical Latin literature. The relationship between the three works in this area is instructive. It very often happens that Downame will quote a passage from Virgil, Ovid, or Cicero at considerable length, Milton will quote the passage more briefly, and Richardson will quote the same passage more briefly still. It is of course theoretically possible that all three were resorting to a common source, and happened to select the same passages for examples. But it is also the case that Milton's and Richardson's quotations are shorter than Downame's. Also, when Milton's quotation is shorter, he will often break it off with an "&c," which he will not do when the quotations are of the same length in both works. Richardson also refers to Downame (and to Keckermann) in his work, so he is at least familiar with the earlier text.[2] Finally, it should be noted that The Logician's Schoolmaster was published during Milton's fourth Cambridge year, by a Cambridge professor (Trinity) whom Milton may have known or heard lecture.

The relationship between the three texts therefore seems to be this: Milton became acquainted with Richardson's

[2] See Alexander Richardson, The Logician's School-Master . . . (London: Iohn Bellamie, 1629), p. 212, as cited in this Appendix in the note to p. 256, infra, and passim.

work while he was at Cambridge or subsequently, and also with Downame's text (which is authoritative and readable) then or subsequently. When he decided to do his own text on logic, he conceived it as a work about the length of Richardson's, but incorporating more of Downame's theoretical material, and hopefully therefore short enough to be digested by younger students, but more impressive as to scholarship. Richardson's work in fact seems to be quite sound, but Milton does not seem to have followed him very closely, perhaps because he (Milton) was working in Latin. Instead he quotes from Downame extensively and without attribution, and borrows almost all of his scholarly quotations from Downame, in some cases rephrasing them slightly, altering the context, or translating from the Greek. He does seem to follow Richardson in his choice of literary quotations from Downame, for more often than not the quoted passages occur in both works. Where he finds himself dissatisfied with Downame's treatment of an issue, he either composes originally, or resorts to Keckermann for material, as shown in the above discussion and in the notes below.

The Ramist axioms, the chapter divisions and headings, the bulk of the scholarship, and a significant proportion of the prose of the Artis Logicae have therefore been borrowed from Downame. Milton's departures from Downame's general line of argument and order of presentation do occur, but they are brief. The obscurity of parts of his

theoretical discussions can be explained by the fact that these are hasty digests from Downame, who is almost invariably fuller, clearer, and more thorough in his exposition. (Downame's text seems to be about twice the length of Milton's.[3]) In a sense Milton's exposition is more orthodoxly Ramist than Downame's. He appears to write his chapters around the important axioms he selects from Downame, giving only enough explanation, and that not always cogent, to stifle possible objections. (Downame often deals with objections fully, first stating them under "Objection" and then a reply under "Response," almost as if in a dialogue.) He borrows literary examples and classical citations from Downame in about the proportion they occur in Downame's text, but quotes them more briefly, sometimes rearranging the order for no apparent reason. Occasionally he will simply run together a series of Downame's comments.

The Artis Logicae therefore cannot be considered an original work in all respects. Its value to us should lie in the insight it affords into Milton's reading habits and his use of sources. A comparison of the two texts shows what Milton conceived as important and what as unimportant, and an examination of Milton's editorial changes yields an

[3] 749 octavo pages in Downame's 1605 edition at Frankfurt to 223 duodecimo pages in this edition: Joannis Miltoni Angli, Artis Logicae Plenior Institutio . . . (Londini: Impensis Spencer Hickman, Societatis Regalis Typographi, ad insigne Rosae in Caemeterie, D. Pauli, 1672).

understanding of what he listened for in Latin. This detailed list is offered as a first step towards a more complete exploration of such relationships.

Citations of classical works are given in the detail in which they occur in the original texts; e.g., if Downame refers to "Aristotle" generally, or to "Physics 2.6" specifically, Milton will do the same, and the citation here follows Milton's detail. There has been no attempt to confirm the accuracy of Downame's quoatations by reference to texts which he might have used, or to modern standard editions of these authors. A very general reference is noted by "s. l."--sine loco. Milton's quotations usually follow Downame typographically; where Downame uses an abbreviation or a Greek letter in numbering, Milton will do the same. Downame is inconsistent, but Milton is inconsistent in the same way in the same cases. In the present notes the name of the author of the work is inserted, when possible, even if it does not occur in the original texts, and titles have been modernized, following the examples of Gilbert's English version. Where Downame's chapter headings differ from Milton's, both are recorded.

III. De Efficiente, procreante, & conservante

(Downname: "De causa efficiente, & c.")

30 Cicero, De Fato. Downname, p. 96.

30 Cicero, De natura Deorum, 1. Downname, p. 97.

32 Aristotle, Physics 2.7. Downname, p. 102. (Where Aristotle is quoted as follows: "tot enim numbero τὸ διὰ τί comprehendit." See also p. 103, where Aristotle is discussed further [Physics 4.7] in terms similar to Milton's.

32 Cicero, Topics. "primus est locus rerum efficientum, quae causae appellantur." Downame, p. 96.

34 Cicero. De Fato. "causa est quae id efficit, cujus est causa." Downame, p. 96.

IV. De Efficiente sola, & cum aliis

34 Cicero, De partitione oratoria. ". . . generis vis . . . causa dicatur." Downame, p. 114.

34 Virgil, 9 Aeneid. (Nysus) "in se factae caedis & culpam & poenam; quasi solus auctor fuerit." Downame, p. 116. Downame also quotes the verse "Me me . . . Nec potuit." Richardson, p. 85.

34 Cicero, Pro Marcello. "Et solitaria causa . . . variè adhibetur." Downame, p. 117. Richardson, p. 86.

36 Cicero, De natura deorum. "disputat nundum nunquam esse factum." Downame, p. 119. Richardson, pp. 86-87.

36 Aristotle, Politics 1.e "instrumenta sunt animata, vel inanimata." Downame, p. 116.

V. De Efficiente per se, & per accidens

38 Cicero, s. 1. "nulla vi . . . contra te." Downame, p. 126. Richardson, p. 88.

42 Aristotle, Rhetoric 1.10. "cùm dixisset . . . ex necessitate." Downame, pp. 126-27.

44 Hippocrates, s. l. The sentiment which Milton attributes to Hippocrates seems to be a general remark of Downame's, "cùm secundariam rei contingentis causam planè nesciunt: aut est ipsa occulta lateusqûe causa." Downame quotes Hippocrates as follows: "casus nullam videtur habere essentiam praeter nomen solum." Downame, p. 132.

44 Cicero, Topics. "Cùm enim . . . latenter efficit." Downame, p. 133.

44 Aristotle, Physics 2.6. Downame, p. 133.

44 Plutarch, De placitis philosophorum and De Fato. "ut casus quàm fortuna latius patest." Downame, p. 133.

46 Aristotle, Ethics 3.1. "In hoc . . . ignorantiam fiunt." Downame has "imprudentiam" for "ignorantiam." Downame, p. 135.

46 Ovid, Tristia 2. "Cur aliquid . . . casus habet." Downame, p. 135. Downame quotes the last two lines separately.

46-48 Cicero, Pro Ligario. "ignosce pater . . tuam confugio." Downame, pp. 135-36.

48 "Fortuna autem . . . nomen induxit." Milton seems to have misread the passage, with the result that he attributes to Lactantius a comment which Downame seems to attribute to Cicero. Downame first has the sententia about Fortune, but in the form of an unattributed quotation (which often implies that the comment is Ramus'). Then he has "Sic Lactantius: stultitia & error & cęcitas, &, ut Cicero ait, ignoratio rerum atque causarum fortunae nomel induxit. The marginal citation is "Instit. [utiones] 3.29." Milton makes it "apud Lactantium." Downame, p. 136.

48 Juvenal, s. l. "Nec inscite . . . coeloqûe locamus." Downame, p. 136.

48 Aristotle, Physics 2.4. "sunt nonnulli . . . divinus quiddam." Downame, p. 135. Downame inserts "autem" after "sunt," has "incerta" for "ignota," and ends with "tanquam divinius quiddam atque praestantius."

48 Cicero, Academic Questions 1. "providentiam Dei . . . ignorationémque causarum." Downame, p. 138 (fuller quotation).

48 Cicero, Pro Ligario. "fatalis quaedam . . . esse superata." Not quoted in this form in Downame. The Pro Ligario is cited by Downame, pp. 128-29 and 131, as well as 135-36 (see note to 46-48 supra).

50 Cicero, s. l. "alibi, datur . . . & voluntati." Downame, p. 129. (Marginal note: "De off.")

VI. De Materia

50 "Efficientem ordine . . . principium appelatur." Compare Downame, p. 138.

52 Cicero, Academic Questions. "materia ea . . . est, constet." Downame, p. 140.

52 Ovid, Metamorphoses 2. "Solis domus auro, pyropo, ebore, componitur." Downame, p. 142. (Downame also quotes the passage, "Regia solis . . . luminae valvae.") Richardson, p. 97.

52 Caesar, Civil War 1. "carinae primum ac statumina ex levi materia fiebant &c." Downame, p. 143. Richardson, p. 98.

VII. De Forma

54 "Efficiens enim & materia sub genere priore continentur, quòd in effecto producendo praecedunt; forma & finis . . ." Compare Downame, p. 143.

58 "Platonicam & Aristotelicam," s. l. Downame, p. 143: "definition Platonica apud Laërt," Aristotle, 2 Post[erior Analytics] 11, Phil. [Metaphysics] δ.2., and other citations of Aristotle passim.

58 "Quid autem . . . essentiâ, differat." With some rewordings, Milton follows Downame, but the "Evigilent hîc Theologi." is his addition. This peculiar way of directing the attention is more understandable in view of the fact that Milton is as it were making a comment on someone else's discussion from the sidelines. ". . . non autem communiter, . . . forma propriam." See Downame, pp. 145-46, passim. Scott-Craig notes this passage and compares it to p. 145 of the Frankfurt, 1601 edition of Downame; see pp. 3-4 of Scott-Craig's article.

60 "Ideoque hinc . . . nunc veniamus." In greatly reduced form, follows Downame's arguments, pp. 148-49.

62 Caesar, Gallic War 7. "muri autem omnes Gallici hac ferè forma sunt &c." Downame, p. 155. Richardson, p. 110.

62 Virgil, Aeneid 1. "est in secessu longo locus &c." Downame, p. 156. Richardson, p. 111.

VIII. De Fine

62 Aristotle, Phil. [Metaphysics] 1.3. "quarta causa est cujus & bonum: hoc enim generationis omnis finis est." Downame has "quarta autem causa huic oppositae est, cujus gratia & bonum" for the first clause. Downame, p. 157.

62 Aristotle, Physics, 2.2. "non omne . . . vel bonum rei." Downame, p. 158.

64 Aristotle, Physics 2.3. "τα δὲ ὡς τὸ [τελος] καὶ τἀγαθον [τῶν] ἄλλων το [μεν] οὐ ἕνεκα βέλτιον, καὶ [τελος] [ἕων] ἄλλων ἐθέλει [εἶναι]."
Downame does not refer to the Ethics. Downame, p. 158.

66 Aristotle, Phil. [Metaphysics] δ.24. "Hinc Graeci . . . Phil δ.24." Downame, p. 164.

66 Aristotle, Physics, 2.2. "rebus inquit, utimur, quasi nostra causa essent omnia: nam & nos quodammodo finis sumus." Downame, p. 166.

66 Proverbs, 16.4. "Deus propter se fecit omnia." Downame, p. 166, has "Deum esse finem, testatur sapiens ille, Proverb. 16.4."

66 "Omnium artium . . . bene ratiocinari." Downame, p. 166--but he has "bene disserere" for logic. See also Richardson, p. 164.

66 Aristotle, Phil. [Metaphysics] δ.24, and Physics, 2.7, 8; Plato in Philebo, s. l., Aristotle, De Part[ibus] 1.1. Downame, p. 164.

68 Aristotle, De Anima, book 2.4. Downame, p. 163.

68 Aristotle, Magna moralia 1.2. "finis alius est perfectus, alius imperfectus." Downame, p. 164.

IX. De Effecto

(Downame: "De Effectis")

72 Aristotle, Posterior Analytics 1.10. "Sic etiam . . . est causa." Cf. Downame, pp. 169-70: "κωλύει [γαρ] οὐδέν, (inquit Aristoteles) [τῶν] ἀντικατηγορουμένων. γνωριμώτερον ἐνιότε [εἶναι] τὸ μὴ αἴτιον, id est, nihil enim prohibet, quin eorum, quae inter se reciprocantur, notius interdum sit id, quod non est causa."

72 "Hujus loci . . . & vituperatur." Compare Downame, p. 176. Gilbert correctly shows this as a quote in italics in his English text (Patterson, XI, 73), but not in his Latin text.

74 Horace, "Epist. ad Torquat. Downame, p. 178" book 1. "Quid non ebrietas desigunt? aperta recludit, &c." Downame, p. 178. Richardson, p. 120.

74 Aristotle, Physics 8.3. "Scientias, inquiunt, ex Aristot. Phys. 8.3. & opiniones, motu uti omnes." Downame, p. 171.

74 Aristotle, 2 Top. c. 9 and 75; Aristotle 1 Post. c. 2, Keckermann, pp. 172-73. "Qualis causa, tale causatum," and "propter quod unumquodque est tale, illud est magis tale," are quoted from Keckermann; compare also Milton's examples and discussion, pp. 74-76, with Keckermann, pp. 171-73. Note that Milton introduces this paragraph with "Duos hîc canones"--not ordinary Ramist terminology.

X. De Subjecto

78 "Argumentum modo quodam consentaneum succedit." Dowmane omits the last phrase (p. 179).

78 "Modo quodam consentire . . . tantum consentirunt." Compare Downame, p. 179 "Modo quodam consentaneum . . . leviter consentiunt . . .".

78 "De subjecto prius . . . ad effectum." Downame, p. 180 "Ac de subjecto quidem prius . . . ad effectum."

78 "adjungitur itaque aliquid, . . . insuper accedit." The passage appears as follows, Downame, p. 182:

"Adjungitur) adjungi id dicitur, quod alteri perfecto jam, suisq; causis constituto, extrinsecus sive praeter essentiam accedit, ut in primo exemplo se ipsum explicat Ramus.

"Subjectum ergo est, cui aliquid adjungitur, id est, quod postquam è causis constitutum perfectq; est, ad aliquid arguendum effectum est, quod sibi praeter illam essentiam, quam è causis habet, insuper accedit. Hactenus de subjecti definitione."

78-80 ". . . subjici enim . . . ut locus locatum." Downame, p. 182. (Downame's closing phrase is "quae locata dicuntur.")

80 "Primus ergo . . . praeter essentiam." Downame, pp. 182-83. ("praeter essentiam accedunt.")

82 "Tertius modus . . . subjecto recipiente." Downame, p. 193. Milton inserts this clause: " . . . & eorum ferè quae dicuntur antecedentia, concomitantia, consequentia, si quam omnino affectionem inter se habent non necessariam; quae causarum & effectorum quaeque ab his orta argumentum affectio duntaxat esse solet." Compare the appendix on Keckermann, supra in the present essay, and the discussion of common subjects and limited subjects, Keckermann, pp. 176-78. Keckermann does not use this terminology.

82-84 "Quartus modus . . . non potest: &c." This material is arranged from Downame. As this is a fairly interesting example of Miltonic editing, Downame's passage is quoted here as a whole. The underlining represents units of Milton's borrowings; Downame's italics are therefore capitalized. Downame, pp. 193-94.

"(1) Quartus modus est subjecti occupantis, circa quod nimirum adjunctam occupatur & exercetur atque hoc proprie objectum dicitur. vulgò materia circa quam. (2) SIC SENSILIA (quae Aristoteles appellat) [ὑποκείμενα ἀποιεῖ τοις αἰσθησιν], , id est, subjecta, quae sensum efficiunt) (2) SENSUM OBJECTA SUNT. (3) Color est subjectum visus, sonus est subjectum auditus, odor olfactus, sapor gustus, calor & frigus, & reliquae tactiles qualitates tactus.

"Si (4) res virtutibus ac vitiis proposite subjecta virtutum & vitiorum hoc modo nominantur, ut (5) voluptas temperatiae & intemperantiae, (6) periculum (7) fortitudinis & ignaviae (8) divitiae (9) liberalitatis (10) & avaritiae. his enim objectis (11) virtutes iste & vitia in Ethicis declarãtur.

(12) Sic res numerabilis Arithmeticae, mensurabilis (ut ita dicam) Geometreae, ratio Logicae, oratio pura Grammaticae, ornata Rhetoricae (13) subjicitur.

"Sed haec exempla nuda fuerunt. sequuntur disposita & collocata. (14) Ejusmodi subjecto Cic. 2. Agrar. disputat, inter Campanos nullam contentionē esse, quia nullus sit honor. Non gloriae cupiditate (ait) efferebantur, propterea quod ubi honos publicè non est, ibi cupiditatis gloriae esse non potest; non contetionē nec ambitione discordes. nihil enim superat, de quo certarent, nihil quod contra paterent, nihil ubi dissiderent. Quae disputatio sic concluditur . . . ."

If the underlined phrases are numbered (counting "sic sensilia . . . sensum objecta sunt" as one phrase), they occur in the following order in Milton's passage: 1, 2, 4, 3, 11, 5, 7, 6, 9, 10, 12, 13, 14. The reader will discover further editorial changes within these units. The clause "quia hi sensus in his sensibilus occupantur & exercentur" (Patterson, XI, 82, lines 23-24) seems to be Milton's.

84 Cicero, Agrarian Law 22. Downame, p. 194. See Richardson, p. 128, where he also quotes Downame's example from Propertius, "Navita de ventis, de tauris narrat arator . . ." Downame, p. 195. Milton does quote this example.

XI. De Adjuncto

84 Cicero, s. l. "Cicero hoc argumentum adjunctum & conjunctum vocat." Downame, p. 195.

86 Aristotle, Phil. [Metaphysics] .l. "adjunctum subjecto est posterius ratione, tempore, cognitione, & natura." Quoted in Downame, p. 197, as follows: "Posterius autem est adjunctum, ut Arist. ait, . id est, ratione, tempore, cognitione & natura."

86-88 Ovid, De remediis 2. "Forsitan haec . . . multa juvant." Downame, p. 199. Richardson, p. 131.

88 Cicero, Pro Roscio Comoedo. "nónne ipsum . . . totus videtur?" Downame, p. 205. Richardson, p. 136.

88 Martial, book 2. "Crine ruber . . . si bonus es." Downame, p. 206. Richardson, p. 136.

92 Apocalypse 1.4 and 4.8. "qui est, qui fuit, & qui futurus est." Downame, p. 209.

94 "αἰὼν , quasi ἀεὶ ὄν ." See Downame, p. 207.

94 Cicero, Topics. "Quicquid ante rem, cum re, post rem, dummodo non necessario, evenit." Not in this chapter of Downame.

94-96 Virgil, Aeneid 4. "Quo circumstantiae genere . . . de adjuncto recepto." (Including gloss.) Downame, pp. 210-11. Downame quotes eight more lines following "lato venabula ferro. See Richardson, p. 135.

96 Plato, s. l. "Quartus modus . . . occupante versantur." Downame, p. 211. Richardson, p. 135.

96 "Sed categoria . . . fontes referendi." Downame, p. 212. Richardson, p. 135.

XI. De Diversis

100 Aristotle, s. l. "Sua dissentaneorum clarius eluscere." Downame quotes Aristotle, Rhet. 3.2, 17: "Contraria juxta se posita clarius elucescunt." Downame, p. 218. The phrases "tamē ex sua dissensione clarius elucescunt" and "tametsi sui dessensione clarius elucescunt" occur on p. 219.

100 "Debet enim . . . & illustrandum." Downame, p. 218.

100 Aristotle, Topics 3.4. Downame, p. 220, quotes Aristotle as follows: "inter omnes locos maxime commodi sunt & communes, qui ex dissentaneis." The sentiment which Milton attributes to Aristotle is made by Downame in the sentence following this quotation.

102 Aristotle, Rhetoric 3.17. "refutantia demonstrativis." Downame, p. 221 ("τα ἐλεγητικὰ τοῖς δειγτικοῖς ").

102-104 "Distributio itaque . . . in oppositis acrior." Compare, generally, Downame, pp. 221-22.

104 Cicero, De Finibus 4. "aeque contingit omnib. fidibus, ut incontentae sint; illud non continuò ut aequè incontentae." Cited but not so quoted, Downame, p. 222.

106 Cicero, Pro Pompeio ["sive pro leg. Manilia," Downame]. "non victoriam, sed insignae victoriae reportarunt." Downame, p. 225. The reference "ad Syllam & Muraenam" is paralleled on Downame's p. 224.

106 Ovid, Ars Amatoria 2. "Non formosus erat, sed erat facundus Ulisses." Downame, p. 225. Richardson, p. 139.

106 Virgil, Aeneid 2. "Hic Priamus quanquam in media iam morte tenetur,/non tamen abstinit." Downame, p. 225. Richardson, pp. 139-42.

106 Terence, Eunuchus. "Nam si . . . faceres tamen." Downame, p. 226. Both Richardson and Milton use the referential phrase "Paula secus in Eunucho"; Downame does not. See Richardson, p. 142. Both Milton and Downame quote the passage from Eunuchus; Richardson does not.

106-108 Cicero, Tusculan Disputations 5. "Quanquam sensu corporis judicentur, ad animum tamen referuntur." Downame, p. 226.

108 Cicero, Pro Ligario. "scelus tu . . . adhuc nemo." Downame, p. 226.

XIII. De Disparatis

108-110 "Opposita sunt . . . sunt opposita." Downame, pp. 227-28.

110 "Re autem . . . non possunt." Downame, p. 228, passim.

110 Aristotle, s. l. "Opposita eidem . . . non possunt." Downame, p. 229 ("Phil. δ. 10").

112 Boethius, s. l. "quae tantum a se diversa sunt, nulla contrarietate pugnantia." Downame, p. 235. ("Lib.I. hypo. syllog.")

112 Cicero, Invent. I; Fabirum, l.5 c. 10. On p. 235, Downame has "a Cicerone & Fabio pro contradictibus usurpari," and in the margin, "In. Top. Cic."

112-114 "Vocabula in . . . argumento disputat." Cf. Downame, p. 237.

114 Virgil, Aeneid 1. "O quam . . . o dea certè." Downame, p. 238, Richardson, p. 147.

XIV. De Relatis

116 Aristotle, s. l., and Cicero in Topics. "Quae Aristoteles . . . contraria distribuit." Downame, p. 240.

118 Aristotle, Top[ics] 4.3 and Phil. [Metaphysics] γ.7. Downame, pp. 242-43.

118-120 "Medium negationis . . . dici possunt." Downame, pp. 242-43.

122 Aristotle, Categories 5 and 6. Downame, p. 249.

124 Aristotle, "Philos. ζ " [Metaphysics 6]. Apparently Milton's original citation. Downame, on p. 251, refers to "Aristotle Categ. Top. 6.3" and "Topicor. 6.5."

124 "Sunt affirmantia . . . pater, filius." Downame, pp. 250-51.

124 Ascanius and Aeneas as examples of relata. See Downame, p. 252.

126 "Aristoteles, Damascenus, & alii" Downame, 253-55; Damascenus, Dial. c. 50; Aristotle, s. l.; Top. 6.3; Laert.; Pyrrhon."

126 Aristotle, Top[ics] 6.4. "Ut alterum in alterius definitione comprehendatur." Compare Downame's citation of the same place on pp. 254-55: "Sic enim Aristotles, . . . Si quis definitè norit relatum aliquid, illud etiam, ad quod relationem habet, definitè norit. Si quis enim norit hoc aliquid relatum esse, illud etiam novit, ad quod affectum est. Cùm enim ea fit reciproca essentiae constitio in relatis, ut alterum mutuò # per alteram definiatur, fieri non putest, ut # qui unum definitè norit, alterius definitionem ignoret." The # marks indicate the line of type against which "Top. 6.4." appears in the margin.

126 Cicero, Pro Marcello. "Ex quo . . . sit gloria." Downame, p. 255. Richardson, p. 155.

128 Martial, in Sosibianum, book 1. "Tum servum . . . Sosibiane, patrem." Downame, p. 255. Richardson, p. 155.

128 Quintilian, l. 5, c. 10. "Si portorium . . . Hermacreonti conducere." Downame, p. 255 (s. l.). Richardson, p. 155.

128 Cicero, "Oratore perfecto." "Num igitur . . . honestum discere?" Downame, pp. 255-56.

128 Ovid, Met[amorphoses] 1. "Non hospes . . . in annos." Downame, pp. 256-57; Richardson, p. 156.

XV. De Adversis

130 Cicero, Topics. Downame, p. 263.

130 "Ramus perpetuo dixerat" See Downame, p. 265, and Richardson, p. 156, for this reference.

132 Aristotle, Categ[ories] 6, 8. Downame, pp. 263-64, et passim. Milton translates the Greek.

132 Cicero, Topics. There is no mention of the Topics here in Downame, but Cicero is discussed passim, pp. 264-65.

132 Galen, De optima secta. Downame, p. 266.

132 "ut docet idem Aristot. cap. de Contrariis." Downame, p. 264: "Certe si hic Aristotelis sensus esset, . . . nam in capite περὶ [τῶν] ἐναντίων, ait, . . ." etc.

132 Virgil, Aeneid 11. "Nulla salus bello; pacem te poscimus omnes." Downame, p. 270. Richardson, p. 158.

132 Tibullus, book 2. "Sic mihi . . . paterna vale." Downame, p. 270. Richardson, p. 159.

132 Cicero, Pro Marcello. "Numquam enim . . . casus admittitur." Downame, p. 270. Richardson, p. 159.

132 Cicero, Paradox I, Against the Epicureans. "Illud tamen . . . non hominum." Downame, p. 270.

134 Aristotle, "Phil.κ.3 [Metaphysics 10.3]." "Contraria etiam . . . differentias referri." Downame, p. 269. Milton translates the Greek. Milton's second quotation in this sentence, "in omni genere contrarietem esse," does not seem to be in Downame, although the Metaphysics are cited passim in this chapter (Dowmane, pp. 263-70).

XVI. De Contradicentibus

136 Aristotle, Posterior Analytics 1.2. "Contradictio est oppositio cujus nullum est medium per se." Downame, p. 273.

136 "Aristot. 1 Post[erior Analytics] 1.2. quodvis verè est vel affirmare vel negare: verè affirmare et negare simul, impossibile est . . . ." ἅπαν ἢ φῆσαι ἢ ἀποφῆσαι ἀληθές
The second clause in this quotation occurs on Downame's p. 280, where it is part of a series of quotations from "Phil.γ.6." (Metaphysics, 3.6) The first clause does not seem to have been borrowed verbatim, but the reader may compare Downame's quotation on p. 274, " , id est, quidlibet vel affirmare vel negare verum est." The citation is "2 Post. 1.2," and the same quotation occurs on p. 280.

136 Aristotle, Topics 6.3. "de qualibet re vel affirmatio vel negatio vere dicitur." Downame, p. 274.

138 "Atque hinc . . . etiam negationis, . . ." Downame, p. 138.

138 Boethius, Topics. "inter affirmationem & negationem nulla est medietas." Downame, p. 275.

138 Cicero, Pro Muraena. "In defensione . . . quadruplex contradictio est . . . ." Downame, pp. 280-81. Richardson, p. 162.

138-140 Martial, book 1. "Bella es . . . nec puella es." Downame, p. 281.

140 Cicero, Tusculan Disputations. "Cicero in Tusc. . . . esse dicis." Downame, pp. 281-82.

140 Terence, s. 1. "Sic Terentius . . . modo negat." Downame, p. 282. Milton inserts the proper name Dorus.

140 Romans 9. Downame, p. 277 ("Rom.9.25."). Milton translates the Greek.

140-142 [Plato], "Sic ad Critonem Socrates." Downame, p. 2[78]. Milton translates the Greek.

142 Analysis of the arguments of Martial's epigram, quoted on Milton's page 138, supra. Compare the discussion on Downame's p. 281. This is a good example of the careless of Milton's composition. For the sake of clarity, there is no reason why this analysis should not immediately follow the quoted epigram, as it does in Downame. Milton apparently omitted it in composing the chapter, and then added it as an afterthought.

XVII. De Privantibus

144 Aristotle, Physics 1.8. "privatio enim . . . per se est non ens: . . ." Downame, p. 283.

144 Plutarch, De primo frigido. "privatio est . . . & ademptio." Downame, pp. 283-84. Partly rephrased.

144 "Quorum alterum . . . natura inest." Downame, p. 284.

144 Aristotle, Categories. ". . . in privantibus verò finita est negatio, atque in eo tantum subjecto affirmatum sive habitum negans, in quo affirmatum suapte natura inest: aut inesse potest, ut etiam Aristot. in Categor." Downame, p. 286: "Sic enim Arist. loquitur, ἐν ᾧ ἂν πέφυκεν ἡ ἕξις [γίνεσθαι] id est, cui habitus suapte natura inest." In margin, "Categ."

146 "Illa autem Arist. à privatione ad habitum non datur regressus." Possibly rephrased from Downame's quotation and translation of a passage, s. l., on page 292: "ab habitu quidem ad privationem mutatio sit, à privatione verò ad habitum impossibile est mutationem fieri."
This parallel and the one preceding must be considered inconclusive.

146 Martial, book 5. "Semper eris . . . nisi divitibus." Downame, p. 293.

146 Cicero, First Oration against Cataline. "quid expectas auctoritatem loquentium quorum tacitorum perspicis." Downame, p. 293.

146 "exempla quae Ramus attulit." s. l. There is a reference to Ramus' chapter 7 on Downame's p. 297, but this comment is probably Milton's interpolation.

148 Aristotle, s. l. "Atque hae . . . nunc contradicentibus." Downame, p. 294.

XVIII. De Paribus

154-156 Aristotle, "Phil. [Metaphysics] δ.15." Downame, p. 308. The phrase "Una, i.e. eadem, aequalis" may be found on Downame's p. 307, with different punctuation.

156 Virgil, Aeneid 2. "--Par levibus ventis"; Aeneid 3. "Et nunc aequali tecum pubesceret aeva."; Aeneid 6. "En hujus . . . aequabit Olimpo." Downame, p. 310. The first two examples are referred to by Richardson, p. 170.

158 Cicero, Against Cataline 4. "Cujus res gestae atque virtutes iisdem, quibus solis cursus, regionibus ac terminis continentur." Downame, p. 311. Richardson, p. 171.

158 Virgil, Aeneid 4. "Tàm ficti pravíque tenax quàm nuntia veri." Downame, p. 311.

158 Catullus 4. "Tantò pessimum . . . omnium patronus." Downame, p. 311. In quoting these verses, Downame inserts "SC. Catullus," after Poëta and "nempe Cicero" after tu.

158 "Negationes imparium . . . non magis, non minus." Compare paragraph at end of Downame's p. 311.

158 Cicero, Phillipics 9. "Neque enim . . . controversias tollere." Downame, pp. 311-13. Milton's "&c." represents an ellipsis from Downame's text.

158 Ovid, Ars amatoria 2. "Non minor est virtus, quàm quaerere, parta tueri." Downame, p. 312.

158-160 Cicero, Pro Muraena. "Paria cognosco . . . dignitate superavit." Downame, p. 312. Downame inserts "sulpitiū intellegit" after te.

160 "Observandum est . . . ergo par." Downame, p. 312.

160 Cicero, Phillipics 2. "Itaque ex . . . praeda communis?" Downame, p. 313.

160 Terence, Adelphi. "Quando ego non curo tuum, ne cura meum." Downame, p. 313, ibid.

160 "Hujus loci . . . collatione tractata." Downame, p. 313.

160 Cicero, Pro Sulla. "neque verò . . . defendo meum." Downame, p. 315.

160-162 Cicero, Tusculan Disputations 5. "quod cum . . . sunt consequentia." Downame, p. 315; see also 313. Richardson quotes the first phrase of this passage and the remark "Contraria enim contrariorum sunt consequentia."

162 Martial, [in Sosibianum, book 1]. "Tum servum . . . Sosibane, patrem." Downame, p. 315. Richardson, p. 171. (Richardson's reference in English prose text.)

162 "Pater est . . . patris servus." Downame, p. 315.

162 Ovid, Fasti 1. "In pretio . . . pauper jacet." Downame, p. 315.

164 Virgil, Eclogue 3. "Dic quib. in terris &c."

164 Matthew 21.23, &c. Downame, p. 316, but Downame does not quote the text.

164-166 Cicero, De officiis 2. "Cato, cum . . . hominem occidere."

166 Cicero, De Inventione 1. "Paria verò . . . melior sit." Compare Downame, 316-17; Richardson, p. 172.

XIX. De Majoribus

168 Cicero, Topics. Downame, p. 327: "Quod in re majore valet, valeat in minore," is a possible parallel.

170 Cicero, Pro Muraena. "Exemplum primae notae: . . . etiam bonus." The passage here edited by Milton is typographically peculiar in Downame's original (Frankfurt, 1605 edition). It is marked as a quotation in his margins:

> "Tollitur è medio non solùm ista verbosa simulatio prudentiae, sed et illa domina rerum sapientia: vi geritur res.
>
> "Spernitur arator non solùm odiosus in dicendo, aut loquax, verumetiam bonus, horridus miles amatur."

172 Terence, s. l. [Downame, "in Eunuch."] "Thr. Magnas . . . serio triumphat." Downame, p. 327.

172 Cicero, Against Cataline 1. "Hic tamen . . . senatum venit." Downame, p. 325.

172 Cicero, In Verrem 3. "Non furem, sed raptorem, non adulterum, sed expugnantorem predicitiae, &c." Downame, p. 325.

172 Cicero, Pro Marcello. "Plus admirationis habitura, quam gloriae." Downame, p. 326.

174 Juvenal, Satire 8. "Malo pater . . . producat Achilles." Downame, p. 325. Richardson, p. 175 (in English prose text).

174 Caesar, s. l. "Malo modestiam in milite, quàm virtutem." Downame, p. 326.

174 Aristotle, Rhet[oric] 2.23. ". . . si quod magis convenire videtur non conveniat, nec quod minus." Downame, p. 326.

176 Cicero, Topics. "quod in re majore valet, valet in minore." Cf. note to p. 168, supra.

176 Virgil, Aeneid 1. "O socii . . . quoque finem." Downame, p. 327.

176 Cicero, Pro Muraena. "Noli tam . . . esse oportere." Downame, p. 327.

176 Terence, Heautonimorumenos." "Satrapes si . . . tu possis." Downame, p. 328. Richardson quotes in the parallel place an English proverb, "If a Duke should love her, he could not keepe her, much lesse canst thou." Richardson, p. 175.

176 Virgil, Aeneid 5. "Magnanime AEnea . . . tantùm sufficimus." Downame, p. 328. The "&c." marks an ellipsis.

XX. De Minoribus

178 Ovid, De Tristibus 3. "Saevior es tristi Busiride." Downame, p. 330 ["Ovidius 2, de Trist."].

180-182 "Secundo, comparationes . . . foedus asciverit." Compare Downame, pp. 330-31.

182 Cicero, Philip[pics] 9. "Omnes ex . . . sunt conferendi." Downame, pp. 330-31.

182 Cicero, [Second Against Cataline]. "Nemo non . . . foedus asciverit." Downame, p. 331. Richardson, p. 176.

182 Cicero, Pro Fonteio. "Non modò nullam facinus hujus protulerant, sed ne dictum quidem aliquod reprehenderunt." Downame, p. 331.

182-184 "Verùm in . . . nondum jeceris." Compare Downame, pp. 331-32. (Milton omits some material.)

184 Cicero, Pro Marcello. "Tantum abes à perfectione maximorum operum, ut fundamenta, quae cogitas, nundum jeceris." Downame, p. 332.

184 "Secundae notae . . . de rep. dimoveri." Compare Downame, p. 332.

184 Cicero, First Against Cataline. "Ut exul potius tentare, quam consul vexare remp. possis." Downame, p. 332.

184 [Cicero, s. l.] "Sic maluit Metallus de repub. quàm de sententia sua dimoveri." Downame, p. 332. Downame adds the notation "Met. Scipio."

186 Cicero, Pro Milone. "Utinam Clodius dictator esset, antequam hoc spectaculum videram." Downame, p. 333.

186 [Cicero, De lege agraria 2.] "Quae cùm omnib. est difficilis & magna ratio, tum verò mihi prater caeteros." Downame, p. 333.

186 Cicero, Second Against Cataline. "Quanquam illi . . . quàm verentur." Downame, p. 333.

186 Cicero, Pro Muraena. "Quod enim . . . ratio comitiorum?" Downame, p. 333.

186 Cicero, [De Officiis] 1. "Ergo histrio hoc videbit in scena, non videbit sapiens in vita." Not in this chapter in Downame. A striking sentiment which Milton may well have had by heart.

186 Aristotle, Rhetoric, 2.23; Cicero, Topics, s. 1. Downame, p. 334.

188 Ovid, [De remediis] 1. "Ut corpus . . . tolerare negabis?" Milton omits two lines which are quoted in Downame: "Arida nec sitiens ora, levabis aqua," at the ellipsis, and a fourth line, "At pretiam pars haec corpore majus habet." Downame, p. 334. Richardson, p. 176.

188 Cicero, Pro Archia. "Bestiae saepe . . . voci moveamur." Downame, p. 335.

188 Matthew, 6.26. "Passeres curat Deus: multo magis ergo homines." The passage is cited, but not quoted, Downame, p. 335.

188 Aristotle, s. l. No equivalent in Downame.

188 Cicero, Pro Marcello. "fundamenta nondum jecisti, certe ergo non perfecisti." Downame, p. 335.

190 [Cicero,] In Verrem 7. "Facinus est . . . crucem tollere?" Downame, p. 335. Richardson, p. 177.

190 Virgil, [Eclogues] 1. "Ante leves . . . pectore vultus." The ellipsis represents three lines of verse. Downame, pp. 335-36. Richardson, p. 178.

190 Cicero, Philip[pics] 2. "Si inter . . . magister equitum, &c." Downame, p. 336 (quoting more fully). Richardson, p. 178.

XXI. De Similibus

192 Aristotle, s. l. Downame, p. 336, quoting Phil. [Metaphysics] δ.14. "habitum & dispositionem, naturalem potentiam & impotentiam, figuram etiam & exteriorem cujusq [ue] formam (quae ab. Aristot. qualitatis species recensentur). . ."

192 Aristotle, Phil. [Metaphysics] δ.15. Downame, p. 337.

192 Boethius, [On the Topics of Cicero] 2. "similtudo, inquit, est unitas qualitatis." Downame, p. 338.

194 "Propriae similium . . . referre, &c." Compare Downame, p. 339.

194 Virgil, Aeneid 1. "Os humerosque Deo similis." Downame, p. 339.

194 Cicero, Philip[pics] 9. "Quanquam nullum . . . ingenii, filium" Downame, p. 339. Richardson, p. 180.

194 Ovid, Tristia 1. "Namque ea . . . more potest." Downame,p. 340. Richardson, p. 180.

194 Cicero, In Pisonem. "Unus ille . . . patriam redii." Downame, p. 340. Richardson, p. 180.

194-196 Cicero, Divinatio in Verrem 1. "Sed repente . . . est Verres." Downame, p. 340. Richardson, p. 180.

196 Cicero, Pro lege Manilia. "Itaque omnes . . . delapsum intuentur." Downame, p. 340. Richardson, p. 180.

196 Virgil, Aeneid 3. "Negationes dissimilum . . . ac fui."; Terence, in Phormio. Downame, p. 340.

196 "Similtudo disjuncto . . . similiter, redditionis." Compare Downame, pp. 341-42.

196-198 Virgil, Eclogues 5. "Tale tuum . . . in gramine." Downame, p. 342.

198 "Carmen ad . . . inspicienda fides." Compare Downame, p. 342. Ad Fratrem 1 and Tristia 1 as in Milton.

198 Cicero, [Phillipics 2]. "Sed nimirum . . . non habent." Downame, p. 342.

198 [Suetonius], Life of Virgil. "Hos ego . . . mellificatis apes: &c." Downame, p. 343. Both Downame and Richardson give the earlier verses "Nocte pluit tota, . . ." and Richardson gives the fullest explanation of them. Richardson, p. 181. Milton's ellipsis represents the last two lines.

198 "In hoc exemplo . . . attribuitur." Downame, p. 343.

198 Virgil, Eclogue 2. "O formose . . . nigra leguntur." Downame, p. 343. Richardson, p. 182.

200 [Plato?], De legibus 3. "Ut * magistralibus leges, ita populo praesunt magistratus." Downame, p. 344. At the asterisk Milton has omitted "enim."

200 Plato, Phaedo. "Ego, inquit . . . facile imponunt." Downame, p. 344.

200 "Quod ad . . . utramque partem." Compare Downame, p. 345.

200 Aristotle, Top[ics] 2.10. "Quod in aliquo . . . in caeteris." Downame, p. 345 ["Top.24."].

200-202 "Quoniam autem . . . hîc omittendae." See Downame, pp. 345-46, passim, for this material, which Milton has rearranged, omitting or translating quoted material.

202-204 Horace, Epistles 1. "Quod si . . . nulla retrorsum." Downame, p. 182.

204 Fabius, s. l. "Illa autem, . . . adversarius concessisset." Downame, p. 348 ["Fabius legit lib. 5, c. 10"]. At the end of the sentence, instead of Milton's asterisk, Downame has "id est, inductio."

XXIII. De Dissimilibus

204. Cicero, Topics. "ejusdem est, inquit, dissimile & simile invenire." Downame, p. 351. (Not there marked as a quote.)

206 Cicero, Pro Planc[io]. "Dissimilis est debitio pecuniae & gratiae." Downame, p. 354.

206 Ennius, s. l. "O domus antiqua, heu quam dispari dominare, domino." Downame, p. 354. Downame omits the "heu." Richardson, p. 183.

206 Caesar, Gallic Wars 1. "Hi omnes linguâ, institutis, legibus inter se differunt." Downame, p. 354. Richardson, p. 184.

206 [Cicero], De lege agraria 2. "Alio vultu, alio vocis sono, alio incessu esse meditabatur." Downame, p. 354. Richardson, p. 184.

206 Cicero, De natura deorum 2. "Quoniam coepi secus agere, atque initio dixeram." Downame, p. 354.

206 Cicero, De oratore. "Non est philosophia similis artium reliquarum." Downame, p. 354.

206 Virgil, Aeneid 2. "At non . . . fuit Priamo." Downame, p. 354.

206 Horace, Epistles 1. "Non eadem est aetas, non meus." Downame, p. 354.

206-208 Cicero, Ad [quintum] fratrem. "Sit annulus tuus, non tanquam vas aliquod, sed tanquam ipse tu." Downame, p. 354.

208 Virgil, Eclogue 1. "Urbem, (quam . . . magna solebam." Downame, pp. 354-55. Milton's "Et mox" replaces these words in Downame: "quo saepe solemus/Pastores ovium teneros depellere foetus."

208 Cicero, Phillipics 3. "Certus dies non ut sacrificii sic consilii expectare solet." Downame, p. 356.

208 Quintilian, l. 5, c. 11. "Brutus occidit liberos proditionem molientes. Manlius virtutem filii morte mulctavit." Downame, pp. 356-56. Richardson, p. 184.

208 Catullus, s. l. "Soles occidere . . . una dormienda." Downame, p. 357. Compare also Downame's comment to "Dissimilitudo est . . . redire possunt."

XXIII. De Conjugatis

210-212 "Quatuor hae . . . prius petatur [l. 22]." Compare Downame, pp. 359-62, passim.

210 Cicero, Topics. Downame, p. 360.

212 Boethius, On the Topics of Cicero 4. Downame, p. 360.

212 Fabrius, l. 5, c. 10. Downame, p. 363. (Downame: "Verum Fabio opponemus Aristotelum . . .")

214 Aristotle, Topics 3, 4; 7, 2. Downame, p. 363. Downame quotes fully.

214 Aristotle and Cicero, s. l. This paragraph is a digest of a lengthy discussion, Downame's pp. 362-69, on the nature and definition of conjugates. Aristotle and Cicero are cited many times, but compare particularly p. 365.

214-216 "Sequuntur exempla; . . . justè agit." Downame, p. 369.

216 Aristotle, Topics 2.3. "quod efficit . . . scilicet abstracti." Downame, pp. 369-70. Downame quotes Aristotle: "Efficientia & conservantia conjugata eorum sunt, quae efficiunt & conservant, vt quae sanitatem procurant bonamq́, corporis constitutionem, sanitatis, bonaeq́ constitutionis."

216 Propertius, 2. "Libertas quoniam . . . amore velit." Downame, p. 369. Richardson, p. 187.

216 Cicero, De natura deorum 3. "Jam mensas . . . est utendum." Downame, p. 370. Richardson, p. 187.

216 Terence, s. l. "Homo sum, humani à me nihil alienum puto." Downame, p. 370.

216 Cicero, In Pison[em]. "Cùm esset omnis illa causa consularis & senatoris, auxilio mihi opus fuerat & consulis & senatus." Downame, p. 370.

216 Cicero, Phillipics 2. "Non tractabo ut consulem, ne ille quidem me ut consularem." Downame, p. 370. Richardson, p. 187.

XXIV. De Notatione

218 Boëthius, On the Topics of Cicero 1. "Notatio est nominis interpretatio." Downame, p. 371 ["ex Aristotele & Boëtho sic definitur."].

218 Cicero, Topics. "Notatio inquit Cic . . . . etymologia dicitur," and "nos autem . . . rerum notae." Downame, p. 371.

218 "ut Cicero loquitur, argumentum ex vi nominis elicitum." This seems to be Milton's phrase. Some related citations: "Hic verò in Cic. Top. lib. 1. Notatio (inquit) est quaedam nominis interpretatio." Downame, p. 371. "Cicero etiam 1. Academ. videtur Etymologiam definire explicationem verborum qua de causa quaeq; essent ita nominata."

218 "Ut homo ab humo." Downame, p. 382. Richardson, p. 188.

220 Ovid, Fasti 6. "Stat vi terra sua; vi stando Vesta vocatur." "At focus a flammis & quod fovet omnia dictus." Downame, p. 382. Richardson, p. 189.

220-222 Cicero, In Verrem 2.2. "O Verrea praeclara! . . . esse videantur." Downame, pp. 382-83. Richardson, p. 189.

222 "illa cavillatio in Antonium generum: * Tuae conjugis . . . contumelia traxerit." Milton omits at the asterisk Downame's citation, "2 Phillipic." Downame, p. 383. Richardson, p. 189.

222 Quintilian, 1. 1, c. 6. This citation seems to have been inserted by Milton. Downame, who has been clearly dividing the categories of notation (e.g., "ab affectis," "à subjectis," "ex Adjunctis"), gives the material in Milton's paragraph in this form:

"5 ex dissentaneis, cujusmodi notatio ἀντιφρασις dicitur. Fab. lib.1.c.6. Ut Lucus à non lucendo, quia umbra opacus parùm luceat. & ludus à non ludendo, quia sit longissimè à lusu. & Dis, quia minimè dives.
"6 è comparatis. ut Pyropus, quòd ignis flammam imitetur. . . ." Downame, p. 383.

Milton's version gives the impression that the comments on lucus are part of the reading of the passage of Cicero quoted just above. Gilbert has rendered the phrase "locupletis quidem certè" as "a man of no estimation," but surely it could also mean "indeed of a certain wealth." Lucus, at any rate, is not related to locupletus in Downame's version. See also Richardson, p. 189.

222-224 "Atque hactenus . . . notatio declarat." Compare Downame, pp. 383-84.

224 "In hoc igitur . . . ergo focus est." Compare Downame, pp. 385-86.

XXV. De Distribution

226 "Unde nascitur . . . explicationes dicuntur." Compare Downame, pp. 389-90.

226 "Totum Logicè . . . à toto." Downame, p. 391.

228 "Inter hanc . . . in prooemio monuimus." Downame, pp. 393-94, passim.

228 "Sed dissensio . . . partium distributarum." Downame, p. 395, middle. ("Nam dissensio . . .")
The "n" in Milton's text in this sentence, at p. 226, l. 11, and elsewhere, is "enim" in Downame's text.

228-230 "Platonis itaque regula est: oportet in quàm proximum fieri potest numerum semper dividere." Downame, p. 397.

230 "Quod si . . . confundenda est." Compare Downame, p. 398. The quote from Aristotle appears in the same form, with the Greek and the marginal note, "De part. 1.3."

XXVI. De Distributione ex causis

(Downame: "De Partitione integri in membra.")

230 "Integrum est totum . . . per formam existentis." Downame, p. 400.

232 "Aristotle, Phil. [Metaphysics] δ.25. "Membra sunt ex quibus integrum componitur." Downame, p. 400. Downame has "dicuntur" for "sunt"; the Greek word in his quotation is "λέγεται ."

232 "Et membra . . . quoque formam." Compare Downame, pp. 400-01.

232 "Cùm enim . . . finibus continetur." Downame, p. 401.

232 "Quae sequuntur apud authorem nostrum exempla duo, . . ." "Our author" isn't Downame, who himself says "Exempla duo afferuntur ab auctore nostro." The two citations--Virgil, Georgics 1, and Cicero, Pro Muraena, then follow. Downame, pp. 402-03. See Richardson, pp. 199-200 (who also refers to Keckermann's Systema as an example of distribution, p. 199).

234 Aristotle, Topics 6.6. "Primo à partibus: affirmatis partibus cunctis, affirmatur totum: & contrà; sublatio partibus cunctis, tolli totum. Item ab una parte: una parte sublata, totum tolli. Secundo à toto ad partes: toto affirmato, affirmantur partes."
Downame, p. 403. "primò à partibus. ἐν οἷς [γὰρ] τὰ μέρη καὶ τὸ ὅλον ἀνάγκη ὑπαρχειν id est, affirmatione partium omnium, affirmari totum.
"Et contrà, μερῶν φθαρέντων φθείρεσθαι τὸ ὅλον, id est, sublatis partibus tolli totum. Item ab una parte, τοῦ μέρους ἀναιρεθέντω καὶ ὁ πᾶς ὁρισμος ἀναιρεῖται , id est, una parte sublata totam definitionem tolli. Id enim ὅλον , id est, integrum, est, οὗ μηδὲν ἄπεστι [μέρω] ἐξ ὧν λέγεται τὸ ὅλον φύσει . cuius nulla pars eorum abest, ex quibus totum natura dicitur.
"Secundo, A toto: ἐν ᾧ [γὰρ] τὸ ὅλον ἐν ἐκείνῳ δεῖ καὶ τὰ μέρη [εἶναι] id est, in quo totum, ibi etiam partes. hoc est, totum affirmatum partes affirmat, vel omnes, vel aliquot. . . ."

234 "Verùm haec . . . partes tolluntur." Downame, pp. 403-04.

234 Catullus, s. l. "Utriusque generis . . . surripuit veneres." Downame, p. 404. Richardson, p. 200.

234-236 "Est & alia . . . à fine." Downame, pp. 427-28.

XXVII. De Distributione ex effectis, ubi de genere & specie.

(Downame: De Divisione generis in species. The material in Downame's chapter XXVII Milton presents in other chapters. See these notes, passim; Downame's XXVII covers pages 404-24 of his text. Milton also divides Downame's chapter XXIX into his own XXVIII and XXIX, so that there are the same numbers of chapters in the first books of both works. He gives new titles to chapters XXVI-XXIX. This does not represent any radical rethinking of the material, but the new headings give the impression of a more symmetrical presentation. Since the subject of these chapters is Distribution, Milton may have felt obliged to make as neat a distribution of the material as possible.)

236 Cicero, s. l. Downame, pp. 404-05.

238 "idea saepe à Graecis [dicitur]." Downame, p. 408.

238 Aristotle, Phil. [Metaphysics] 1.7 & μ.5. Downame, p. 406. (Downame adds "vide Ram. schol. Dial. lib. 3. cap. 7." in his marginal note.)

238 "Plato in Menone." Downame, p. 238. (Downame quotes Plato in Greek and this Latin: "quod in omnibus speciebus idem est.")

238 Plutarch, De placitis philosophorum 1.10. Downame, p. 406.

238 Aristotle, Phil. [Metaphysics] δ.25. Downame, p. 408: "εἶδος μόριον του [γένους]"; Cicero, De inventione 1. "Pars quae generi subest." Downame, p. 408.

238 "Ex definitione . . . minime continetur." Downame, pp. 408-09.

238 Aristotle, Phil. [Metaphysics] ζ.12. "Genus non . . . contrariae sunt." Downame, p. 409. For Milton's last phrase Downame has "siquidem differentiae contrariae sunt."

238-240 Porphyry, s. l. "Unde illud . . . ut inquit Porphyrius." Downame, p. 409, where both quotes are given fully, and the marginal note refers to "Cap. 4."

240 Plato in Politicus. Downame, p. 408.

240 "Animal enim . . . communem habent." Downame, p. 410. (Apparently a quote from Ramus.)

242 "Sic homines singuli sunt species specialissime hominis, & singuli leones leonis." Downame, p. 410.

242 Aristotle, Physics 1.7. "Singuli enim . . . Phys. 1.7." Compare Downame, pp. 411-12.

242 Aristotle, Phil. [Metaphysics] 10.3. "Deinde, quicquid . . . ergo specie." Compare Downame, pp. 411-12.

242-244 Compare, generally, this discussion with the same material in Downame, pp. 411-13.

244 Laërtius, In Zenone. "Socratem esse speciem specialissimam."; Aristotle, De partibus 1.4. "Socrates & Coriscum species infimas vocat." Downame, pp. 413-14.

244 "In animali . . . sui continent." Downame, p. 416.

244 Aristotle, 1 Posterior Analytics 24. Downame, p. 417.

246 "Excellit quidem . . . apte nominantur." Compare Downame, pp. 417-18.

246 Ovid, 1 Metamorphoses. "Attamen illustrationis . . . formae deorum: &c." Downame, p. 418. The "&c." represents an ellipsis of the next five lines. Richardson, p. 209. (Richardson quotes the same lines that Milton chooses.)

246 Cicero, De officiis 1. "Sic Cic. Offic. 1. . . . & temperantia." Downame, pp. 418-19. Milton's clause, "quae tamen ipsae non ponuntur in distributione, sed, quod idem est, earum formae" is in Downame "quae tamen ipsae in distributione non ponuntur, sed (quod idem est) earum defintiones." Richardson, p. 209.

248 Cicero, Pro Archia. "Etenim omnes . . . se continentur." Downame, p. 422. Richardson, p. 210.

248 Ovid, 4 Tristia. "Sic Ovidius . . . arguitúrque malis." Downame, p. 422. Richardson, p. 210. In this case Milton omits unnoted the two lines Richardson uses: "Materiámque tuis tristem virtutibus imple:/Ardua per praeceps gloria vadit iter."

248-250 "Cum itaque . . . in omne sermone." Downame, pp. 422-23.

250 Cicero, Ad Atticum. "Urbem tu relinquas? . . . tamen retinuerunt." Downame, p. 424. Richardson, p. 211.

250-252 "Hîc ab . . . suo accomodantur." Downame, p. 424.

252 Cicero, De Senectute. "Nautarum alii . . . in pupi." The first clause of this passage is given by Downame without attribution, p. 426 in his chapter XXVIII, De Distributione imperfecta, ex absolute consentaneis." Compare the text of Milton's last paragraph in his own chapter XXVII with Downame, pp. 425-26. See also note to pp. 234-36, supra. Richardson, p. 206: "Marriners are generall causes, but the[y] haue special effects. for some climbe the shroud, some runne vp and downe, some pumpe, &c. here are the effects of the efficient cause . . . ."

XXVIII. De Distributione è subjectis

(Downame: "De Distributione imperfecta, ex absolutè consentaneis")

252 "Distributio è . . . vel adumbrantur." Downame, p. 429.

254 Catullus, s. l. "Virginitas non . . . dote dederunt."

254 "Virginitas puellae . . . ipsa puella." Downame, p. 430.

254 Virgil, Georgics 1. "Ubi poeta . . . canere incipiam--" Downame, p. 429. Downame says the two examples are "apud Ramum cap. 26"; Milton refers to his own chapter XXVI. See pp. 222-23 in Patterson.

254-56 Cicero, Pro Muraena. "Intelligo Judices . . . esse versatam." Downame, p. 429.

256 Cicero, Tusculan Disputations 5. "Sint sanè . . . caelúmque contingant." In Downame, the last sentence continues, "ut ea qui adeptus sit, cur eum beatum modo & non beatissimum dixerim?" Downame, pp. 430-31. Richardson, p. 212, where he objects to the terminology of both "Kickerman and Doctor Downham."

XXIX. De Distributione ex Adjunctis

(Downame: "De Imperfecta distributione ex subjectis & adjunctis.")

256 "Ut hominum alii sani, alii aegri: alii divitas, alii pauperes." Downame, p. 431.

256 Virgil, Georgics 1. "Sic Virgil. . . . ab igni:&c." Downame, p. 432, where the next four lines are quoted. Richardson, p. 213.

258 Caesar, Gallic War 1. "Gallia est . . . Galli appellantur." Downame, p. 432. Richardson, p. 213.

XXX. De Definitione

262 Boëthius, Top[ics] 5. "omnis definitio, rei, quam definit, adaequatur." Downame, p. 438.

262 "Definitio perfecta est, quae constat è solis causis essentiam constituentibus." Milton has reedited Downame's quotation of Ramus, which reads, "Definitio perfecta est definitio constans è solis causis essentiam constituentibus." Downame, p. 442.

262 "Genus enim . . . genus habeat." Downame, p. 443 (top and middle of page).

264 "Atque hoc . . . rationis facultate." Downame, p. 446.

264 "Tales definitiones . . . cap. i.). . . ." Downame, pp. 446-47. For the reference to Chapter VIII, see third note to Patterson's p. 66, supra.

XXXI. De Descriptione.

266 "Definitiones perfectae . . . inventa est." Compare Downame's sentence, p. 447: "Definitiones perfecte propter formatum obscuritatem rarae admodum sunt a difficiles inventu."

266-270 "Aristot. 1. 6. Metaph. c. 5." This citation, and the examples in the passage pp. 266-70, are not in Downame in the parallel place.

Usually Downame refers to the Metaphysics as "Phil.", as at p. 449 ("Phil.β.3"). In discussing accidents, Keckermann refers to "quod Philosophus docet 6 Met. c. 5 & 9." (Keckermann, p. 184); in the same passage he uses risibility as an example, as Milton does. See also Keckermann on description, pp. 238-42. But it would not be fair to assert a strong influence. Milton refers to "Metaph. 7, Text 8" in his Fourth Prolusion, and he may have known the Metaphysics well. The subject of the Prolusion is somewhat related to the predication issues discussed in this part of the Artis Logicae, although the treatment in the Prolusion is metaphysical, not logical. See Don M. Wolfe, et al., eds., Complete Prose Works of John Milton (New Haven: Yale University Press, 1963), I, 252, and note 8 on pp. 263-64, where the editor suggests that Milton may have borrowed the Prolusion reference from Suarez.

270 "Virtus est . . . stultitia carvisse." Also not in Downame.

270 "cap.25." The same cross-reference in Downame, p. 450.

272 Aristotle, Top[ics] 5.1. "Ut, homo est animal mortale, capax disciplinae." Downame, p. 451.

272 Aristotle, Top[ics] 4.2. "ζῶον ἀθάνατον" Downame, p. 452.

272 "Succinctae descriptiones . . . ac disputationibus." Downame, p. 452.

272 Cicero, Miloniam Oration. "Sic gloria . . . ejus adjiciuntur." Downame, p. 454.

274-278 Virgil, Aeneid 4. Description of Fame. "Ex templo . . . nuntia veri." This discussion is substantially borrowed from Downame, except that Milton has rearranged the texts. In Downame, the passage from Virgil is given first, with footnote numbers referring to the discussion which follows. The numbers which Gilbert has inserted in his text parallel Downame's. Milton has somewhat rephrased and reduced the commentary. Casualties of Milton's rearrangement are the first half of the fourth quoted line, "Parva metu primo," and the sixth line, "Illam terra parens ira irritata Deorum." See Downame, pp. 454-56.

278 "Tales sunt . . . & Oratores." Compare Downame, p. 456. (But the phrase "apud Poetas & Oratores" is Milton's.)

APPENDIX C

THE TEXT OF THE ACCEDENCE COMMENC'T GRAMMAR AND OF ITS SOURCES

The following notes are the results of a detailed comparison between Milton's Accedence Commenc't Grammar, as edited by George Philip Krapp in the Columbia Milton,[1] the Logonimia Anglica of Alexander Gill, Milton's teacher at St. Paul's, which appeared in 1618 and 1621,[2] and the standard schoolroom text of Latin grammar during the sixteenth and seventeenth centuries, Lily's Grammar, in the Cambridge edition of 1621, which is one likely to have been accessible or familiar to Milton.[3] These texts will be abbreviated respectively as "ACG," "LA," and "SI" (for

[1] George Philip Krapp, ed., "Accedence Commenc't Grammar," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols (New York: Columbia University Press, 1932), VI, 285-353.

[2] The edition consulted is that of Otto L. Jiriczek, ed., "Alexander Gill's Logonomia Anglica," Quellen und Forschungen . . . (Strassburg: Karl J. Trubner, 1903), vol. 90. This is based on Gill's 1621 edition.

[3] [William Lily,] A Short Introduction of Grammar Generally to be used: . . . (Cambridge: Cantrell Legge, Printer to the Universitie, 1621). This edition may be consulted in the University Microfilms series of English Renaissance works under its Short Title Catalogue number, 806-15627a.

"A Short Introduction . . .") in the following discussion.

The comparison demonstrates that, as in the case of the Artis Logicae, Milton's text depends heavily on its sources for the general design of the work and materially for specific patterns of exposition and wording. Of the two, the SI shows a more profound influence, and it may be assumed that Milton intended an abbreviated and modernized redaction of this work, rather than his own original treatment. The ACG follows very closely the first half of the SI, which is an English introduction to Latin grammar for beginning students, and borrows material in some sections from the second half of the SI, a more extended exposition in Latin for advanced students. There has been some trivial rearrangement of the order in which the material has been presented, but the most important change is the omission of many examples and of some explanation. Milton has also inserted a few paragraphs which have the effect of organizing the material in a more Ramist fashion, and these alterations are discussed in Chapter II above. The extent of the influence of the LA is more debatable. Some closely parallel passages, quoted below, seem to indicate that Milton translated material from the LA, or at least consulted it before writing, but he seems to have been understandably less inclined to draw from it. It is in Latin, it is a grammar of English, not of Latin, and it is a more philosophical work than the SI, apparently directed at a mature

audience of Continental scholars.

The evidence seems to indicate that Milton followed roughly the same procedure in composing both the Artis Logicae and the ACG. In both he had a primary text which he followed in most instances (Downame; the SI), and a secondary text upon which he relied for material or arguments which he felt strongly deserved insertion (Keckermann; the LA). The unified surface of the exposition is misleading. There is no noted transition from Lily's prose to Milton's; some of the rather terse examples are mutliated fragments of fuller quotations in the original. Because many of the quotations are borrowed, the ACG in itself cannot be taken as evidence of Milton's classical culture, although his knowledge can easily be inferred on other grounds. J. Milton French asserts that the book shows "a wide and intimate knowledge of classical Latin authors,"[4] but also demonstrates the extent of Milton's debt to Lily. Some examples of shared citations are presented in detail in the notes below.

The title of the ACG is perhaps explained by an examination of the alternative method systems offered by Milton's two sources. Gill's work is in four parts, "Grammatica, Etymologia, Syntaxis, Prosodia."[5] These correspond to the

[4] J. Milton French, "Some Notes on Milton's Accedence Commenc't Grammar," JEGP, LX (1961), 649. See p. 644 for Milton's debt to Lily.

[5] Jiriczek, p. 287.

four parts which Ramus himself recognized when he used grammar as an example of a liberal art in an early work on method.[6] Ramus calls the first of the four parts orthography, and this today appears to be a more appropriate title than "Grammatica," as in fact Gill devotes his first section to discussing the English alphabet. (Like Shaw he is dissatisfied with what he finds and invents his own so that foreigners may more easily find their way through English pronunciation.) "Etymologia" corresponds with the modern "accidence," that is, the declined and conjugated forms of words. "Syntaxis" has its modern denotation, and "Prosodia" includes everything about poetry, including figures and tropes. The Latin section of the SI includes all four subjects in the same order, but the English section includes only a brief statement on orthography, and consists substantially only of an accidence and a syntax, without any formal division between the two.[7] Milton may have reasoned that Logonomia was appropriately the title for the study of language as a whole, or of all four subjects, and grammar the term for the shorter sequence of two subjects; this would suggest an appropriate Ramist dichotomy. His title is therefore a signal that his grammar commences with the "Accedence" (Gill's etymology), and not with the orthography. It also reflects his

[6] Walter J. Ong, S.J., Ramus, Method and the Decay of Dialogue (Cambridge, Mass.: Harvard University Press, 1958), pp. 245-46, and note 56.

[7] [Lily,] C6^{v}.

disinclination to enter into the linguistic speculation characteristic of Gill's work. The LA is directed at non-speakers of English, and is designed to interest them in the language and to introduce them to the works of its great poets, notably Spenser, whom Gill quotes extensively.[8] Milton seems to assume that it is not necessary to invoke such motivations in order to teach Latin to native speakers of English. His inclusion in the ACG of material from both the Latin SI and the LA indicates that he considered them sound, if too complex for an introductory text.

The following parallel passages are arranged in the page order of the ACG, which follows that of the English SI closely. One of Gill's innovations was the construction of a phonetic alphabet to assist the foreigner in mastering English pronunciation: English passages have been normalized in these notes.

[8] See Gill's summary, Jiriczek, pp. 155-56, et passim.

ACG 287 Definitions of grammar and etymology ("Latin Grammar . . . part of speech.")

> Logonomia est comprehensio regularum quibus sermo ignotus faciliùs addisci potest: ea ex Latini sermonis vsu obseruata Latina est, ex Anglici Anglica, &c.
> Partes eius sunt quatuor: Grammatica, Etymologia, Syntaxis, Prosodia. Grammatica sive, (vt alijs placet) Literatoria, est Logonomiae pars de numero & potestate literarium simplicium, & coniunctarum. LA 19.

> Etymologia est altera Logonomiae pars de vocibus, quatenus vna ab aliâ descendit. Vox igitur est primitiua; aut deriuata . . . LA 40.

ACG 287-288 The parts of speech

Milton's diagrammatic listing of the parts of speech is almost identical with that on SI A6^{r}. Compare Gill's three parts of speech, the noun, the verb, and the "consignificatiua dictio." LA 49.

ACG 288 "Of Genders"

> Some Nouns are of two Genders, as hic or haec dies a Day; and all such as may be spoken both of Male and Female, as hic or haec Parens a Father or Mother; some be of three, as hic haec and hoc Felix Happy. ACG 288.

> . . . The Common of two is declined with Hic and Haec: ad Hic & Haec Parens, a father or mother.
> The Common of three is declined with Hic, haec and hoc: as Hic, haec & hoc foelix, happie. SI A7^{r}.

In addition to masculine, feminine, and neuter, the SI recognizes the genders "Common of two & Common of three, the Doubtful, & the Epicene." SI A7^{r}.

> Genera sunt tria; Masculinum, Faemininum, Neutrum. LA, 52-53.

Genders are three, the Masculin, Feminin, and Neuter. ACG 288.

ACG 289 "Of Numbers"

Words Declin'd have two Numbers, the Singular, and the Plural. The Singular speaketh but of one, as Lapis a Stone. The Plural of more than one, as Lapides Stones, . . . ACG 289.

Nounes be two numbers, the Singular and the Plurall. The Singular number speaketh but of one: as lapis, a stone. The plurall number speaketh of moe than one: as lapides, stones. SI A6^{r}.

Compare also Milton's remarks on nouns without singulars or without plurals ("Note that some Nounes . . . will best teach.") with Gill's list of "Anomalia numeri," LA 49-52. Milton's replacement of a substantial presentation by a laconic reference to "reading" is a good index of his respect for the labor of his source.

ACG 289-290 "Of Cases"

Nounes, Pronounes, and Participles are declin'd with six Endings, which are called Cases, both in the Singular and Plural Number. The Nominative, Genitive, Dative, Accusative, Vocative, and Ablative. ACG 289.

Nounes be declined with sixe cases, singularly and plurally: the Nominatiue, the Genitiue, the Datiue, the Accusatiue, the Vocatiue, and the Ablatiue. SI A6^{v}.

Casus sunt sex; qui non terminatione internoscuntur; sed aut Loco, aut signorum adiectione. Nominatiuus verbo antecedit, Accusatiuus sequitur, Genitiui signum est Of; Datiui To, aut For; Ablatiui una ex praepositionibus in, with, from, &c. de quibus pòst; Vocatiui signum est ô aut ho, raro tamen idque ἐμφατικωτέρως adhibetur; vt.

> O man! remember that last bitter throw;
> For as the tree doth fall, so lies it ever low. LA 53.

Milton does not use the same examples as does the SI, but they are arranged in the same order.

ACG 290 "Of a Noune"

The distinction between nouns substantive and nouns adjective is reflected in LA 49.

ACG 290-297 "The Declining of Substantives"

Milton follows SI's exposition closely, quoting from the introductory paragraphs, but changing the examples. The following sentences show imitation in detail, and should be compared with the cited pages in SI:

> ACG 291 "The first . . . the Example following." SI A7^{r}.
> ACG 291 "The second is . . . chorus, fluvius." SI A7^{v}. (Second and fourth paragrphs of section II.)
> ACG 292 "Note that . . . ô Deus." SI A7^{v}.
> ACG 292 "When the . . . ô Georgi." SI A7^{v}.
> ACG 293 "The third is . . . ium, &c." Compare this passage, SI A8^{r}.

> The third is, when the Genitiue case singular endeth in is, the Datiue in i, & Accusative most commonly in em, & sometimes in im, and sometimes in both: the Vocatiue like the Nominatiue, & Ablatiue in e, sometime in i, & sometime both in e & i: The Nominatiue case plurall in es, the Genitiue sometime in um, & sometime in ium, the Dative in bus, the Accusatiue in es, the Vocatiue like the Nominatiue, the Ablatiue in bus: as in example, . . .
>
> ACG 296 "The fourth is . . . in ai, . . ." SI A8^{v}.

Milton recognizes five declensions, the third with two subdivisions, "Nounes encreasing Long," and "Nounes encreasing Short." Gill recognizes three plural formations in English: "Nominum quorum figuratiua vocalis mutatur in plurali;" . . . "Nominum quae numero singulari adjiciunt s aut z, in plurali, . . ." "Tertia declinatio imparisyllabica, est vocum quarum pluralis syllaba unâ excedit singularem." LA 52-55.

The diagrams matching singular with plural forms are similar in both works.

ACG 297-299 "The declining of Adjectives"

The paradigm on ACG 298 and 299 (bonus, bona, bonum; hic, haec & hoc Felix, and hic & haec tristis) are slightly simplified from SI's paradigms, $A8^{v}$ and $B1^{r}$.

For Gill's discussion of adjective forms, not very similar, see LA 78-83 and 52.

ACG 299-301 "Comparison of Nounes"

Nounes adjective, of course, are the only ones with comparative forms.

The whole of the SI passage ($B1^{v}$) is included in Milton's discussion but reworded slightly. If numbered sequentially, the similar paragraphs in the two works may be ordered as in the following table. Because of a typographical

ambiguity, the first two sentences in the SI have arbitrarily been counted as one paragraph. Note that the fifth paragraph in the SI begins "From these general rules are excepted . . ."

p.	299	300									301				
ACG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SI	1	2	3	4	6	7	8	-	-	-	-	-	-	5	9

Gill's discussion of comparison follows an order similar to Milton's. LA 46-48.

> These following are without Rule, Bonus melior optimus, Malus pejor pessimus, Magnus major maximus, Parvus minor miniumus; Multus plurimus, multa plurima, multum plus plurimùm. ACG 301.

> Quae tamē ipsa signa anomaliā quādā habent, vt et adiectiua illa quae sequuntur. good bonus, better melior, best optimus. bad, ill, naught, malus; worse peior, worst pessimus. LA 47.

ACG 301-304 "Of a Pronoun"

Milton again follows the SI closely. He rearranges the second and third paragraphs in the SI in order to associate the pronouns with their compounds and to distinguish clearly between the pronouns and their possessive adjectives.

> There be Ten Pronounes, Ego, tu, sui, ille, ipse, iste, hic, is, qui, and quis besides their Compounds, egomet, tute hicce, idem, quisnam, aliquis, and such others. The rest so call'd [erroneously referred to as pronouns, as in SI], as meus, tuus, suus, noster, vester, nostras, vestras, cujus and cujas, are not Pronouns, but Adjectives thence deriv'd. ACG 301.

> There be fifteene Pronounes, Ego, tu, sui, ille, ipse, iste, hic, is, meus, tuus, suus, noster, vester, nostras, vestras, whereof four haue the vocative case: as, Tu, meus, noster, and nostras, and all the other

lacke the Vocative case.
To these may be added their compounds, Egomet, tute, idem, and also Qui, quae, quod. SI $B2^r$.

In the section "The Declensions of Pronovns," $B2^r$-$B3^v$, the SI lists four classes of declension:

1. ego, tu, sui (Milton's paradigms on ACG 302 follow SI $B2^r$-$B2^v$ very closely.)
2. Ille, ipse, iste, hic, is, and qui
3. Meus, tuus, suus, noster, vester
4. Nostras, Vestras, Cuias

Milton disposes of the last two categories theoretically in his last paragraph on ACG 302 (lines 20-26). His own paradigns provide for three categories:

1. ego, tu, sui
2. ille, iste, ipse ("making thir Genitive singular in ius, their Dative in i," ACG 303.)
3. hic, is, qui, quis ("making thir Genitive singular in jus with j consonant," ACG 303.)

Gill treats of pronouns in a chapter called "Personalia," LA 55-58. His declension diagrams of Ego, Tu, and Ille (LA 55,56) roughly parallel Milton's (ACG 302,303.)

ACG 304-326 "Of a Verb"

Compare the rather different treatment in Gill, "De Verbo," LA 58-76.

ACG 304 "A Verb . . . and Person." Compare SI $B3^v$: "A Verbe is a part of speech, declined with moode and tense, and betokeneth doing: as Amo, I loue: or suffering, as Amor, I am loued: or beeing, as, Sum, I am.

ACG 304-305 "Moods"

Milton eliminates the Optative from the SI version, and considers the Potential and the Subjunctive as one. SI's distinction is based on the observation that the subjunctive always is associated with a conjunction, and that "it dependeth of another verbe in the same sentence, either going afore, or cumming after." SI B4^{r}.

> There be four Moods, which express the manner of doing; the Indicative, the Imperative, the Potential or Subjunctive, and the Infinitive. ACG 304.
>
> Modi sunt quatuor, vt apud Latinos; Indicatiuus, Imperatiuus, Potentialis, & Infinitiuus. LA 58.
>
> The Indicative Mood sheweth or declareth, as Laudo I praise.
> The Imperative biddeth or exhorteth, as Lauda praise thou.
> The Potential or Subjunctive is Englisht with these Signs, may, can, might, would, could, should, Or without them as the Indicative, if a Conjunction go before or follow. As Laudem, I may or can praise. Cum Laudarem when I praised. Cavissem, si praevidissem, I had bewar'd if I had foreseen.
> The Infinitive is englisht with this sign To, as Laudare to praise. ACG 305.
>
> Indicativis signis caret: sed rem aperta esse, aut non esse; fieri, aut non fieri significat.
> Imperativi signa sunt in praesenti let, sine aut fac; in futuro shall.
> Potentialis signa may, might, can, could, should, etiam & would. Infinitiui, to. LA 66.

The SI gives similar signs of the subjunctive. SI B4^{r}.

ACG 305 "Tenses"

The SI's presentation resembles Milton's almost word for word, except that Milton's third paragraph, defining the

preterite as a single tense with the preterimperfect, preterperfect, and preterpluperfect as subdivisions, is an insertion. Milton therefore recognizes three tenses, and the SI five. Milton's explanation that verbs "express the time of doing" perhaps indicates the purpose of his rearrangement. The SI's example is amo, Milton's laudo.

Gill lists five tenses in this order: Present indicative, Future, Imperfect, Perfect, and Indefinite. LA 63.

ACG 305-308 "Persons" (Including sum)

> Through all Moods, except the Infinitive, there be three Persons in both Numbers, as Sing. Laudo I praise, laudas thou praisest, laudat he praiseth; Plur. Laudamus we praise, laudatis ye praise, laudant they praise. Except some Verbs which are declin'd or form'd in the Third Person only, and have before them this sign, It; as Taedet it irketh, oportet it behoveth, and are called Impersonals. ACG 305-306.

> There be also in Verbes three persons in both numbers: as, Singulariter, Ego amo, I love: Tu amas, Thou louest: Ille amat, He loueth. Pluralit. Nos amamus, We loue: Vos amatis, Ye loue: Illi amant, They Loue. SI $B4^{v}$.

> And such as haue no persons, be called Impersonals as Taedet, It irketh Oportet, It behooueth. SI $B3^{v}$.

After this discussion about the persons, Milton inserts the paradigm of sum. The SI places this further along, on pp. $B7^{r}$-$B7^{v}$, just before the paradigms of the deponent verbs, because "Before we decline any Verbes in Or, for supplying of many tenses, lacking in all such Verbes, we must learne to decline this Verbe Sum, in this wise following." SI $B7^{r}$.

Milton's paradigm follows the SI substantially, except

that he only gives one paradigm for the Potential. The SI separately gives the Optative, Potentiall, and Subjunctive, with translations to show the distinction, e.g.:

> Optative Moode: Sim I pray God I be . . .
> Potentiall Moode: Sim I may or can be . . .
> Subjunctive Moode: Sim When I am . . . SI $B7^{r}$-$B7^{v}$.

Gill's paradigm of sum is roughly comparable to Milton's. LA 66-68.

Milton's treatment of compounds of sum and of possum seems to be largely original. (ACG 307-308.) Gill discusses possum as the sign of the potential mood, just before his discussion of to be. (LA 66.) Also see LA 68-69 for a discussion of persons, not parallel to Milton's.

ACG 308 "Voices"

The order of the material in the section Voices suggests that it may have been adapted from the treatment of this subject in the Latin section of the SI. As this is a fairly complex example of Miltonic redaction, both texts are quoted in full:

> In Verbs that betoken doing are two Voices, the Active and the Passive.
> The Active signifieth to do, and always endeth in o, as Doceo, I teach.
> The Passive signifieth what is done to one by another, and always endeth in or, as Doceor, I am taught.
> From these are to be excepted two sorts of Verbs. The first are called Neuters, and cannot take or in the Passive, as Curro I run, Sedeo I sit; yet signifie sometimes passively, as Vapulo I am beaten.
> The second are call'd Deponents, and signifie actively, as Loquor I speak; or Neuters, as Glorior I boast: but are form'd like Passives. ACG 308.

De Genere

Quinque sunt Verborum genera, { Activum, Passiuum, Neutrum } Deponens, Commune.

ACTIVVM.

Actiuum est quod agere significat, & in o finitum. Passiuum in or formale potest, vt Doceo, doceor. Lego, legor.

PASSIUUM

Passiuum est, quod pati significat, & in or finitum activi formam, r dempto, resumere potest; vt Amor, amo. Afficior, afficio.

NEVTRVM.

Neutrum est, quod in o vel in m finitum, nec activam, nec passiuam formam integrè induere potest, vt, Curro, ambulo, iaceo, sum.

Neutrorum tria sunt genera.

Nam aliud Substantiuum dicitur: vt, Sum, es, est, sumus, &c. Aliud absolutum, sic dictum, quòd ipsum per se sensum absoluat.

Atque hoc rursum duplex est. Nam alterum actionem completam in ipso verbo significat, nec aliud transeuntem: vt, Ambio, dormio, pluit, niu in Alterum verò passionem in ipso completam iudicat: vt Palleo, rubeo, albesco, nigresco.

Est praeterea & aliud, cuius actio in rem cognata significationis transit, ac tertiam personam passiuo vocis vsurpat: vt,

Bibo vinum	Vinum bibitur
Curro stadium	Stadium cúrritur
Viuo vitam	Vita viuitur.

Sunt denique, que simplicia quidem neutra sunt, composita verò agendi vim concipiunt: vt Eo, adeo, mingo, commingo.

DEPONENS

Deponens, quod in or finitum, vel actiui significationem habet, vt Loquor verbum, vel neutri, vt Philosophor.

COMMVNE

> Commune, quod in or finitum, tam activam quam passiuam significationem obtinet: vt, Veneror, criminor, consolor, stipulor, speculor, osculor, adulor, frustror, dignor, testor, interpretor, amplector, meditor, experior, ementior: multaq; id genus alia, quę passum apud veteres reperias. SI $G7^{r}$-$G7^{v}$.

ACG 308-316 Verb forms and paradigms

No high level of originality can be expected in verb paradigms, so it is not surprising that Milton's presentation follows the SI closely, and parallels Gill's as well. The SI presents its verb forms in two sections. "CONIVGATIONS" (SI $B4^{v}$-$B7^{r}$) and "Of certain Verbs going out of Rule, which are declined and formed in maner following." (SI $C2^{r}$-$C3^{v}$.) Milton borrows the active forms (ACG 308-311) and the passive forms (ACG 313-315) from "CONIVGATIONS," and his sections on the verbs volo, nolo, etc. (ACG 311-313) and on irregulars (ACG 315-316) are drawn in part from "Of certain Verbs." Milton has reduced the number of active and passive moods so that they parallel and are presented in the same order as Gill's. Compare LA 68-70 for actives, LA 72-23 for passives. Milton may also have referred to Gill's list of defectives (LA 73-76) in discussing irregular verbs, although he also has his own short section on defectives (ACG 322-323).

There are some editorial changes, although they don't follow any discernible practice. Milton uses laudare and

habere for examples instead of amare and docere; he reduces the three versions of the potential to one. He omits the statement of the principal parts (SI $B5^r$) and the part of the section on the infinitive which gives the future infinitive, gerund, and participial forms. (SI $B6^v$-$B7^r$) In the passive section he comments, "Note that the Passive Voice hath no Preterperfect, nor the tenses deriv'd from thence in any Mood," ("ACG 313 ") and thus drops three paradigms in the indicative and potential. As noted above, the paradigm of sum is excised from this section (SI $B7^r$-$B7^v$) and inserted in the passage on persons.

ACG 316 "Of Gerunds and Supines"

> The first Gerund endeth in di, as Laudandi of praising or of being praisd. The second in do, as Laudando in praising or in being praised. The third in dum, as Laudandum to praise or to be praised.
> Note that in the two latter Conjugations, the Gerunds end sometimes in undi, do, dum, as dicendi or dicundi: But from Eo alwayes eundi, except in the Compound Ambiendi. ACG 316.
>
> Hinc etiam sunt Gerundia: illud in di, per signum genitiui casus of; illud in do, per signum ablatiui in: vt, of loving amandi, in loving amando.
>
> Adiectiua verbalia passiua { loved amatus; taught doctus; spoken dictus
>
> Haec semper exeunt in d, t, aut n; servatâ aut mutatâ figuratiuâ. Praesentis cum adiunctâ consonâ; vt suprà in coniugationibus dictum est. LA 72.

ACG 316-321 "Verbs of the four Conjugations irregular in the Preterperfect Tense or Supines."

This passage has no significant parallels in Gill or the SI.

ACG 322-323 "Of Verbs Defective"

See Gill's list of "Defectiua," LA 73-74.

ACG 323-326 "Of a Participle"

Milton's treatment is again independent. The SI has clear expositions about the participle both in Latin ("DE PARTICIPIO" SI $H8^{r}$-$I1^{v}$) and in English ("Of the Participle" SI $C4^{r}$-$C4^{v}$), but the ACG does not follow them. Gill discusses a few "-ing" forms rather generally, but on the whole neglects the subject. (See LA 100-101.)

ACG 326 "Of an Adverb"

> An Aduerb is a part of speech joynd with some other to explain its signification, as valde probus very honest, benè est it is well, valdè doctus very learned, benè manè early in the morning. ACG 326.
>
> An aduerbe is a part of speech ioyned to the Verbs to declare their signification. SI $C4^{v}$.

The rest of Milton's short passage is also excerpted from the SI's "Of an ADVERBE" (SI $C4^{v}$-$C5^{r}$). The SI gives twenty-four categories of adverbs, each with several examples, most of which Milton excises with the sentences, "And of many sorts needless to be here set down," and with the phrase "and the like."

ACG 326-327 "Of a Conjunction"

Again, this is ruthlessly cut down from the SI's list of twelve categories ("Of a CONIUNCTION" SI $C5^{V}$), but not much altered. The paragraph distinguishing between conjunctions and other adverbs seems to be Milton's.

ACG 327 "Of a Preposition"

Milton's first paragraph, including the examples ad patrem and indoctus, imitate the SI's first paragraph. His two further sentences replace an extensive list of prepositions arranged according to the cases they govern. ("Of a PREPOSITION," SI $C5^{V}$-$C6^{r}$) For a similarly arranged list, see Gill, LA 86-88.

ACG 327 "Of an Interjection"

> An Interjection is a part of Speech, expressing some passion of the mind. ACG 327.
>
> An Interiection is a part of speech, which betokeneth a sodaine passion of the minde, under an unperfect voyce. SI $C6^{V}$.

Milton edits down the SI passage. ("Of an INTERIECTION" SI $C6^{V}$) He borrows these categories: sorrow, marvelling, disdaining, exclaiming, praising, and omits mirth, dread, shunning, scorning, cursing, laughing, calling, and silence. (Silence, according to the SI, is expressed by the interjection "Au.")

See also Gill, LA 88.

ACG 327-328 "Figures of Speech"

This sketchy passage in the ACG is a compromise between the full treatments of poetic devices in Gill and in the Latin SI, and the complete omission of the subject in the English SI. There is probably no systematic reason, Ramist or otherwise, why these few prosodic devices should be considered a part of accidence. It seems fair to assume that Milton was interested in the subject and wished to treat it somewhere in the ACG, but did not want to take the trouble to give it a full treatment.

The passage seems to be substantially original, but may be compared with the following excerpt from Gill's extended treatment of poetic devices.

7. Metaplasmus

Est, quum necessitatis, aut iucunditatis gratiâ, syllaba, aut dictio à formâ propriâ in aliam mutatur. Huc refer omnes antedictas dialectas praeter communem. Et licet omnis Metaplasmus ad syllabarum quantitatem agnoscendā non sit vtilis: tamen quia plurimae eius species hîc multum possunt, eas omnes simil explicabimus.

[a]Prothesis apponit caput id quod [b]Aphaerisis aufert: vt, [a]aright, emove; pro right, move: & eleganti imitatione Latinae compositionis, afraid pro fraid. [b]venger pro avenger.

[a]Syncope de medio tollit, quod [b]Epenthesis insert. vt, What I thee [a]bet for thy Spens. pro better, [b]tellen, & dispelasen, Chauser pro tell, displease.

Consonā vt [a]Echtlipsis, vocalē [b]Synaloepha.

Exempla.

[a]Fame with abundance maketh a man thrice blessed an happy pro and happy.

[b]First, let Cimmerian darkness be my onl'habitation. pro only. . . . LA 139-141.

The first three examples are labelled "Manc[inello]" in the margin. See Gill's reference on LA 102.

ACG 328 Definitions of Syntax, Concord, and Governing

(". . . Now followeth . . . is to follow.")

See LA definitions, p. 40, as quoted in note to ACG 287, supra.

ACG 329-331 "Of the Concords"

> There be Three Concords or Agreements.
> The First is of the Adjective with his Substantive.
> The Second is of the Verb with his Nominative Case.
> The Third is of the Relative with his Antecedent,
> An Adjective (under which is comprehended both Pronoun and Participle) with his Substantive or Substantives, a Verb with his Nominative Case or Cases, and a Relative with his Antecedant or Antecedants, agree all in number, and the two latter in person also: as Amicus certus. Viri docti. Praeceptor praelegit, vos vero neglitis. . . . ACG 329.

Milton's summary of the concords is probably excerpted and reduced from an extended discussion by Gill ("Secunda Syntaxeos species" LA 78-86). Gill has an elaborate Ramist breakdown of the parts of syntax. The first division is into simple or schematic syntax:

> Syntaxis est simplex; aut schematistica: simplex, qua vulgò inter scribendum vtimur & loquendu; schematistica, siue figurata est; quae necessitatis, aut ornatus gratiâ, aliquo sermonis lumine enitscit. LA 77.

The bulk of his attention is given to schematic syntax, which is subdivided into absolutè, convenient ("Cōuenientiae"), and "Syntaxix rectionis." Absolute syntax concerns itself with "Omnia Substantiua absolutè cum alijs [constructa]," "Adiectiua sine substantiuis posita," "Nominatiuus absolutus," and "Laus & vituperium"; in short, with classes of expression that are conventionally thrown into a particular case. The second species is discussed as follows:

> Ea est conuenientiae: Estque triplex: vt, in dato superius exēplo, The good examples of parents, ought to be a rule of life to the children: prima est adiectiui good, cum substantiuo examples; secunda, Verbi ought, cum nominatiuo; tertia, Substantiui eodem casu appositi rule. neque vltrà est ulla syntaxis conuenientiae.
> 1. Adiectiua quia nec casibus, nec numero mobilia sunt, (numeralibus exceptis) non possunt cum Substantivo non cohaerere: vt, a learned man vir doctus; learned men viri docti. LA 78.

The first two subdivisions of convenient syntax correspond with the first two of Milton's concord. The second paragraph is the above excerpt, which begins a more detailed exposition of the second species, is included because Milton borrows its example. "Syntaxis rectionis" establishes the case of a noun according to its use and significance in a particular sentence.

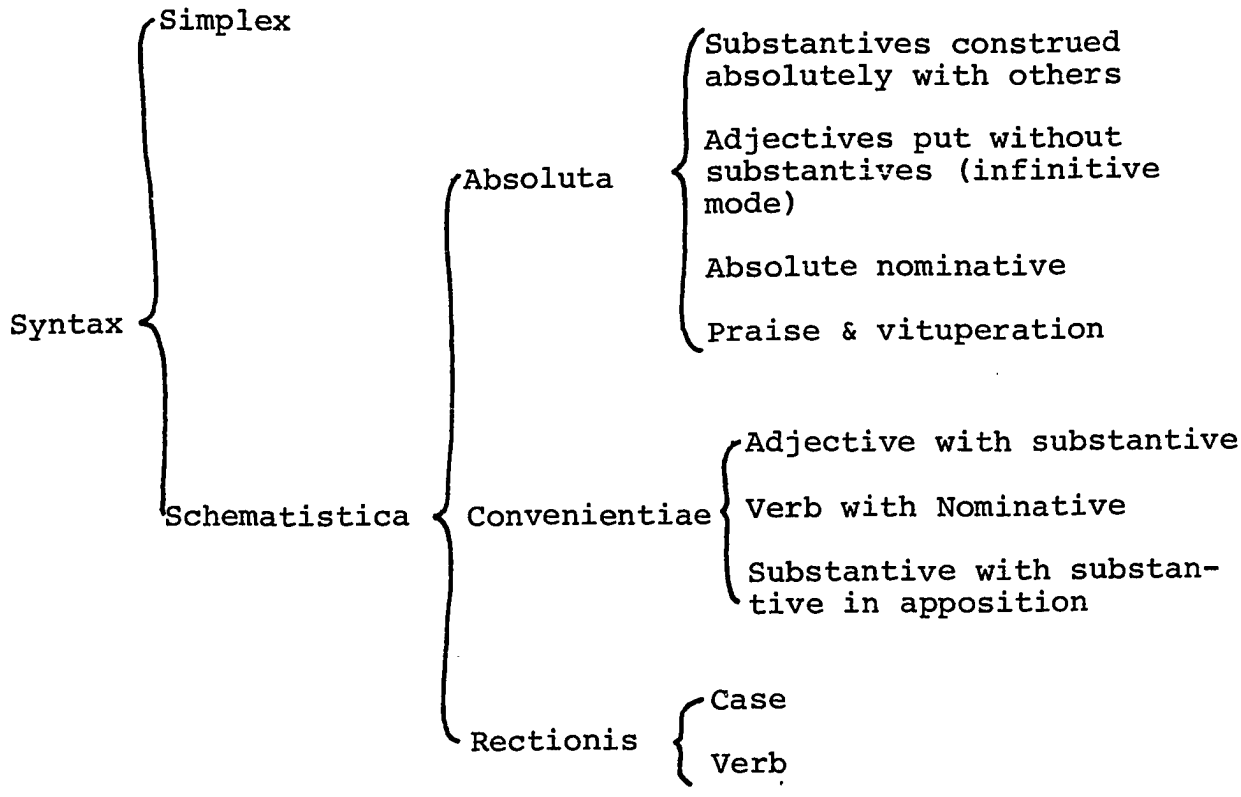
Milton simplifies his discussion by abandoning the distinction between simple and schematic syntax, a distinction which in any case it seems impossible to pursue theoretically. He divides syntax into the syntax of agreement, or concord

(Gill's convenient syntax) and of governing (Gill's Syntax rectionis); this eliminates absolute syntax from consideration. Milton's distinction is a useful one, as concord includes constructions which are controlled by the logic of grammar (adjective's agreement with substantive, verb's agreement with subject, relative's agreement with antecedant), whereas government, as of an object by a verb or a noun by a preposition, seems to be more a matter of custom, and can be altered without reexamining the basic principles of the language. A reconstruction of the "Ramist" structure of both discussions is appended (p. 213).

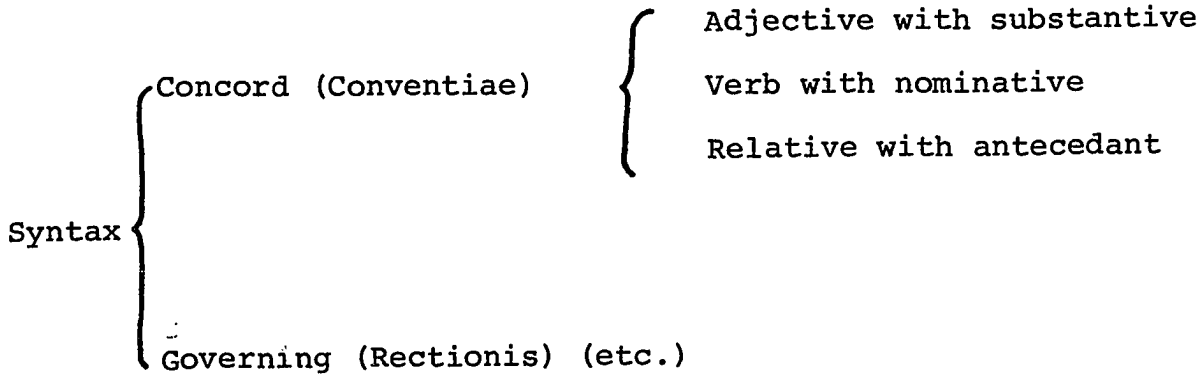
> But when a Verb cometh between two Nominative cases not of the same number, or a Relative between two Substantives not of the same Gender, the Verb in Number, and the Relative in Gender may agree with either of them; . . .
> And if the Nominative cases be of several persons, or the Substantives and Antecedents of several Genders, the Verb shall agree with the second person before the third, and with the first before either; and so shall the Adjective or Relative in thir Gender; . . . ACG 330.

> 3. Verbum, inter duo Substantiua diuersorum numerorum positum, cum alterutro conuenire potest, quoties adsunt which aut that; quae quidē aut rei relatiua sunt, aut personae: vt, the offspring of men which is to come aut etiam which are to come soboles futuroru hominu, aut soboles hominum quae futura est. Sin fiat reditio per who qui vel quae (quia who, non rei, sed personae tantùm relatiuū est) verbum adhaerebit substantiuo personae: vt, the offspring of men who are to come, non who is. Sic etiam casus inter duo Verba, nunc cum hoc, cū illo construi-tur: ut, Let Thomas come in, I mean he that came yesterday; aut, I mean him. Ingrediatur Thomas ille (inquam) qui venit heri, aut illum intelligo qui, &c. LA 84-85.

GILL



MILTON



The "Concordantia" section of the SI (16^{v}-18^{r}) also has some similarities to Milton's discussion. The following examples are in both the ACG and the SI as cited.

> Praeceptor legit, vos vero negligitis. ($C7^{r}$; 329)
> Amantium irae amoris integratio est. ($C7^{v}$; 330)
> Quid enim nisi vota supersunt. ($C7^{v}$; 330)
> Diluculo surgere saluberrimum est. ($C7^{v}$; 330)
> Amicus certus in re incerta cernitur. ($C7^{v}$; 329)
> Ego & tu sumus in tuto. ($C7^{r}$; 330)
> Tu & pater periclitamini. ($C7^{r}$; 330)
> In tempore veni, quod omnium rerum est primum. ($C8^{r}$;331)
> Tu multùm dormis, & saepè potas, quae ambo sunt corpori inimica. ($C8^{r}$; 330)
> Arcus & calami sunt bona. ($C8^{v}$; 330)
> Arcus & calami quae fregisti. ($C8^{v}$;330)

ACG 331-333 "Construction of Substantives"

The paragraph "Hitherto of . . . construction requireth." (ACG 331) is part of Milton's Ramist superstructure, and is not in the SI or LA. The last paragraph on ACG 331 ("When two substantives . . ." and the second on ACG 332 ("But if both the Substantives . . .") are fragments of the first paragraph in the SI section "Constructions of Nouns Substantives." (SI $D1^{v}$-$D2^{r}$)

> An adjective in the neuter gender, put alone without a substantive, standeth for a substantive & may have a generative case after him, as if it were a Substantive: as, Multum lucri, much gaine. . . . SI $D1^{v}$.

This example is used by Milton in the following section on adjective constructions.

Gill's sections on "Substantiua casus regentia" and "Adiectiua casus regentia" are on LA 88-90 and 90-92 respectively.

ACG 333-335 "Construction of Adjectives. . . ."

Milton's section closely paraphrases the SI's "Constructions of Adiectiues" ($D2^r$-$D3^r$) with a few insertions. The first paragraph on ACG 333, "Adjectives that signifie," contans examples from SI $D2^r$, except for the last two. Milton also inserts the reference to adjectives ending in ax. Tempus edax rerum. SI $K1^r$.

The material in the first half of the next paragraph (ACG 333, lines 11-14) is greatly condensed from three SI paragraphs. ($D2^r$-$D2^v$). Aurium mollior est sinistra and Cicero Oratorum eloquentissimus are from the SI. (Milton omits Cicero's name.)

> Adjectives call'd Nouns Partitive, because they signifie part of some whole quantity or number, govern the word that signifieth the thing parted or divided, in the Genetive; as Aliquis nostrum. Primus omnium. Aurium mollior est sinistra. Oratorum eloquentissimus. . . . ACG 333.

> 1. Adiectiua partitiuè posita, vt some of us aliquis nostrum; the best of them praestantissimus eorum. . . . LA 90.

In the section on the Dative, the first paragraph ("Adjectives that betoken Profit or Disprofit . . ." ACG 333, lines 21-25) is taken from SI $D2^v$.

Milton's first paragraph on the Accusative (ACG 334, lines 11-15) is from the SI $D2^v$, except for the sentence "Sometimes in the Genitive; as Areas latas pedum denûm facito."

Milton's first paragraph on the Ablative parallels

the SI's second and third on this subject, but the examples are his. (ACG 334, line 21-335, line 2; SI $D3^r$) His third paragraph (ACG 335, lines 11-15) is reduced from the SI's first ($D2^v$-$D3^r$); Milton adds the example "Vobis immunibus hujus esse mali dabitur," and omits the second half of this one: "Integer vitae scelerisque purus, non eget Mauri iaculis nec arcu."

> And Dignus, Indignus, have sometimes a Genitive after them; as Militia est operis altera digne tui. Indignus avorum. Virg. ACG 335.
>
> Horum nonnulla genitiuum interdum vendicant. Ovidius. Militia est operis altera digna tui. SI $K2^v$.
>
> Words also betokening the cause, or form, or manner of a thing, are put after Adjectives in the Ablative Case; as Pallidus ira. Trepidus morte futura. Nomine Grammaticus, re Barbarus. ACG 335.
>
> Adiectiua regunt ablativum significantem causam, vt, Pallidus irâ. Incurvus senectute. Liuida armis brachia. Trepidus morte futura. SI $K2^v$.

ACG 335-336 "Of Pronouns"

As in the discussion of this subject in the first half of the ACG, Milton prefers to emphasize the distinction between the pronoun and the possessive adjective, so his treatment is more appropriately compared with the version in the Latin SI. ($K3^r$) Milton borrows his first example from Cicero.

> Haec possessiua, Meus, tuus, suus, noster & vester, has genitivos post se recipiunt, Ipsius, solius, vnius, duorum, trium, &c. omnium plurium, paucorum, cuiusq; & genitivos participiorum, quae ad genitiuum primitiui in possessiuo inclusum referuntur, vt, Ex

tuo ipsius animo coniecturam feceris.
Cicer. Dico meâ vnius operâ Rempublicam esse liberatam.
Idem. Meum solius peccatum corrigi non potest.
Eras. Noster duorum euentus ostendat, vtra gens sit melior. In suâ cuiusque laude praestantior. Nostrâ omnium memoriâ.
Brutus ad Cicer. Vestris paucorum respondet laudibus.
Hor.--Scripta cùm mea nemo legat, vulgo recitare timentis. SI K3^{r}.

ACG 336-344 "Construction of Verbs"

This long and complex section seems to be substantially Milton's but it borrows much in detail from both Gill and the SI. Milton inserts two introductory sections which have the effect of clarifying and emphasizing the distinction between transitive and intransitive verbs. ("Of the Verb Substantive Sum, and such like, with a Nominative and other oblique Cases." ACG 336-337; "Of Verbs Transitives with an Accusative, and the Exceptions thereto belonging." ACG 337-338)

ACG 336-337 "Of the Verb Substantive Sum, . . ."

> Verbs that signifie Being, as Sum, existo, fio; and certain Passives, as dicor, vocor, salutor, appellor, habeor, existimor, videor; also Verbs of motion or rest, as incedo, discedo, sedeo, with such like, will have a Nominative Case after them as they have before them, because both Cases belong to the same person or thing, and the latter is rather in apposition with the former, then govern'd by the Verb. ACG 336.

Compare SI D3^{r}, "Sum, forem . . . evill thing." See also SI K3^{v}.

Nullum verbum post se nominatiuum recipit, nisi appositum praecedenti; quicquid grammatici. . . . LA 92.

ACG 336-337 "But if . . . desunt multa." (On the dative with sum to show possession.) Compare the fuller discussion, SI $D4^{v}$-$D5^{r}$.

ACG 337-338 "Of Verbs Transitives . . ."

Verbs Active or Deponent, call'd Transitive, because thir action passeth forth on some person or thing, will have an Accusative after them of the person or thing to whom the action is done; . . . ACG 337

Verbes transitives are all such as haue after them an Accusatiue case of the doer or sufferer, whether they be Actiue, Commune, or Deponent: . . . SI $D5^{r}$.

"Also Verbs . . . own signification." ACG 337; SI $D5^{r}$.

Pastillos Rufillos olet . . . ACG 337; SI $K7^{v}$.

ACG 337, lines 17-20. Misereor is treated in a sentence on SI $D4^{r}$, in the section "The Genitive Case." ($D3^{v}$-$D4^{r}$) Milton omits the last word in the example "Miserere mei Deus." "Reminiscor, Obliviscor . . . Recordor pueritiam." SI $D4^{r}$.

Omnia quae curant senes meminerint. Plautus ACG 337; SI $K4^{v}$.

ACG 338 "These Impersonals also . . . teipsum nosse. SI $D7^{r}$. (In the separate section on "Impersonalls.")

ACG 338 "But Verbs . . . an Accusative." Compare the more formal catalogue of dative verb categories, SI $D4^{v}$.

ACG 338; SI D4^{r}. Potior [. . .] Urbes. See also SI K7^{v} on fungor, fruor, utor, potior.

For general treatment, compare Gill, "Accusatiuus post verbum," LA 94-96, and "Loci nomen," LA 97-99.

ACG 338-340 "The Accusative with a Genitive"

> Hitherto of Transitives governing their Accusative, or other Case, in single and direct Construction: Now of such as may have after them more Cases than one in Construction direct and oblique, that is to say, with an Accusative, a Genitive, Dative, other Accusative, or Ablative. ACG 338-339.

> Omne verbum actiuam significationem habens, aliquo sensu accusatiuū admittere potest. Illa tantùm hic adnoto, quae apud Latinas cum alijs casibus construuntur; . . . LA 94

The Miltonic transition is part of his imposed Ramistic structure.

> Verbs of Esteeming, Buying or Selling, besides thir Accusative, will have a Genitive betokening the value of price, flocci, nihili, pili, hujus, and the like, after Verbs of Esteeming; Tanti, quanti, pluris, minoris, and such like, put without a Substantive, after Verbs of Buying or selling; . . . ACG 339.
>
> Verbis to buy emo, to sell vendo, substitues ablatiuum pretij cum prepositione for pro, vt: He bought a horse for five pounds and sold him for twice so much, . . . At, to stand, effertur cum in: vt, it stands me in ten shillings, . . . LA 95.

ACG 339 "Verbs of . . . of price, . . ." (quoted immediately supra) SI D4^{r}. "flocci . . . hujus" SI K4^{r}.

ACG 339 "But the word of Value is sometimes in the Ablative; . . ." Compare the discussion in the SI section on the Ablative, SI D5^{r} ff.

ACG 339 "Verbs of . . . dupli condemnavit." SI D4^{r}.

Accusas furti, an stupri, an utroque? ACG 340; SI K4^{v}.

Compare Milton's comments on impersonals, ACG 340, to the first paragraph on LA 94.

ACG 340-341 "An Accusative with a Dative."

ACG 340, line 16 List of prefixes that take the dative. Compare the similar list, SI $D4^{V}$.

ACG 341 "Sometimes a . . . laudi ducis." SI $D5^{r}$.

ACG 341 "Verbs of . . . iamdudem hortor." SI $D5^{r}$. But Milton replaces "Viuo vitam" with "Induit se calceos" and "Hoc me celabas."

ACG 341 "A double Accusative"

Verbs of asking, teaching, arraying, and concealing, will have two accusatives, one of the person, another of the thing; . . . ACG 341.

Verba interrogandi, obsecrandi, docendi, duplicem regunt accusetiuum; rei, & personae: . . . LA 95.

ACG 341-342 "An Accusative with an Ablative"

All Verbs require an Ablatiue case of the intrument put with this signe with before it, or of the [c]ause, or of the manner of doing: as, Ferit cum gladio. Taceo metu. Summâ eloquentia causam egit. SI $D5^{r}$

Verbs Transitive may have to thir accusative an ablative of the instrument or cause, matter, or manner of doing; and Neuters the ablative only; [same examples] . . . ACG 341

Verbis quibusdam additur auferendi casus per Sy[n]e[c]dochen, & poeticà accusativus: vt, AEgrotat animo ma[gis]quam corpore. Candit dentes. Rubet capillos. SI $K8^{r}$.

After all manner of Verbs, the word signifying any part of a thing, may be put in the genitive, accusative, or ablative; . . . [same examples, and others]. ACG 342.

Desipit mentes. ACG 342. Desipiebam mentis. SI $K8^{r}$.

Discrucior animi. ACG 342. Plaut. Discrucior animi, qua ab domo abeundem est mihi. SI K8^{v}

ACG 352-344 "Nouns of Time and Place after Verbs"

This material is drawn almost verbatim from "The Time," "Space of Place," and "A Place," SI D6^{r}-D7^{r}. Compare also Gill's "Loci nomen," LA 97-99. Gill's passage is confused by the introduction of a paragraph about ablatives.

ACG 344 "Construction of Passives"

ACG 344 "A Verb Passive . . . forma petitur," SI D6^{v}.

ACG 344-345 "Construction of Gerunds and Supines"

ACG 344 "Gerunds and Supines . . . consulendam tibi" SI D6^{v}.

Gerunds in do are us'd after Verbs in manner of an ablative, according to former Rules, with or without a proposition; as Defessus sum ambulando. A discendo facile deterretur. Caesar dando sublevando, ignoscendo, gloriam adeptas est. In apparando consumunt diem. ACG 344.

When ye haue an English of the Participle of the Present tense, with this signe of or with, [c]omming after a Noune Adiectiue, it shall in Latine [m]aking be put in the Gerund in Do; as, Defessus sum [a]mbulando, I am weary of walking.
Also the English of the Participle of the present [t]ense comming without a Substantive, with this [s]igne in or by before him, shal in Latine making be put [i]n the Gerund in Do: as Caesar dando, subleuando, ig[n]oscendo, gloriam adeptus est. In apparando totum hunc [c]onsumunt diem. And the same Gerund in Do, is u[s]ed either without a Preposition, or with one of these Prepositions, A, ab, de, e, ex, cum, in: as, Deterrent a bi[b]endo. Ab amando. Cogitat de edendo.

Ratio bene scri[b]endi cum loquendo coniuncta est. LA D6^{r}

ACG 345 "A Gerund in dum . . . Inter coenandum." SI D6^{r}.

Ad accusandos homines praemio dicitur. ACG 345; SI L1 D6^{r}. where it would seem to be attributed to Virgil.

"as Utendum est aetate." ACG 345. Ovidius. Utendum est aetate, cito pede praeterit aetas. SI L1^{r}

ACG 345-346 "Construction of Verb with Verb"

Not paralleled in Gill or the SI.

ACG 346-347 "Construction of Participles"

Compare particularly "A Participle," SI D7^{v}-D8^{r}. Gill has a brief essay on verbal substantives in his chapter "De Verbo." (LA 75; see LA 71-72 for the forms.) But this cannot be considered parallel.

Fruiturus amicis. ACG 346; SI D7^{v}.

Diligendus ab omnibus. ACG 346; SI D7^{v}. Idem. Virgilius Ubera lacte domum referent distentia capellae. Diligendus ab omnibus. SI L3^{v}.

Appetens vini. ACG 347; SI D7^{v}.

Fugitans litium. ACG 347; SI D8^{r}.

ACG 347 "An Ablative put absolute"

Not paralleled in Gill or the SI. Gill does comment, "Nominatiuus absolutus apud Angles ita usurpatur. vti apud Latinos Ablatiuus, vt, I being present, he durst not have done it; . . . He being in trouble, his friends forsook him. . . ." LA 78.

ACG 347-349 "Construction of Adverbs"

This ignores "The Adverb" (SI $D8^r$), which lists the possible cases governed by an adverb, and follows "Quibus Verborum modis, quae congruant Aduerbia." (SI $L5^r$-$L6^v$) Milton follows the order of examples closely, and uses the following examples from this section. Brackets show his omissions.

Haec vbi dicta dedit.

[Terentius.] Ubi nos lauerimus [, si voles, lauato.]

[Virgil.] Cum faciam vitula [pro frugibus, ipse venito.]

Idem. Cum canerem reges [& praelia, Cyntheris aurem Vellit.]

[Ouid.] Donec eris felix. [multos nimirabis amicis.]

Verg. Cogere donec oves [stabulis, numerumq referre] Iussit.

[Colum.] Donec ea aqua, [quam adieceris,] decocta sit.

[Terent.] Dum apparatur Virgo [in conclavi].

[Virgilius.] Tertia dum Latio regnantur viderit aestos.

Dum prosit tibi.

Quod expectas contubernalem [Cicero,]

Omnia integra servabo, quoad exercitus huc mittatur.

Simulac belli patiens erat [Virgilius.--] simulátque adoleverit aetas.

[Eras.] Ut salutabis, ita & resalutaberis.

[Horatius.] Ut sementem feceris, ita & metes. Ut ventum est in Urbem.

[Terentius.] Quasi non norimus nos inter nos. Tanquam feceris ipse aliquid.

[Virgil.--] Ne saevi [magna sacerdos.]

[Terentius. Hic nebulo magnus est.] ne metuas.

The balance of Milton's citations in this section (ACG 349) probably are directly from an edition of Cicero.

ACG 349-351 "Of Conjunctions"

ACG 349 "Conjunctios Copulative and Disjunctive . . . & pluris." SI D8^{r}.

Accusas furti . . . ACG 349. Cf. note to ACG 340, supra.

The balance of Milton's examples in this section are drawn from "DE CONIVNCTIONUM constructione" (SI L6^{r}-L7^{r}).

[Albus an ater ius sit, nescio.]
Est minor natu quàm tu.
[Nemoni placet si (vel praeterquam sibi.]
Recto stat corpore, despicitque terras.

[Ter.] Nisi me lactasses [amantem], & vana spe produceres. . . .

ACG 350 "Etsi, tametsi . . . Graecia campos." Directly adopted from the Latin of the "DE CONIUNCTIONUM constructione."

[Ouid.] Ipse licet venias [musis comitatus Homere./ Nil tamen attuleris, ibis Homere foras.]

ACG 350 "Ni, nisi . . . antequam, priusquam." This catalogue drawn from the "DE CONIUNCTIONUM constructione."

[Verg.] Cùm sis officijs[,] Gradivi[,] virilibus aptus. Nihil refert, fecerisne, an persuaseris. Vise num redierit. (SI has the last sentence first.)

[Terentius.] Te oro [Darie], ut redeat iam in viam.

[Terentius.] Metuo ut substet hospes, [id est, ne non substet.]

Ut omnia contingens quae volo, [louari non possum.]

ACG 351-352 "Of Prepositions"

This corresponds substantially to the section PRAEPOSITIONVM constructio" in SI $L7^{r}$-$L7^{v}$, except that the final four items in the following list (according to Milton's order) occur first in the SI. The catalogue here somewhat resembles Gill's arrangement of examples according to case in his section "Syntaxis rectionis," LA 86-88. Gill includes his remarks on interjections in his sections on prepositions, so his order of presentation resembles Milton's.

[Virgil. Accipit in Teucras animum mentemq; benignam.

[Virgil. Quid meus Aeneas in te committere tantum? Quid Troës potuere?] Milton: In te committere tantum quid Troës potuere?

Sub umbram properemus. [Liuius.]

[Virg.--] Sub noctem [cura recursat: . . .]

[Virg.--] Super Garamantas & Indos [Proferet imperium.]

[Virg.] Fronde super viridi.

[vt Liuius. P]ugnatum est, super subterque terras. [--omnes Ferre libet] subter densa testudine [casus.]

Habeo te loco parentis.

[Virg.] Detrudent naves scopulo

[Cicero.] Detrahere de tuâ famâ nunquam cogitavi. [Cum ex insidijs euaseris.]

Apparuit [illi] humana specie.

ACG 353 "Of Interjections"

ACG 353 "Certain Interjections . . . hominem fidem!" Compare "The Interjection," SI D8^{v}.

The fuller forms of the examples are as follows:

[Virg.] O fortunatos [nimium bona si sua norint, Agricola!]

[Virg.] O formose puer, [nimium ne crede colori!]

[Virgilius] Heu prisca fides.

Terent. Vae misero mihi, [quantâ despe decidi?]

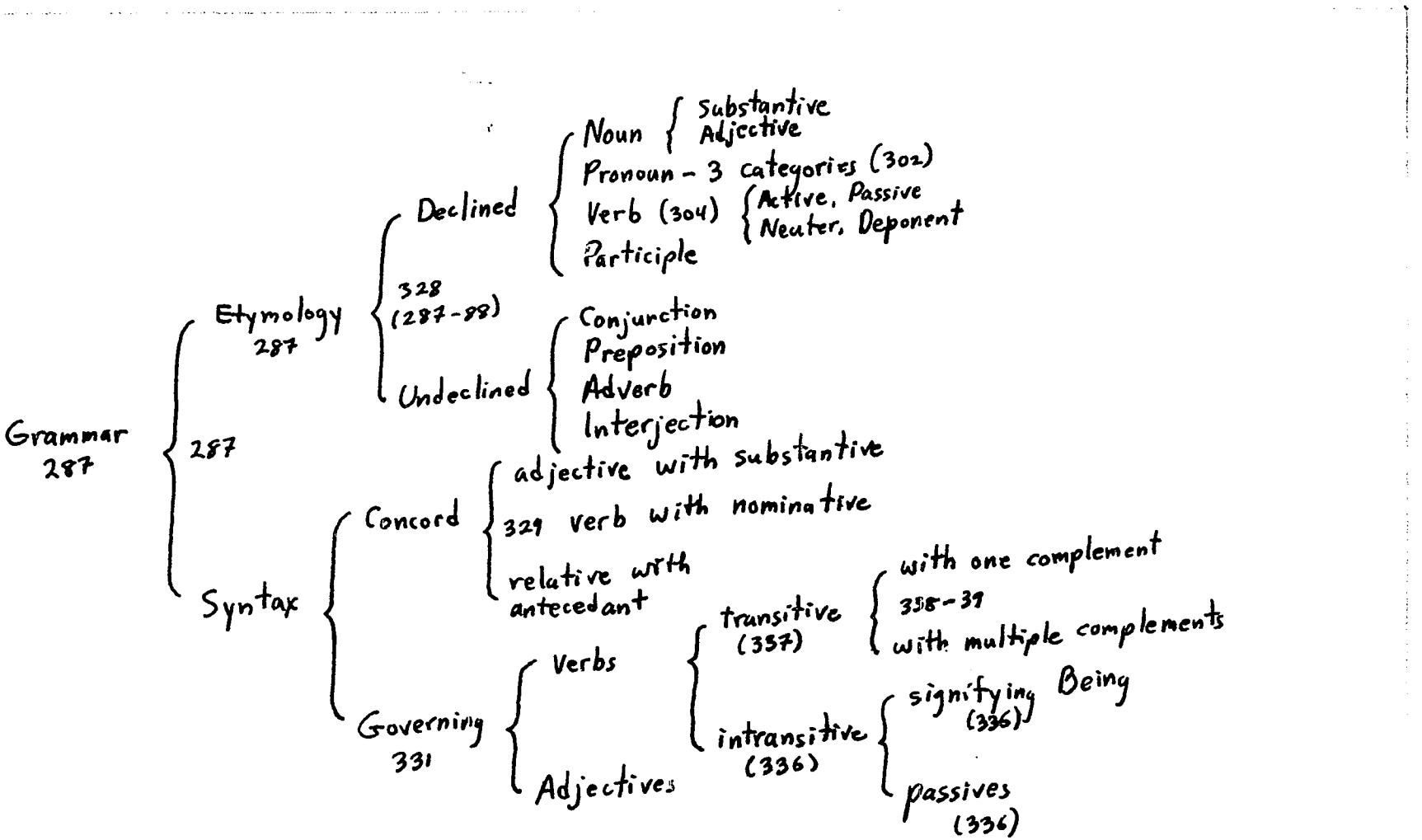
The example "Me caecum, qui haec ante non viderim!" is neither in the LA nor the SI. Compare Gill's discussion of interjections, LA 88.

APPENDIX D

SYNOPSIS LIBRI: ACCEDENCE COMMENC'T GRAMMAR

Page references are to axioms and distributive transitions in the Columbia edition of the Grammar.[1]

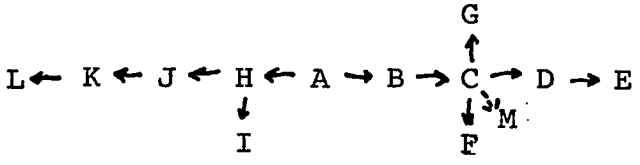
[1] George Philip Krapp, ed., "Accedence Commenc't Grammar," The Works of John Milton, ed. F. A. Patterson, et al. (New York: Columbia University Press, 1932), VI, 285-353.



APPENDIX E

SYNOPSIS LIBRI: DE DOCTRINA CHRISTIANA

The thirteen pages following constitute a single synopsis libri of the De Doctrina, reconstructed from the typographical conventions of the text as reproduced in the Columbia edition.[1] Page references are to axioms and distributive transitions. The pages are interrelated as shown in the following chart:

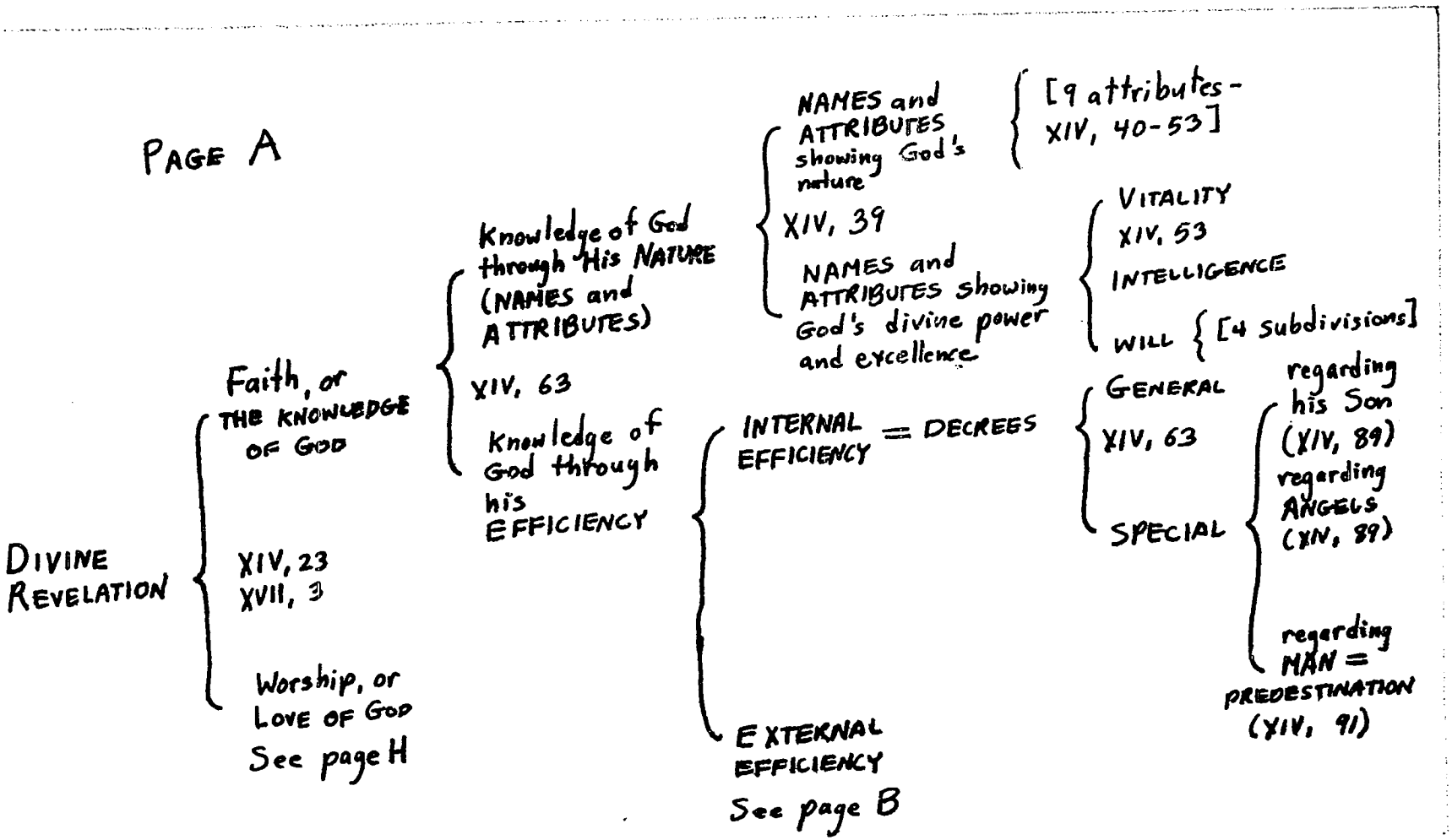


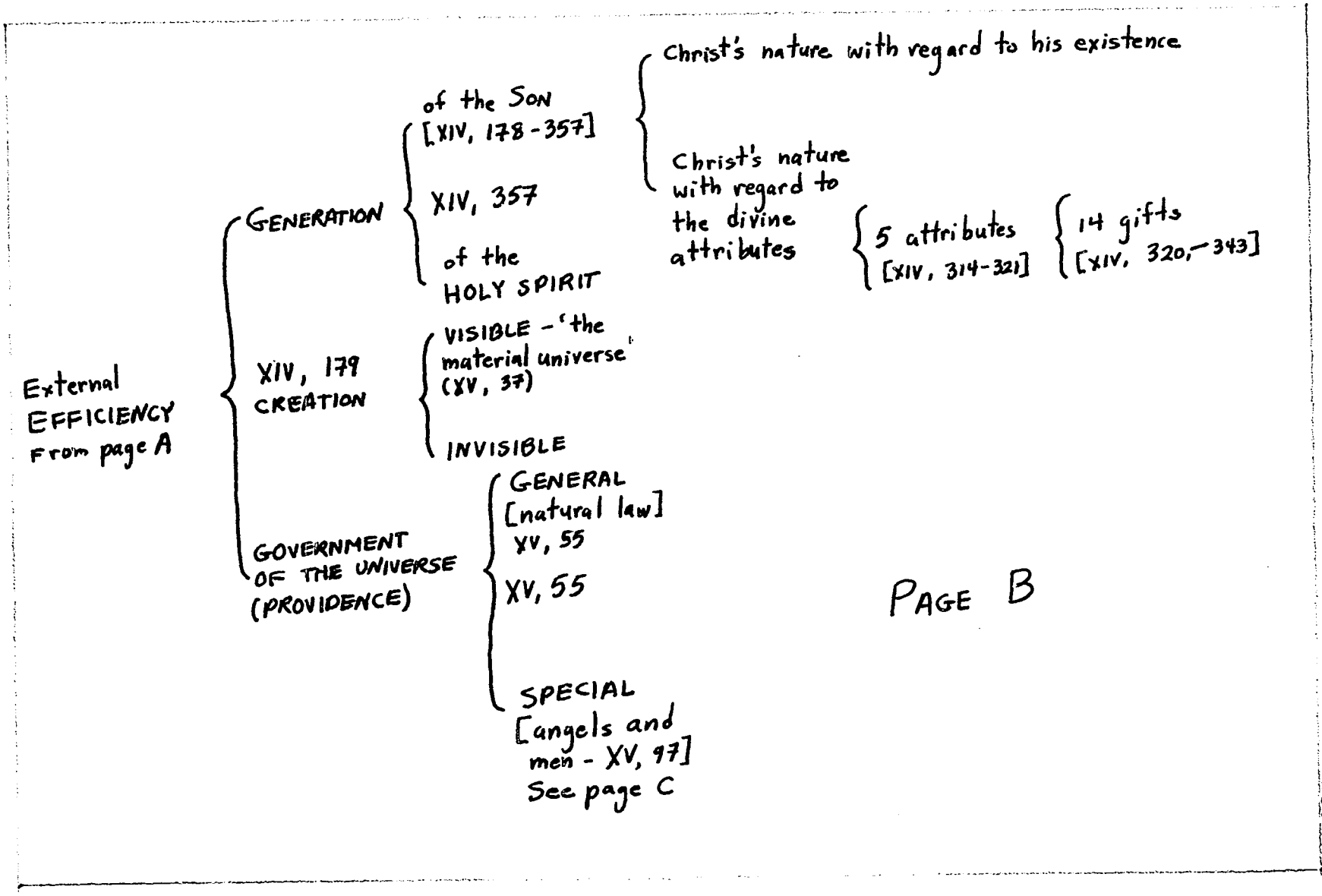
Analogous synopses are presented in Franklin Irwin's Ramistic Logic in Milton's Prose Works, a 1941 Princeton dissertation.[2]

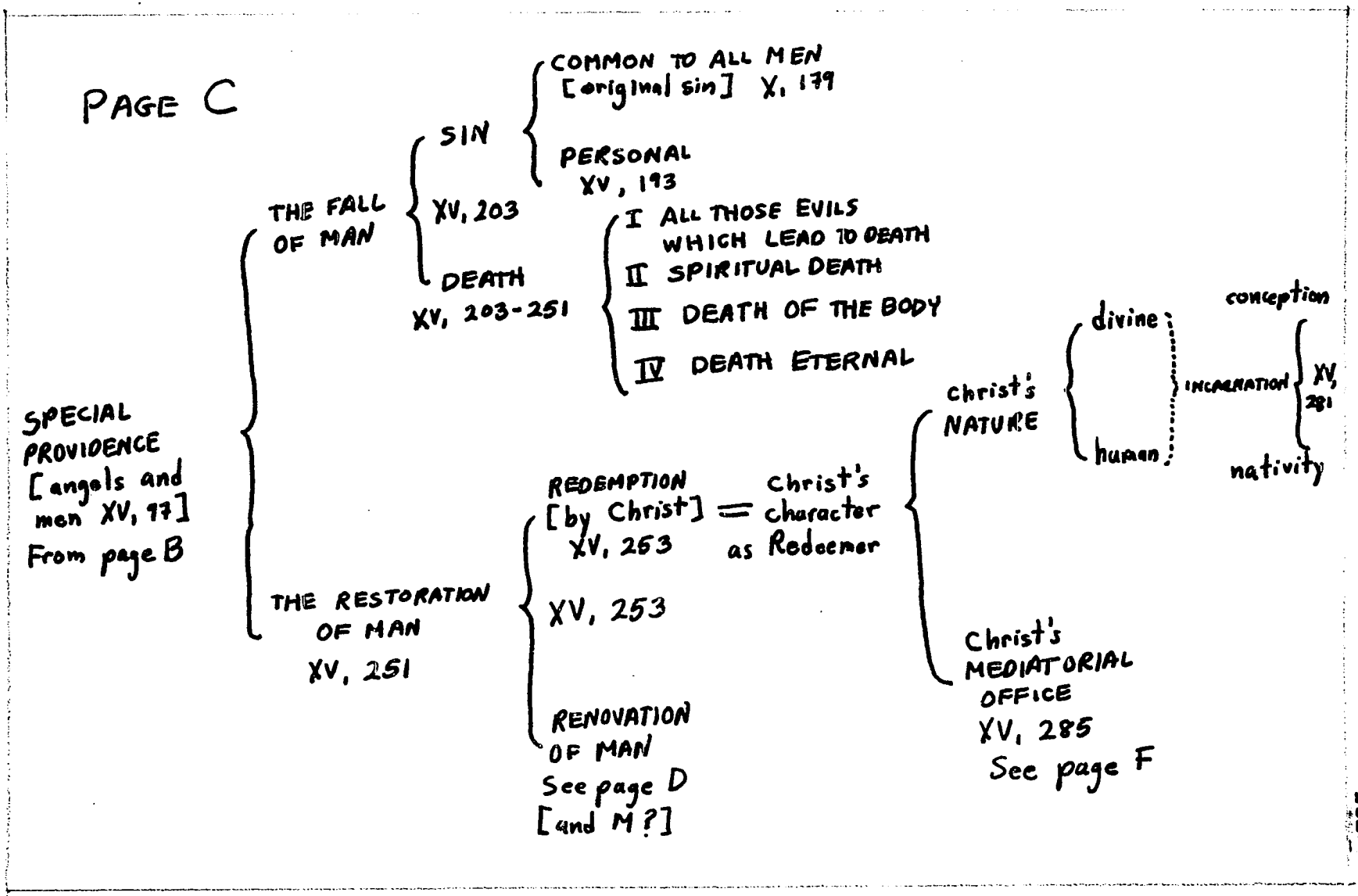
[1] J. H. Hanford and Waldo Hilary Dunn, "De Doctrina Christiana," The Works of John Milton, ed. F. A. Patterson, et al., 18 vols. (New York: Columbia University Press, 1933), vols. XIV-XVII.

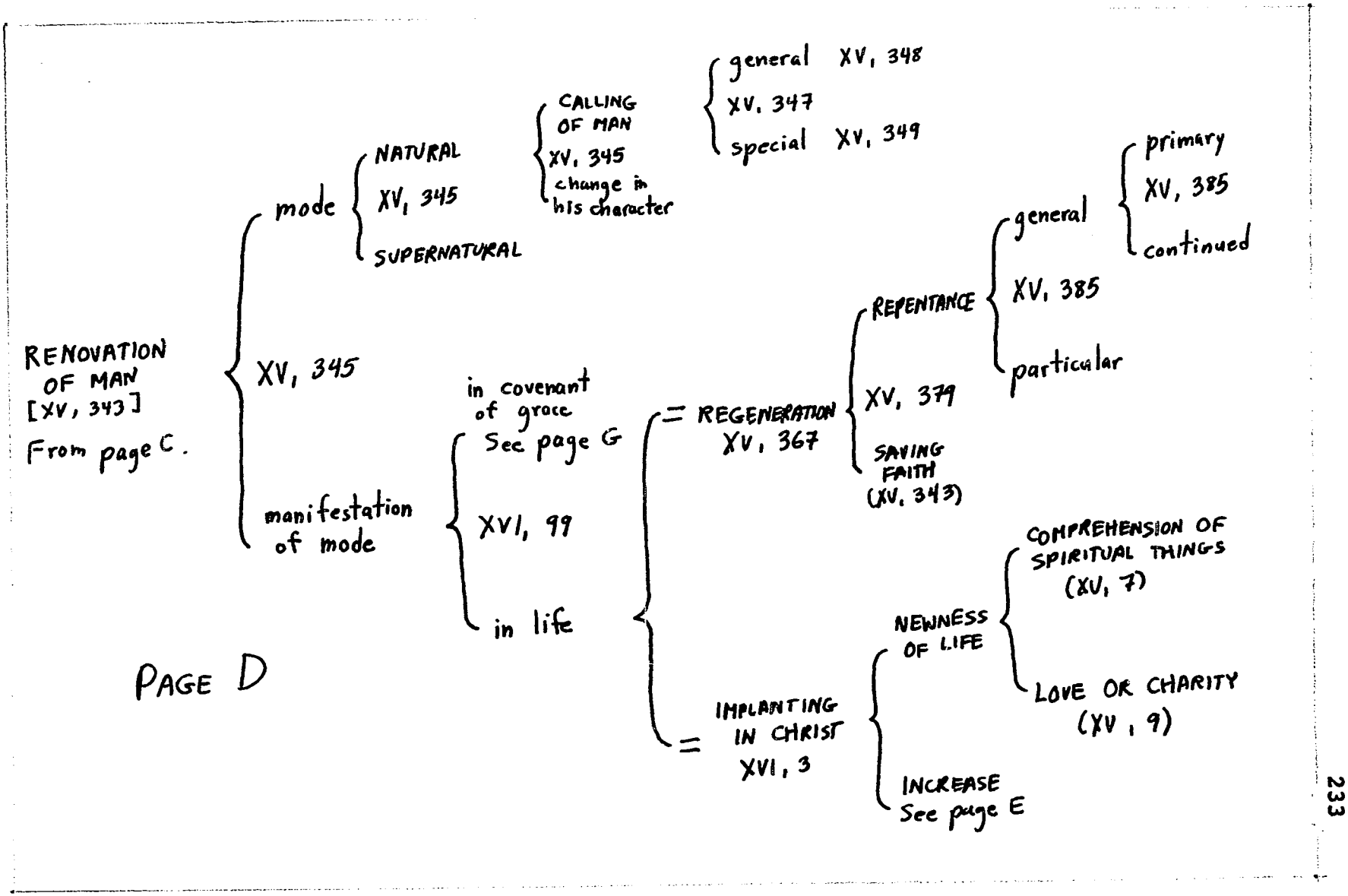
[2] Franklin Irwin, Ramistic Logic in Milton's Prose Works, Princeton University Dissertation (Ann Arbor: University Microfilms, 1941), pp. 13 and 68.

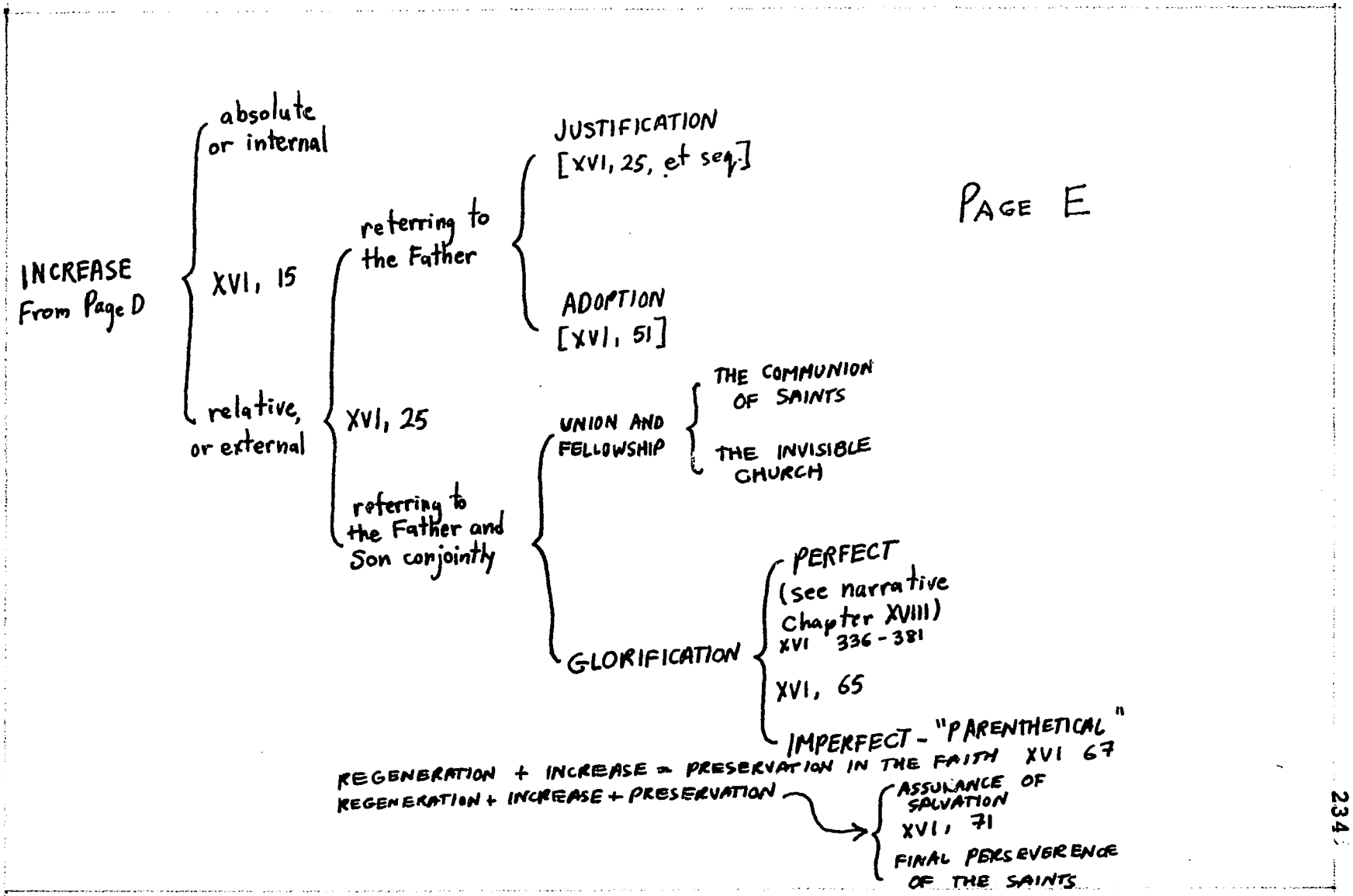
PAGE A



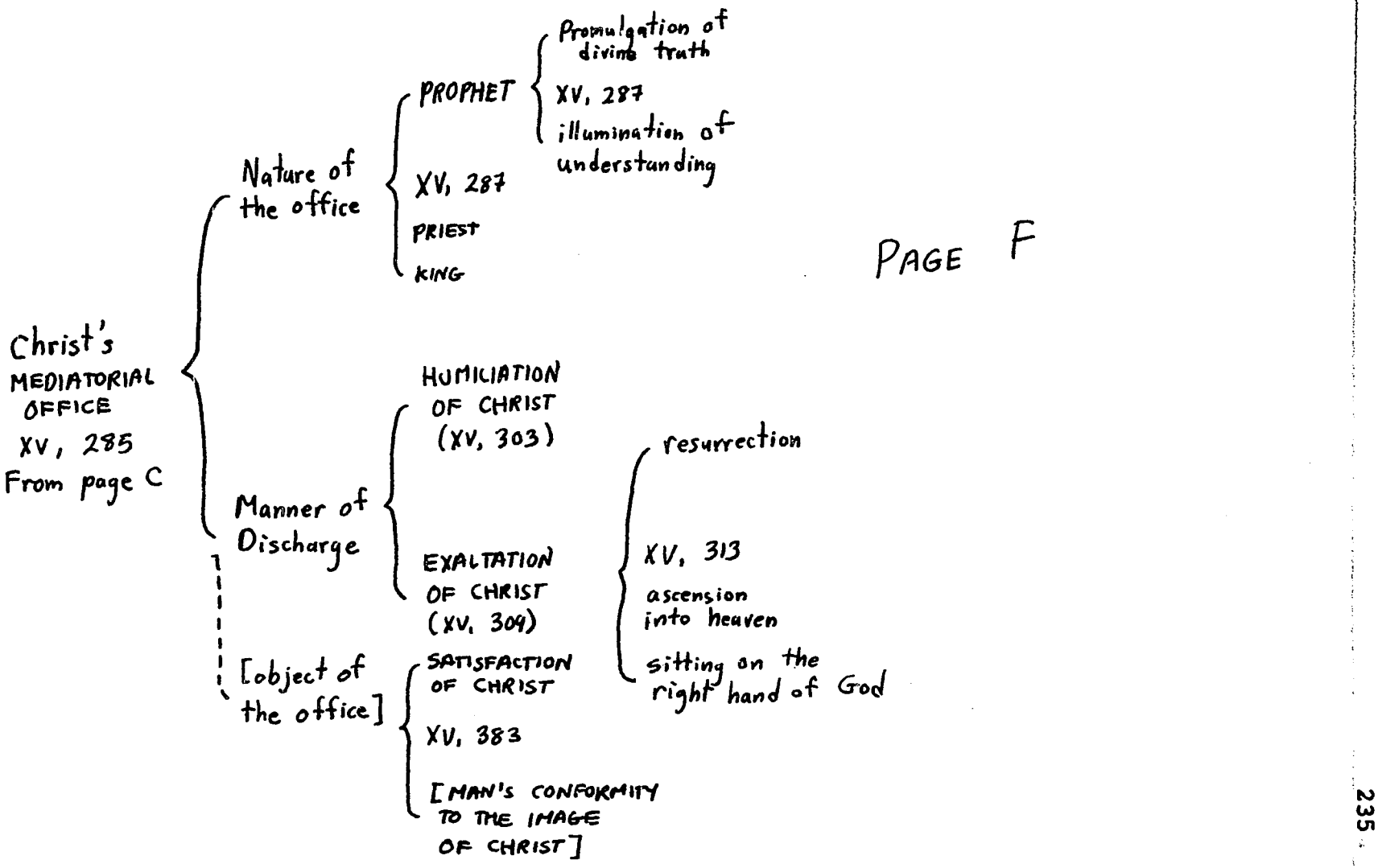




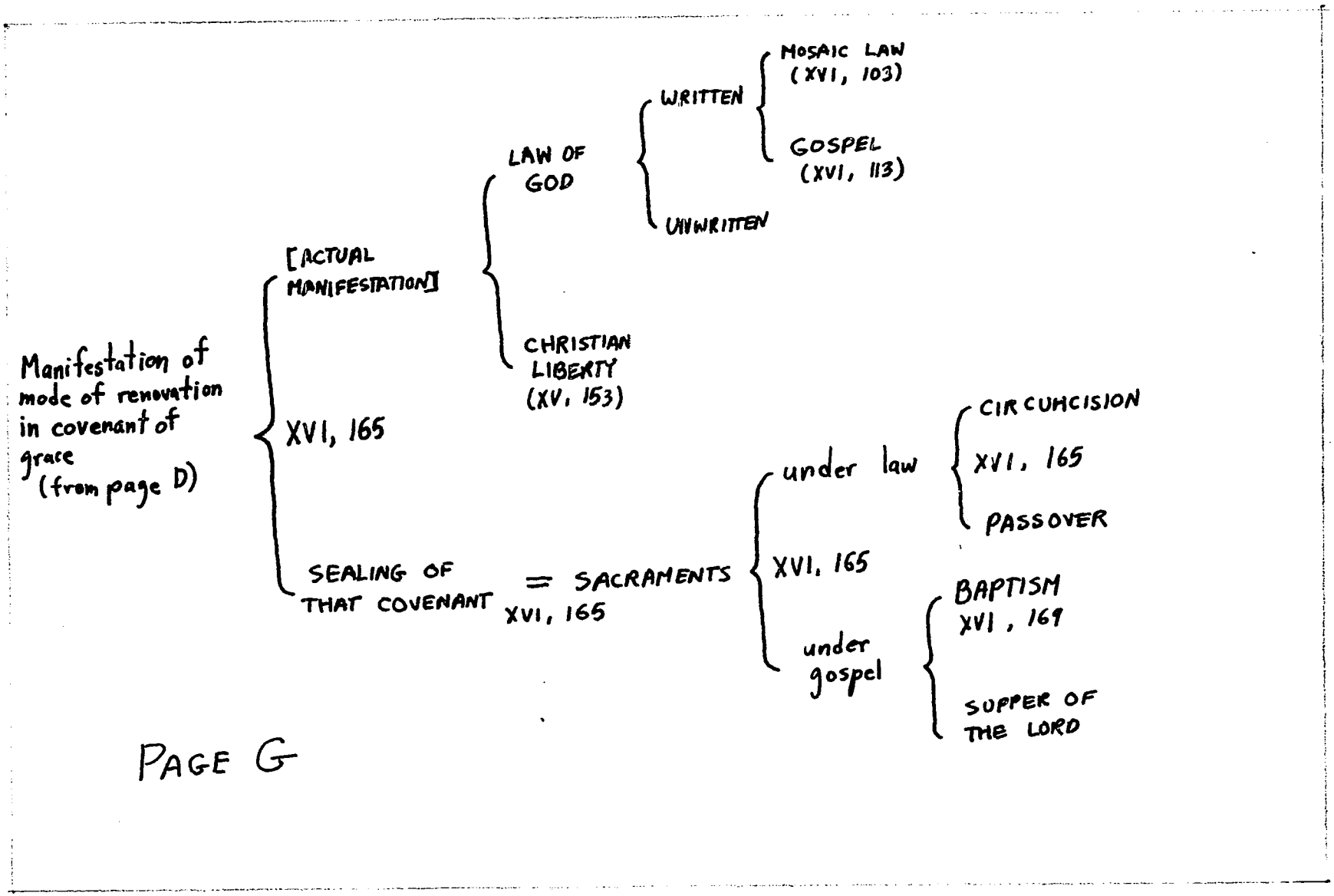




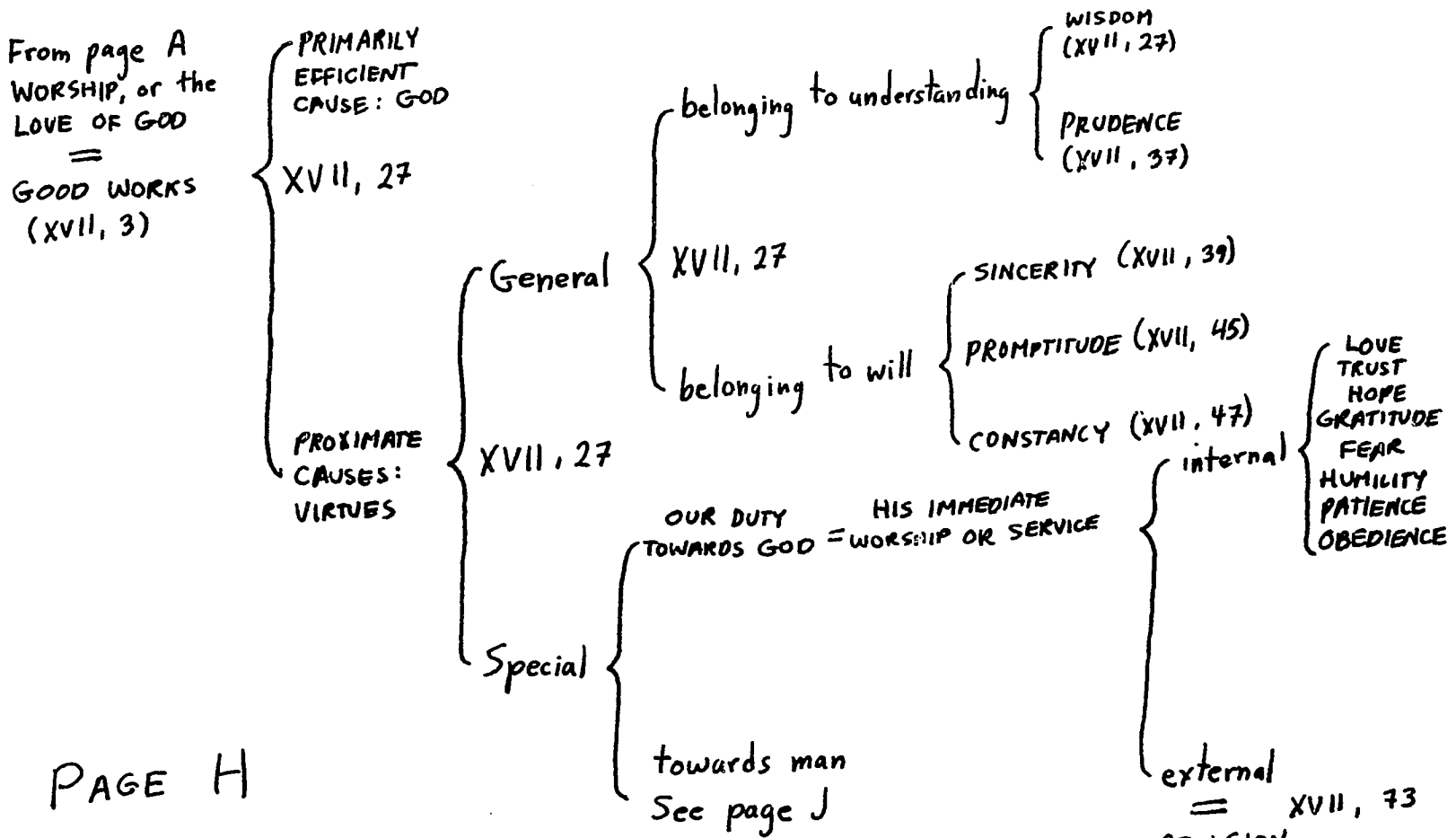
PAGE E

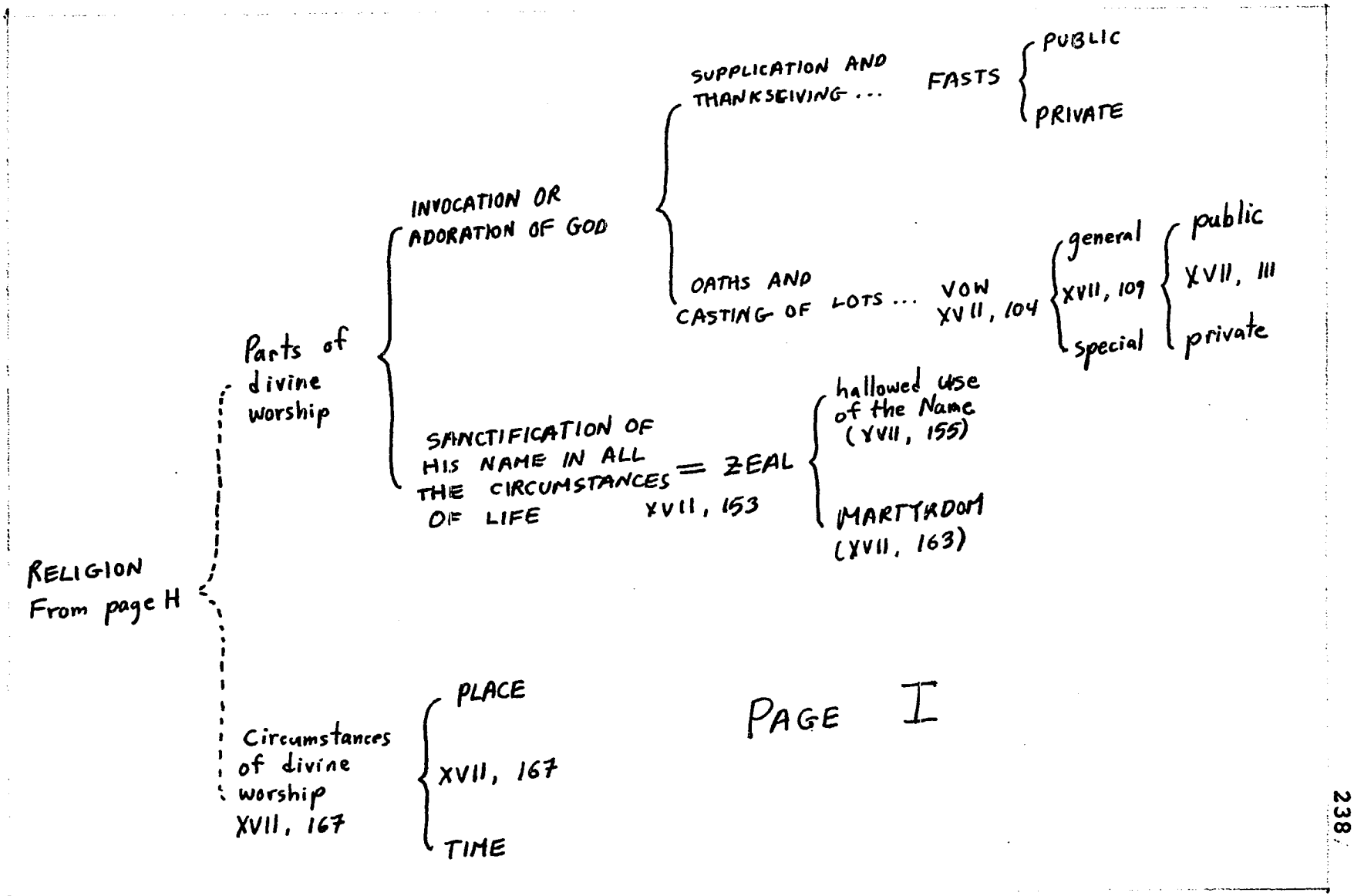


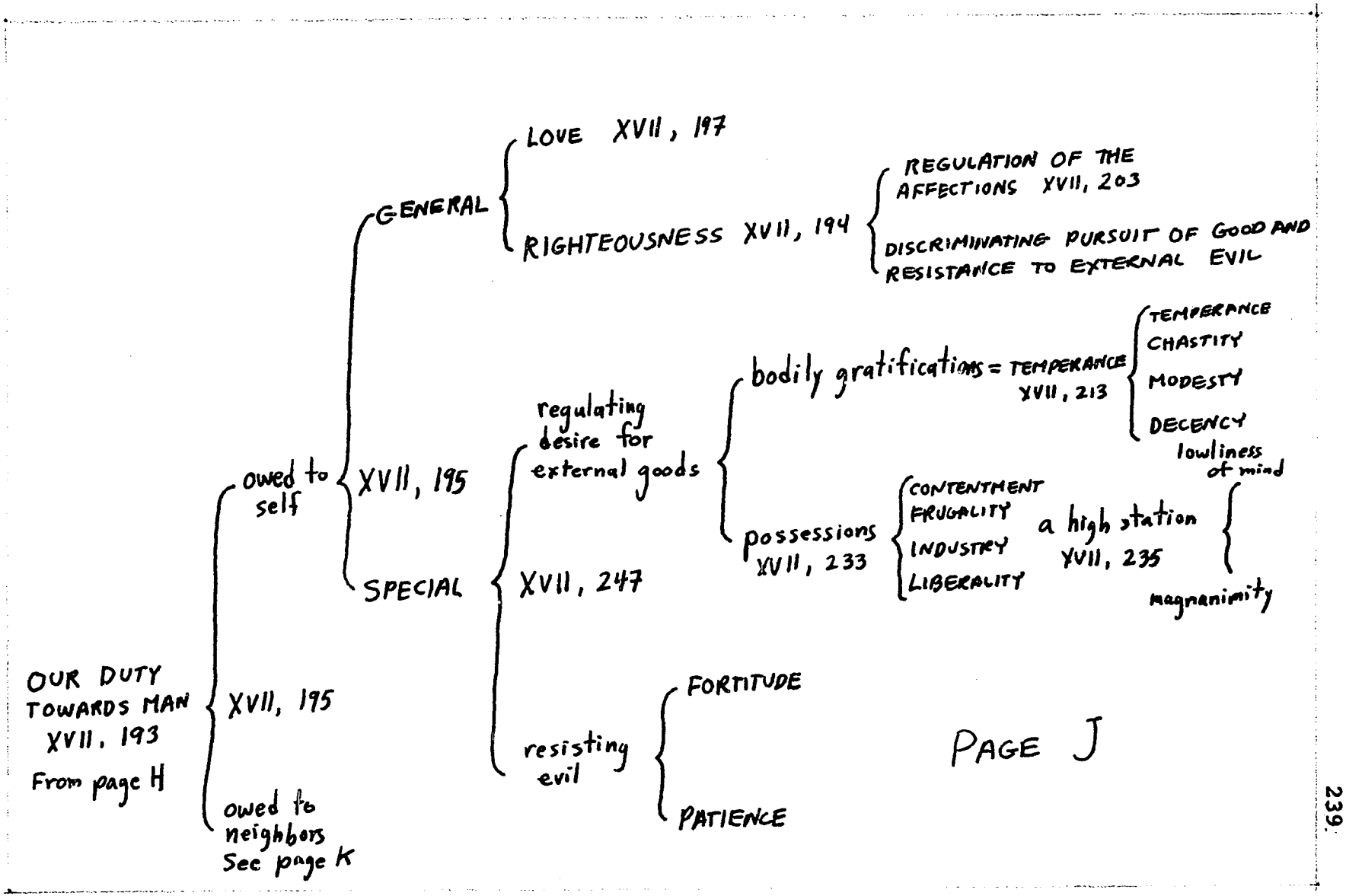
PAGE F

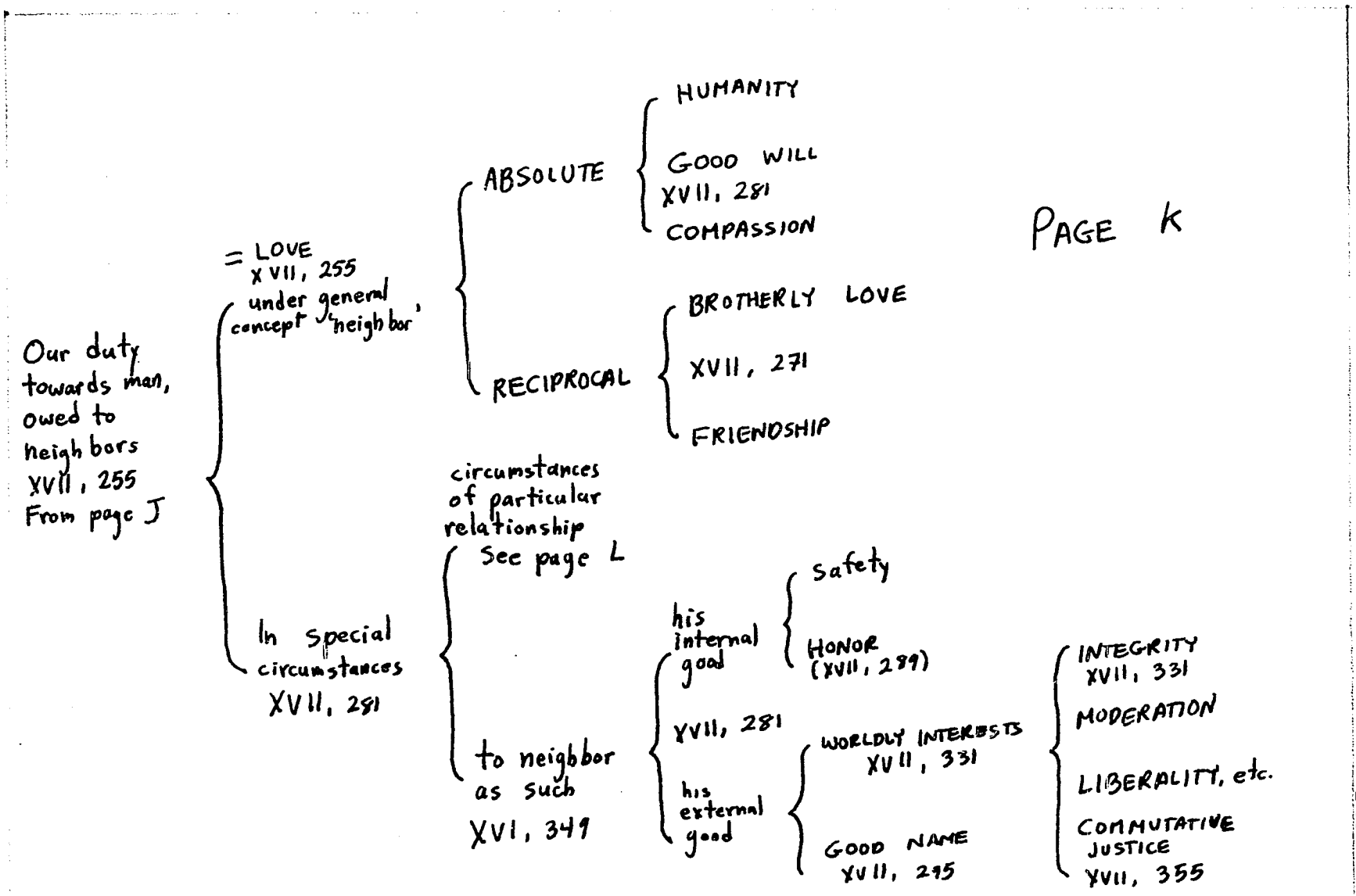


PAGE G

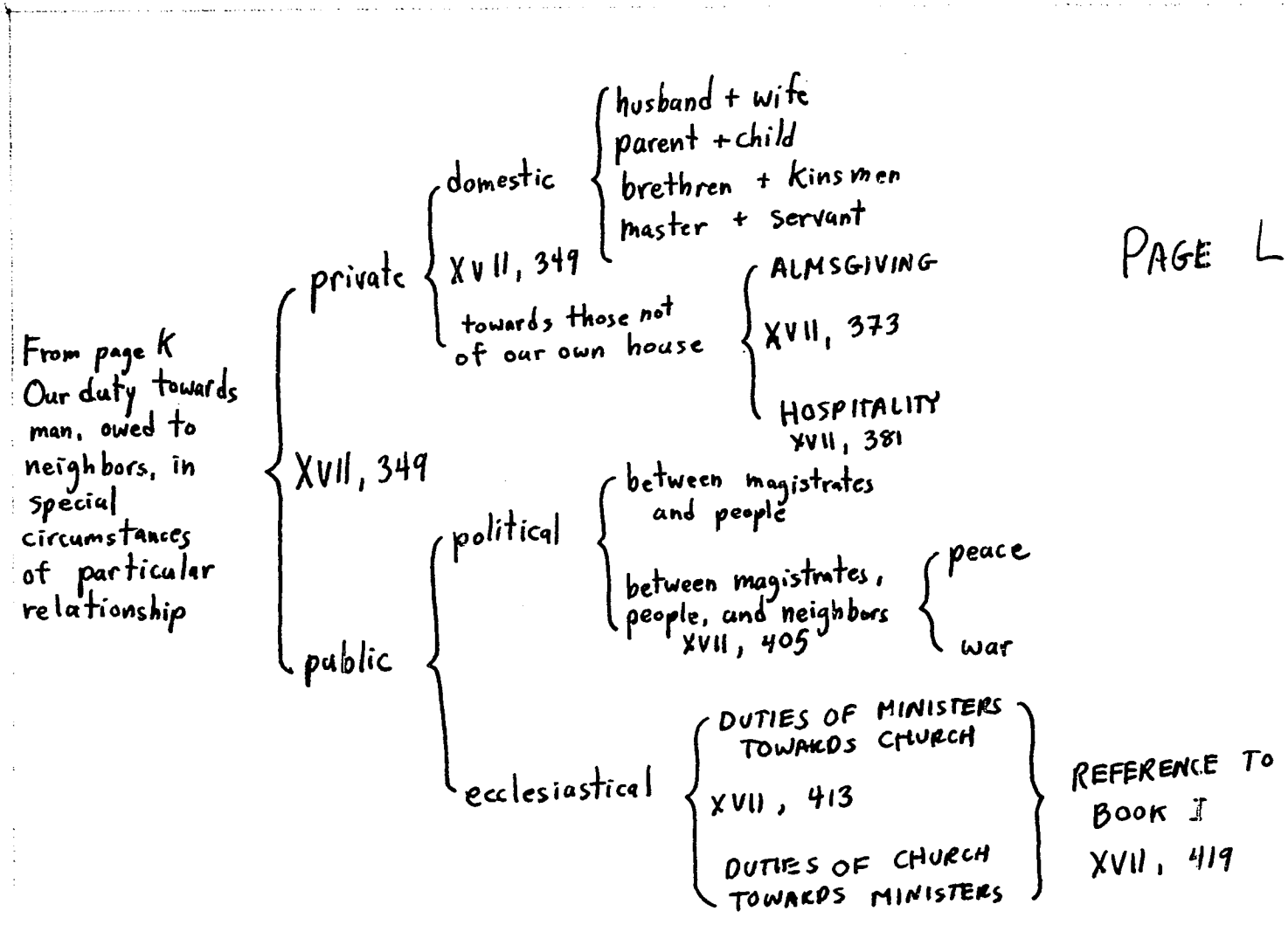


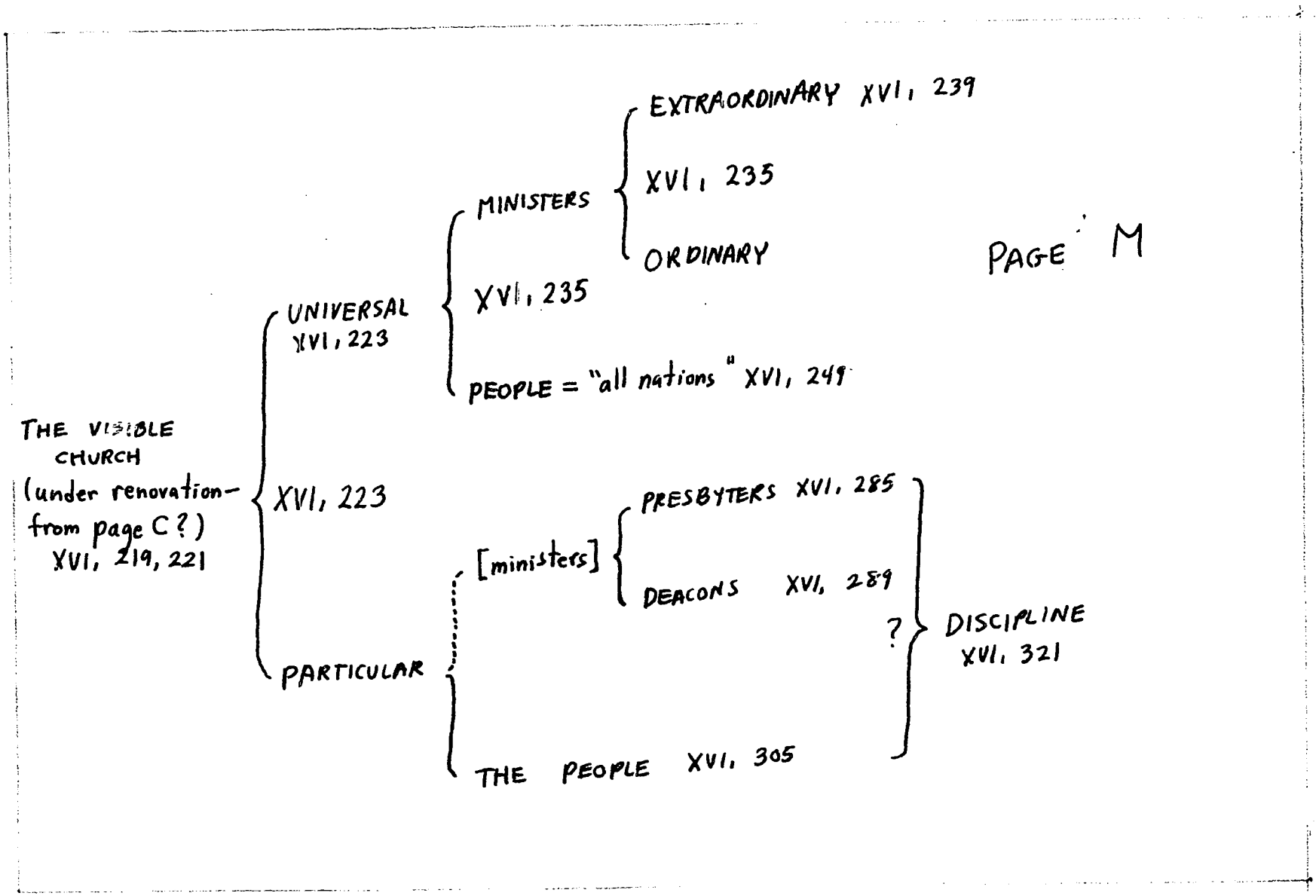






PAGE K





BIBLIOGRAPHY

Barker, A. E. "Milton's Schoolmasters." MLR, XXXII (1937), 517-36.

Bayle, [Pierre]. "Keckerman (Barthelemi)." Dictionnaire Historique et Critique. [4 vols.] Rotterdam: Reihier Leers, 1697. Tome second, Premiere Partie, H--O, p. 229.

Bolgar, R. P. The Classical Heritage and its Beneficiaries. Cambridge: Cambridge University Press, 1954.

Brett, George Sidney. A History of Psychology. 3 vols. London: George Allen & Unwin, Ltd., [1921].

Brooks, P. "Milton as an Educator." Journal of Education, LXVIII (1908), 533-35.

Brucker, Jacob. Kurzer Fragen aus der Philosophischern Historie, von Christi Geburt biss auf Unsere Zeiten, mit Ausfuhrlichen Anmerkungen erläutert. Ulm: Daniel Bartholomäi und Sohn, 1735.

Burden, Dennis H. The Logical Epic: A Study of the Argument of Paradise Lost. London: Routledge and Kegan Paul, [1967].

Burtt, E. A. The Metaphysical Foundations of Modern Physical Science. London, 1925.

Butterfield, H. The Origins of Modern Science: 1300-1800. London: G. Bell and Sons, Ltd., 1968.

Cavanaugh, S.S.J., Sister Mary Hortense. John Milton's Prolusions Considered in the Light of His Rhetorical and Dialectical Education at St. Paul's Grammar School and Cambridge University. Fordham University dissertation. Ann Arbor: University Microfilms, Inc., 1968.

Clark, Donald Leman. John Milton at St. Paul's School: A Study of Ancient Rhetoric in English Renaissance Education. [Hamden, Conn.]: Archon Books, 1964.

Collins, Dan Stead. Rhetoric and Logic in Milton's English Poems. University of North Carolina dissertation. Ann Arbor: University Microfilms, Inc., 1960.

Copi, Irving I. Introduction to Logic, 2nd ed. New York: Macmillan Co., [1961].

Costello, William T., S.J. The Scholastic Curriculum at Early Seventeenth-Century Cambridge. Cambridge, Mass.: Harvard University Press, 1958.

Craig, Hardin. The Enchanted Glass: The Elizabethan Mind in Literature. Oxford: Basil Blackwell, 1950.

Curry, Walter Clyde. Milton's Ontology, Cosmology and Physics. Lexington, Ky.: University of Kentucky Press, 1957.

Curtis, M. H. Oxford and Cambridge in Transition, 1558-1642. Oxford: [Oxford University Press], 1959.

Darbishire, Helen, ed. The Early Lives of Milton. London: Constable, 1932.

Downame, George. Commentarii in P. Rami Regii Professoris Dialecticam, quibus ex classicis qvibusque auctoribus praeceptorum Rameorum perfectio demonstratur, sensus explicatur, usus exponitur. Francofurti: Ex Calcographia Wolfgangi Richteri, . . . [1605].

Duhamel, P. A. "The Logic and Rhetoric of Peter Ramus." MP, XLVI (1948), 163-71.

_____. "Milton's Alleged Ramism." PMLA, LXVII (1952), 1035-53.

Fenner, Dudley. "The Artes of Logicke and Rhethorike, plainelie set foorth in the Englishe tounge, easie to be learned and practised: . . . ." Four Tudor Books on Education, ed. Robert D. Pepper. Gainesville, Fla.: Scholars' Facsimiles & Reprints, 1966. Pp. 143-80.

Fisher, Peter F. "Milton's Logic." JHI, XXXIII (1962), 37-60.

Fletcher, Harry Francis. The Intellectual Development of John Milton, II: The Cambridge University Period, 1625-32. [Urbana, Ill.: University of Illinois Press, 1961].

French, J. Milton. "Milton, Ramus, and Edward Phillips." MP, XLVII (1949), 82-87.

_____. "Some Notes on Milton's Accedence Commenc't Grammar." JEGP, LX (1961), 641-50.

Frissell, Harry Lee. Milton's Art of Logic and Ramist Logic in the Major Poems. Vanderbilt University dissertation. Ann Arbor: University Microfilms, Inc., 1951.

Frye, Northrop. Anatomy of Criticism: Four Essays. New York: Atheneum, 1966.

_____. The Return of Eden: Five Essays on Milton's Epics. [Toronto]: University of Toronto Press, [1965].

Gilbert, Allan H., ed. "Artis Logicae." The Works of John Milton, ed. F. A. Patterson, et al. 18 vols. New York: Columbia University Press, 1935. XI.

_____. "Logic in the Elizabethan Drama." SP, XXXII (1935), 527-45.

Gilbert, N. W. Renaissance Concept of Method. New York: Columbia University Press, 1960.

Gordon, Alexander. "Downame, George (Died 1634)." Dictionary of National Biography, ed. Sir Leslie Stephen and Sir Sidney Lee. 22 vols. London: Oxford University Press, 1921-22. V, 1300-1301.

Graves, Frank Pierrepont. Peter Ramus and the Educational Reformation of the Sixteenth Century. New York: The Macmillan Company, 1912.

Hanford, J. H. "The Chronology of Milton's Private Studies." PMLA, XXXVI (1921), 251-314.

_____. "The Date of Milton's De Doctrina Christiana." SP, XVII (1920), 309-19.

_____. A Milton Handbook. 4th ed. New York: Appleton-Century-Crofts, [1961].

Hanford, J. H. and Dunn, W. H., eds. "De Doctrina Christiana." The Works of John Milton, ed. F. A. Patterson, et al. 18 vols. New York: Columbia University Press, 1933-34. XIV-XVII.

Harris, Victor. "The Arts of Discourse in England, 1500-1700." PQ, XXXVII (1958), 454-64.

Henry, Nathaniel H. "Milton and Hobbes: Mortalism and the Intermediate State." SP, XLVIII (1951), 234-49.

Hobbes, Thomas. The English Works of Thomas Hobbes of Malmesbury, ed. Sir William Molesworth, Bart. [Darmstadt], Germany: Scientia Verlag Aalen, 1966.

Howard, Leon. "'The Invention' of Milton's 'Great Argument': A Study of the Logic of 'God's Ways to Men.'" HLQ, IX (1945-46), 149-73.

Howell, Wilbur Samuel. Eighteenth-Century British Logic and Rhetoric. Princeton, N.J.: Princeton University Press, 1971.

_____. Logic and Rhetoric in England, 1500-1700. Princeton, N.J.: Princeton University Press, 1956.

_____. "Ramus and English Rhetoric." QJS, XXXVII (1951), 299-310.

Hughes, Merritt Y., ed. John Milton: Complete Poems and Major Prose. New York: Odyssey Press, [1957].

Hunter, William B., Jr. "Milton and Thrice-Great Hermes." JEGP, XLV (1946), 327-36.

_____. "Milton's Materialistic Life Principle." JEGP, XLV (1946), 68-76.

_____. "Milton's Power of Matter." JHI, XIII (1952), 551-62.

_____. "The Theological Context of Milton's Christian Doctrine." Achievements of the Left Hand: Essays on the Prose of John Milton, ed. M. Lieb and J. T. Shawcross. Amherst, Mass.: University of Massachusetts Press, [19740.

Irwin, Franklin. Ramistic Logic in Milton's Prose Works. Princeton University dissertation. Ann Arbor: University Microfilms, Inc., 1941.

Jiriczek, Otto L. "Alexander Gill's Logonomia Anglica." Quellen und Forschungen zur Sprach- und Culturegeschichte der Germanischen Völker. Herausgegeben von Alois Brandl Ernst Martin, Erich Schmidt. Strassburg: Karl J. Trübner, 1903. XC.

Kearney, Hugh. Scholars and Gentlemen: Universities and Society in Pre-Industrial Britain, 1500-1700. [Ithaca, N.Y.]: Cornell University Press, [1970].

Keckermann, Bartholomew. Systema Logicae Tribus Libris Adornatum, Pleniore Praeceptorum & collationem cum doctrina Aristotelis atque aliorum, tum veterum, tum recentum Logicorum sententiis ac disputationibus. Hanovae: Apud Haeredes Guilielmi Antonii, [1613].

Kelley, Maurice, ed. "Christian Doctrine," trans. John Carey. Complete Prose Works of John Milton, ed. Don M. Wolfe, et al. New Haven, Conn.: Yale University Press, 1973. VI.

_____. "Milton's Debt to Wolleb's Compendium Theologiae Christianae." PMLA, L (1935), 156-65.

_____. "The Recovery, Printing, and Reception of Milton's Christian Doctrine." HLQ, XXXI (1967), 35-41.

_____. This Great Argument: A Study of Milton's De Doctrina as a Gloss upon Paradise Lost. Princeton Studies in English, vol. 22. Gloucester, Mass.: Peter Smith, 1962.

Kneale, William, and Kneale, Martha. The Development of Logic. Oxford: The Clarendon Press, 1962.

Krapp, George Philip, ed. "Accedence Commenc't Grammar." The Works of John Milton, ed. F. A. Patterson, et al. New York: Columbia University Press, 1932. VI, 285-353.

_____. "The History of Britain That Part especially now call'd England." The Works of John Milton, ed. F. A. Patterson, et al. New York: Columbia University Press, 1932. X.

Kuhn, Thomas S. The Structure of Scientific Revolutions. 2nd ed. [Chicago]: University of Chicago Press, [1970].

Leach, Arthur Francis. "Milton as Schoolboy and Schoolmaster." Proceedings of the British Academy, III (1907-08), [295]-318.

Lewis, C. S. A Preface to Paradise Lost. A Galaxy Book. New York: Oxford University Press, 1961.

Lieb, Michael, and Shawcross, John T., eds. Achievements of the Left Hand: Essays on the Prose of John Milton. Amherst, Mass.: University of Massachusetts Press, [1974].

Lieb, Michael. "Milton and the Metaphysics of Form." SP, LXXI (1974), 206-24.

[Lily, William.] A Short Introduction of Grammar Generally to be used: Compiled and set forth for the bringing up of all those that intend to attaine to the knowledge of the Latine tongue. Cambridge: Cantrell Legge, Printer to the Universitie, 1621.

McCain, John Walker, Jr. "Milton's Artis Logicae." N&Q, CLXI (1933), 149-50; CLXV (1933), 56-59.

Masson, David. The Life of John Milton: Narrated in Connexion with the Political, Ecclesiastical and Literary History of His Time. 6 vols. New York: Peter Smith, 1946.

Michael, Ian. English Grammatical Categories and the Tradition to 1800. Cambridge: Cambridge University Press, 1970.

Miller, Perry. The New England Mind: The Seventeenth Century. Cambridge, Mass.: Harvard University Press, 1954.

Miltoni, Joannis. Artis Logicae Plenior Institutio, ad Petri Rami Methodum concinnata. Libris duobus. Londini: Spencer Hickman, 1672.

Mintz, Samuel I. The Hunting of Leviathan: Seventeenth-Century Reactions to the Materialism and Moral Philosophy of Thomas Hobbes. Cambridge: Cambridge University Press, 1969.

Mohl, Ruth. John Milton and His Commonplace Book. New York: Frederick Ungar Publishing Co., [1969].

Moore-Smith, G. C. "A Note on Milton's Art of Logic." RES, XIII (1937), 335-40.

Mullinger, James Bass. The University of Cambridge. Cambridge: Cambridge University Press, 1873-1911.

Nelson, Norman E. "Peter Ramus and the Confusion of Logic, Rhetoric, and Poetry." UMCMP, II (1947), p. 22 et seq.

Nicolson, Marjorie H. "Milton and Hobbes." SP, XXIII (1926), 405-33.

_____. "The Spirit World of Milton and More." SP, XXII (1925), 433-52.

Ong, Walter J. "Hobbes and Talon's Ramist Theory in English." TCBS, Vol. III, Part I (1951), 260-69.

_____. "Logic and the Epic Muse: Reflections on Noetic Structures in Milton's Milieu." Achievements of the Left Hand: Essays on the Prose of John Milton, ed. M. Lieb and J. T. Shawcross. Amherst, Mass.: University of Massachusetts Press, [1974]. Pp. 239-68.

_____. The Presence of the Word: Some Prolegomena for Cultural and Religious History. New Haven: Yale University Press, 1967.

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

_____. Ramus and Talon Inventory: A Short-Title Inventory of the Published Works of Peter Ramus (1515-1572) and of Omar Talon (ca. 1510-1562) in their Original and in Their Variously Altered Forms. Cambridge, Mass.: Harvard University Press, 1958.

_____. Rhetoric, Romance, and Technology: Studies in the Interaction of Expression and Culture. Ithaca, N.Y.: Cornell University Press, [1971].

Parker, William Riley. "Education: Milton's Ideas and Ours." CE, XXIV (October, 1962), 1-14.

_____. Milton: A Biography. 2 vols. Oxford: The Clarendon Press, [1968].

_____. "Milton and Thomas Young, 1620-1628." MLN, LIII (1938), 399-407.

Parks, Malcolm Gordon. Milton and Seventeenth-Century Attitudes to Education. University of Toronto dissertation. Ann Arbor: University Microfilms, Inc., 1963.

Porter, Harry Culverwell. Reformation and Reaction in Tudor Cambridge. Cambridge: Cambridge University Press, 1958.

Richardson, Alexander. The Logician's School-Master: or, A Comment vpon Ramvs Logicke. London: Iohn Bellamie, 1629.

Samuels, Irene. "Milton on Learning and Wisdom." PMLA, LX (1949), 708-23.

Scott, William O. "Ramism and Milton's Concept of Poetic Fancy." PQ, XLII (1963), 183-89.

Scott-Craig, T.S.K. "The Craftsmanship and Theological Significance of Milton's Art of Logic." HLQ, XVII (1953), 1-16

[Seton, John.] Dialectica Ioannis Setonis Cantabrigiensis, Annotationibus Petri Carteri, ut clarissimus, ita breuissimus explicata . . . Londini: EEx Typographia Societatis Stationiorum, 1617.

Sewell, Arthur. A Study in Milton's Christian Doctrine. N.p.: Archon Books, 1967.

Shawcross, John T. "Milton's Decision to Become a Poet." MLQ, XXIV (1963), 21-30.

_____. "A Survey of Milton's Prose Works." [Appendix.] Achievements of the Left Hand: Essays on the Prose of John Milton, ed. M. Lieb and J. T. Shawcross. Amherst, Mass.: University of Massachusetts Press, [1974]. Pp. 291-390.

Smith, A. J. "An Examination of Some Claims for Ramism." RES, n.s. VII (1956), 348-59.

Spragens, Thomas A., Jr. The Politics of Motion: The World of Thomas Hobbes. N.p.: The University of Kentucky, [1973].

Temple, Sir William. P. Rami Dialecticae Libri Duo, Scholiis G. Tempelli Cantabrigiensis illustrati. Cantabrigiae: Ex officina Thomae Thomasij, 1584.

Tillyard, E.M.W. The Elizabethan World Picture. [Harmondsworth, Middlesex]: Penguin Books, [1963].

Tillyard, Phyllis B., trans. Milton: Private Correspondence and Academic Exercises. Cambridge: Cambridge University Press, 1932.

Tuve, Rosemond. Elizabethan and Metaphysical Imagery: Renaissance Poetic and Twentieth-Century Critics. Chicago: University of Chicago Press, [1961].

_____. "Imagery and Logic: Ramus and Metaphysical Poetics." JHI, III (1942), 365-400.

Waddington, Charles. Ramus, sa vie, ses écrits et ses opinions. Paris: Librairie de Ch. Meyriers et C^{e}, editeurs, 1855.

Watson, George. "Ramus, Miss Tuve, and the New Petromachia." MP, LV (1958), 259-62.

Williamson, George. "Milton and the Mortalist Heresy." SP, XXXII (1935), 553-79.

Wolfe, Don M. "Milton and Hobbes: A Contrast in Social Temper." SP, XLI (1944), 410-26.

Woodward, William Harrison. Studies in Education during the Age of the Renaissance: 1400-1600. Contributions to the History of Education. New York: Russell & Russell, Inc., 1965.

Yates, Frances. The Art of Memory. London: Rutledge & Kegan Paul, [1966].

[Zedler, Joh. Heinrich, et al.] "Keckermann . . ." Grosses Vollständiges Universal Lexicon. . . . Halle und Leipzig: Verlegts Johann Heinrich Zedler, 1737. XV, c. 373-374.