

## General Works and Bibliographies on the History of Logic in Western Thought

### SOME WORKS ON THE HISTORY OF LOGIC [UP TO 1977]

There is a paucity of works which treat the complete history of logic. Investigation of some of the problems in this field has increased in the last decades, mostly due to symbolic logic, which has established that many of the results obtained were familiar to the Stoics and particularly to the Scholastics. But these have not been overall studies of the science. The authors of the studies we possess usually aimed at rediscovering the results reached in symbolic logic by earlier logical schools, and so many problems of historical interest have in the past been only little explored or not at all. We shall quote below only those studies published in volumes, and which have a more general aim, even when treating special problems, or limited periods of time.

The first history of logic seems to be the work of Petrus Ramus, entitled *Scholae in liberales artes* -- "Schools of Liberal Arts" (Basle, 1569). The first eight chapters of this book deal with history of logic and are called *Scholae dialecticae* -- "Dialectic Schools". Unfortunately, the author naively believes all historical or legendary personages to have been logicians and in the chapter *Logica Patrum* ("Logic of our Ancestors") he lists among them Noah and Prometheus.

After this, studies of the history of logic become more scientific. Here we quote:

- Bartholomäus Keckermann: *Praecognitorum Logicorum Tractatus III* -- "Three Treatises on the most well-known Logicians" (Hanover, 1598). It is rather a useful list of authors and titles, with some indication of contents.
- Jacob Friedrich Reimmann: *Critisirender Geschichts-Calender von der Logica* -- "Critical and Historical Calendar of Logic" (Frankfort-on-Main, 1699). Written in defective German, this work nevertheless contains valuable information.
- Pierre Gassendi: *De origine et varietate logicae* -- "On the Origin and Diversity of Logic" (Lyons, 1658), a very valuable work.
- Johann Albert Fabricius: *Specimen elencticum historiae logicae* -- "Index of Subjects of the History of Logic" (Hamburg, 1699). This "Index" is actually a catalogue of the treatises of logic known by this scholar.
- Johannes Georgius Walchius [Johann Georg Walch]: *Historia Logicae* -- "History of Logic" (Leipzig, 1721). This book differs from the preceding ones in the correctness of its information.
- Heinrich Christoph Wilhelm Sigwart: *De historia logicae inter Graecos usque ad Socratem commentatio* -- "On the History of Logic among Greeks as far as Socrates" (Tübingen, 1832).
- Frederich Auguste de Reiffenberg: *Principes de la Logique suivis de l'Histoire et de la bibliographie de cette Science* -- "The Principles of Logic followed by the History and Bibliography of this Science" (Brussels, 1833).
- Adolphe Frank: *Esquisse d'une histoire de la logique precedée d'une Analyse etendue de l'Organum d'Aristote* -- "Sketch of a History of Logic Preceded by an Extensive Analysis of Aristotle's Organon" (Paris, 1838).
- Friedrich Adolf Trendelenburg: *Geschichte der Kategorienlehre* -- "History of the Theory

of Categories" (Berlin, 1845).

- Robert Blakey: *Historical Sketch of Logic, from the Earliest Times to the Present Day* (Edinburgh, 1851).
- We have reached now the monumental work in four volumes, Carl Prantl's *Geschichte der Logik im Abendlande* -- "History of logic in Western Europe" (Leipzig, 1855-1870). This writing offers an inexhaustible source of information, of original Greek and Latin texts, some of them copied down from inaccessible books and manuscripts (which the present work has also used). Yet this work has at least two shortcomings: it expounds the history of logic only down to the sixteenth century, and it is blemished by opinions that are inadmissible because of their violence and by a lack of understanding of ideas different from his own. Although Prantl was convinced he had written a work "so that it would not be necessary, at least for some time, to write another history of logic" (op. cit., IV, *Vorwort*), the material he collected can be only a source of information for other histories of logic. Prantl's method is exclusively chronological and therefore entails repetitions.
- Paul Janet and Gabriel Séailles: *Histoire de la Philosophie* (Paris 1887). In this "History of Philosophy", a large part deals with history of logic in a very original manner, dividing it into its main problems: history of the problem of concept, of judgement, of syllogism, of induction. It is a didactic handbook, supplying an important amount of information, sometimes following closely the treatise of Prantl.
- Friederich Harms: *Die Philosophie in ihrer Geschichte* "Philosophy in its History".
- The second volume of this work is entitled *Geschichte der Logik* - "History of Logic". (Berlin, 1881), and deals in a very general way with the history of this discipline.
- Robert Adamson: *A Short History of Logic* (Edinburgh, 1911; reprinted, Dubuque, Iowa, 1962).
- Clarence Irving Lewis: *A Survey of Symbolic Logic* (Berkeley, 1918). This book contains numerous historical indications about mathematical logic.
- Theodor Ziehen: *Lehrbuch der Logik auf positivistischer Grundlage mit Berücksichtigung der Geschichte der Logik*, - "Treatise on Logic, on Positivist Ground, Considering also the History of Logic" (Bonn, 1920).
- Oswald Külpe: *Vorlesungen über Logik* - "Lessons on Logic" (Leipzig, 1923). The first part of this book is a short history of logic, containing competent opinions, and a very judicious division of the history of this science.
- Federigo Enriques: *Per la storia della logica* - "For the History of Logic" (Bologna, 1922). This study contains some interesting remarks, gives the logic a larger framework, (including the methodologic and philosophical logic), but aims to show the connections between mathematics and logic.
- Henrich Scholz: *Geschichte der Logik* - "History of Logic" (Berlin, 1931). This is a short, but very erudite study, which underlines only those data which confirm or prefigure the results of mathematical logic.
- Jörgen Jörgensen: *A Treatise of Formal Logic* (3 vols., Copenhagen - London, 1931). The first volume bears the title *Historical Developments*, and offers precious information.
- Evert Willem Beth: *De Wijsbegeerte der Wiskunde van Parmenides tot Bolzano* - "The Theory of Science from Parmenides to Bolzano" (in Dutch, Antwerp-Nijmegen, 1944);
- Evert Willem Beth: *Geschiedenis der Logica* - "History of Logic" (in Dutch, the Hague, 1944).

- Francesco Albergamo: *Storia della logica delle scienze esatte* - "History of the Logic of Exact Sciences" (Bari, 1947).
- Antoinette Virieux-Reymond: *La logique et l'épistémologie des Stoïciens* - "Logic and Epistemology of the Stoics" (Lausanne, 1949).
- Philotheus Boehner: *Medieval Logic, an outline of its development from 1350 to c. 1400* (Manchester, 1952).
- Robert Feys: *De ontwikkeling van het logisch denken* - "Development of Logic Thought" (in Dutch, Antwerp - Nijmegen, 1949).
- Alonzo Church: *Introduction to Mathematical Logic* (Princeton, 1956). This masterly treatise on mathematical logic contains numerous and important historical references. Church has also published regularly in "Journal of Symbolic Logic" the bibliography of this science (beginning from 1936).
- Józef Maria Bochenski: *Formale Logik* - "Formal Logic" (Freiburg - München, 1956). This is, in our opinion, an important work in this field. It contains an anthology of texts, taken from the original writings of the logicians, beginning with Greeks until now, translated into German, and is chronological. The principle of this work is to give the texts which prefigure or present the results obtained in our time by mathematical logic. *Formale Logik* also gives short information about Indian logic. [Translated in English as *A history of formal logic* (1961)]
- Francesco Barone: *Logica formale e Logica trascendentale* - "Formal and Transcendental Logic" (2 vols., Turin, 1957-1965). The first volume is entitled *Da Leibniz a Kant* - "From Leibniz to Kant", and the second one *L'algebra della logica* - "The algebra of logic". Barone's work, although limited to a certain determined period, is rich in personal comment and contains much information.
- Ettore Carruccio: *Matematica e logica nella storia e nel pensiero contemporaneo* "Mathematics and Logic In the History and In the Contemporary Thought" (Turin, 1958).
- Benson Mates: *Stoic Logic* (Berkeley and Los Angeles, 1961).
- William and Martha Kneale: *The Development of Logic* (Oxford, 1962): We think this is the third important work in this field (chronologically, after those of Prantl and of Bochenski), very important as a work of references. The aim of this book is, as the authors say in the "Preface", "an account of the growth of logic, rather than an attempt to chronicle all that past scholars, good or bad, have said about their science". Kneale's method is not that used by Bochenski (anthology of texts), but their aim coincides with Bochenski's, being "to record the first appearances of those ideas which seem to us most important in the logic of our own day".
- Tadeusz Kotarbinski: *Leçons sur l'histoire de la logique* - "Lessons in the History of Logic" (Paris, 1964). The book is the translation of the lessons given by the author at the University of Warsaw, and though short offers a larger framework for the history of this discipline, also discussing other logic problems, for instance methodological ones, which were not considered by Bochenski or Kneale. Notwithstanding, this work aims to show the historical filiation of mathematical logic.
- Nicolai Ivanovici Stiazhkin: *Stanovlenie idei matematicheskoi logiki* - "The Genesis of the Idea of Mathematical Logic" (Moscow, 1964). This book has been translated into English under the title *History of Mathematical Logic from Leibniz to Peano* (Cambridge, Mass., London, 1969).
- Ernst Kapp: *Der Ursprung der Logik bei den Griechen* - "The Origin of Logic with

Greeks" (Gottingen, 1965) [Originally published in English as *Greek foundations of traditional logic*, 1942)

- Wilhelm Risse : *Bibliographia Logica*. The author intends to continue the work of Prantl, in his studies bearing this general title, but in an objective manner, beginning from where the last has left it, i. e. end of the sixteenth century. This bibliography is planned to appear in four volumes, the first being already published: *Bibliographia Logica. Verzeichnis der Druckschriften zur Logik mit Angabe ihrer Fundorte*. Band I, 1172 -1800 - "Logic Bibliography. List of printed writings with indication where they are to be found. Vol. I, 1472-1800" (Hildesheim - New York, 1965). Beside this vast bibliography, (which will also list the manuscripts of logic), Risse has published another work in two volumes (which will be continued too): *Die Logik der Neuzeit* Band I, 1600-1640 - "Logic of Recent Times, vol. I, 1500-1640" (Stuttgart - Bad Cannstatt, 1964); *Die Logik der Neuzeit* Band II, 1640-1780 (Stuttgart - Bad Cannstatt, 1970). These two volumes expound, in Prantl's manner, but more systematically, the treatises on logic from the mentioned periods. The studies of Risse, as well as those of Prantl, are indispensable to all researches in the field of history of logic.
- Peter Harold Nidditch: *The Development of Mathematical Logic* (London, New York, 1960).
- Guido Calogero: *Storia della logica antica* - "History of the ancient logic" (Bari, 1967). The author, mentions that this is the first of a series of volumes - "The Archaic Epoch", dealing with logic from Heraclitus to Leucippus and Democritus [other volumes were never published]. Calogero also published the important work *I fondamenti della logica aristotelica* - "The Bases of Aristotle's Logic" (2nd ed., Florence, 1968) [First edition: Rome, 1932]
- Alexandr Osipovich Makovelski: *Istoria Logiki* - "History of Logic" (Moscow, 1967), short general and didactic handbook of this discipline [translated in French by Geneviève Dupond as: *Histoire de la logique*, Moscou, Éditions du Progrès, 1978].
- James C. Colbert: *La evolucion de la logica simbolica y sus implicaciones* - "Evolution of Symbolic Logic and its Philosophical Implications" (Pamplona, 1968). This writing studies mathematical logic and some important authors.
- Anton Dumitriu: *Istoria Logicii* - "History of Logic" (Bucharest, 1969). The work highlights all the historical aspects of logic. It contains a chapter on logic in China and another on logic in India. An ample compendium of the whole book, in two parts, was published by "Scientia", and appeared simultaneously in French and English versions (Nos. VII-X, 1971). [Translated in English as *History of logic* (1977)]
- Robert Blanché: *La logique et son histoire. D'Aristote à Russell* - "Logic and its History. From Aristotle to Russell" (Paris, 1970), The book is full of interesting remarks, but it neglects, as many other works do, methodology, Renaissance logic, and other important problems.
- Reuben Louis Goodstein: *Development of Mathematical Logic* (New York, London 1971).
- Vicente Muñoz Delgado: *Logica Hispano-Portuguesa hasta 1600* - "The Spanish-Portuguese Logic till 1600" (Salamanca, 1972). This is an important study of logic in the Iberian Peninsula, containing information ignored till now.
- Stanislaw Surma (editor): *Studies in the History of Mathematical Logic* (Wroclaw - Warszawa - Krakow - Gdansk, 1973).

We can see from the above list, that very few of the works quoted are really "histories of logic". The

importance of all these contributions cannot be diminished but -- and this is a curious fact -- they generally defend or emphasize some particular results and thus neglect others.

We realize, in this way, that, indisputably, one veritable historical work, in the above list, is nevertheless, in spite of its weak side, Prantl's *Geschichte der Logik im Abendlande*, because the author does not select the logicians nor the theories he is treating of. He is judging them severely when they contradict his conception, and that is his error. But his work is unquestionably historical in character, and Prantl is really a historian, although his judgements are often too subjective and rudely expressed." (Vol. I, pp. XIII-XVI)

From: Anton Dumitriu, *History of logic*, Tunbridge Wells: Abacus Press, 1977.

The most important recent works are the *Handbook of the History of Logic*, edited by Dov Gabbay and John Woods (11 volumes) and *The Development of Modern Logic* edited by Leila Haaparanta; see the following section for the bibliographic details.

## GENERAL WORKS ON THE HISTORY OF LOGIC

1. "Logic, History Of." In. 2006. *Encyclopedia of Philosophy. Second Edition*, edited by Borchert, Donald M., 397-484. New York: Thomson Gale.  
The first edition of the *Encyclopedia of Philosophy*, edited by Paul Edwards, was published in 1967.  
The editor of the article *Logic, history of* in the first edition was Arthur Norman Prior.  
"The mainstream of the history of logic begins in ancient Greece and comes down through the Arabian and European logic of the Middle Ages and through a number of post-Renaissance thinkers to the more or less mathematical developments in logic in the nineteenth and twentieth centuries. In the period after the fall of Rome many of the ancient achievements were forgotten and had to be relearned; the same thing happened at the end of the Middle Ages. Otherwise this Western tradition has been fairly continuous. Indian and Chinese logic developed separately. Today logic, like other sciences, is studied internationally, and the same problems are treated in the Americas, western and eastern Europe, and Asia and Australasia. The story of the development of logic will be told here under the following headings:  
Susanne Bobzien: Ancient logic; Brendan S. Gillon: Logic and inference in Indian philosophy; A. C. Graham (1967): Chinese logic (Bibliography updated by Huichieh Loy); Nicholas Rescher (1967): Logic in the Islamic world (with an Addendum by Tony Street); Christopher J. Martin: Medieval (European) logic; Ivo Thomas (1967): The Interregnum (between medieval and modern logic); Precursors of modern logic: Ivo Thomas (1967): Leibniz; Ivo Thomas (1967): Euler; Ivo Thomas (1967): Lambert and Ploucquet; Yehoshua Bar-Hillel (1967): Bolzano; Modern logic: the Boolean period; P. L. Heath (1967): Hamilton; P. L. Heath (1967): De Morgan; John Corcoran: Boole; P. L. Heath (1967): Jevons; P. L. Heath (1967): Venn; Francine F. Abeles: Carroll; A. N. Prior (1967): Peirce; A. N. Prior (1967): A. N. Prior (1967): Keynes; A. N. Prior (1967): Johnson; The heritage of Kant and Mill; A. N. Prior (1967): From Frege to Gödel; Ivo Thomas (1967): Nineteenth century mathematics; Bede Rundle (1967): Frege; Bede Rundle (1967): Whitehead and Russell; Bede Rundle (1967): Ramsey; Bede Rundle (1967): Brouwer and Intuitionism; Bede Rundle (1967): Hilbert and Formalism; Bede Rundle (1967): Löwenheim; Bede Rundle (1967): Skolem; Bede Rundle (1967): Herbrand; Bede Rundle (1967): Gödel; John P. Burgess: Since Gödel; Bede Rundle (1967): Gentzen; Bede Rundle (1967):

- Church; Herbert B. Enderton: Turing and computability theory; Wilfrid Hodges: Decidable and undecidable theories; Wilfrid Hodges: Model theory; Grahan Priest: The proliferation of nonclassical logics; Peter Cholak and Red Solomon: Friedman and revers mathematics." (from the Second Edition)
2. Gabbay, Dov, and Woods, John, eds. 2004. *Handbook of the History of Logic*. Amsterdam: Elsevier.  
Plan of the work: 1. Greek, Indian and Arabic Logic (2004); 2. Mediaeval and Renaissance Logic (2008); 3. The Rise of Modern Logic: from Leibniz to Frege (2004); 4. British Logic in the Nineteenth Century (2008); 5. Logic from Russell to Church (2009); 6. Sets and Extensions in the Twentieth Century (co-editor Akihiro Kanamori, 2012); 7. Logic and the Modalities in the Twentieth Century (2006); 8. The Many Valued and Non-monotonic Turn in Logic (2007); 9. Computational Logic (2015); 10. Inductive Logic (co-editor Stephan Hartmann, 2011); 11. Logic: A History of its Central Concepts (2012).
  3. ———, eds. 2004. *Greek, Indian and Arabic Logic*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 1
  4. ———, eds. 2008. *Mediaeval and Renaissance Logic*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 2.
  5. ———, eds. 2004. *The Rise of Modern Logic: From Leibniz to Frege*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 3.
  6. ———, eds. 2008. *British Logic in the Nineteenth Century*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 4.
  7. ———, eds. 2009. *Logic from Russell to Church*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 5.
  8. ———, eds. 2012. *Sets and Extensions in the Twentieth Century*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 6.  
Co-editor Akihiro Kanamori.
  9. ———, eds. 2006. *Logic and the Modalities in the Twentieth Century*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 7.
  10. ———, eds. 2007. *The Many-Valued and Nonmonotonic Turn in Logic*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 8.
  11. ———, eds. 2015. *Computational Logic*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 9.
  12. ———, eds. 2011. *Inductive Logic*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 10.  
Co-Editor Stephan Hartmann.
  13. Gabbay, Dov, Pelletier, Francis Jeffrey, and Woods, John, eds. 2012. *Logic: A History of Its Central Concepts*. Amsterdam: Elsevier.  
Handbook of the History of Logic: Vol. 11.
  14. Haaparanta, Leila, ed. 2009. *The Development of Modern Logic*. New York: Oxford University Press.  
"This volume is the result of a long project. My work started sometime in the 1990s,

when Professor Simo Knuuttila urged me to edit, together with a few colleagues, a volume on the history of logic from ancient times to the end of the twentieth century. Even if the project was not realized in that form, I continued with the plan and started to gather together scholars for a book project titled *The Development of Modern Logic*, thus making a reference to the famous book by William and Martha Kneale. Unlike that work, the new volume was meant to be written by a number of scholars *almost as if* it had been written by one scholar only. I decided to start with thirteenth-century logic and come up with quite recent themes up to 2000, hence, to continue the history written in *The Development of Logic*. My intention was to find a balance between the chronological exposition and thematic considerations. The philosophy of modern logic was also planned to be included; indeed, at the beginning the book had the subtitle "A Philosophical Perspective," which was deleted at the end, as the volume reached far beyond that perspective. The collection of articles is directed to philosophers, even if some chapters include a number of technical details. Therefore, when it is used as a textbook in advanced courses, for which it is also planned, those details are recommended reading to students who wish to develop their skills in mathematical logic." (From the Preface by Leila Haaparanta)

Contents: Preface V-VI; 1. Leila Haaparanta: Introduction 3; 2. Tuomo Aho and Mikko Yrjönsuuri: Late medieval logic 11; 3. Mirella Capozzi, Gino Roncaglia: Logic and philosophy of logic from Humanism to Kant 78; 4. Volker Peckhaus: The mathematical origins of Nineteenth century algebra of logic 159; 5. Christian Thiel: Gottlob Frege and the interplay between logic and mathematics 196; 6. Risto Vilkkko: The logic question during the first half of the Nineteenth century 203; 7. Leila Haaparanta: The relations between logic and philosophy, 1874-1931 222; 8. Göran Sundholm: A century of judgement and inference, 1837-1936: Some strands in the development of logic; 9. Paolo Mancosu, Richard Zach, Calixto Badesa: The development of mathematical logic from Russell to Tarski 1900-1935 318; 10. Wilfrid Hodges: Set theory, model theory, and computability theory 471; 11. Jan von Plato: Proof theory of Classical and Intuitionistic logic 499; 12. Tapio Korte, Ari Maunu, Tuomo Aho: Modal logic from Kant to possible worlds semantics 516; Appendix to Chapter 12: Risto Hilpinen: Conditionals and possible worlds: On C. S. Peirce's conception of conditionals and modalities 551; 13. Gabriel Sandu, Tuomo Aho: Logic and semantics in the Twentieth century 562; 14. Andrew Aberdein and Stephen Read: The philosophy of alternative logics 613; 15. Sandy Zabell: Philosophy of inductive logic: the Bayesian perspective 724; 16. Alessandro Lenci, Gabriel Sandu: Logic and linguistics in the Twentieth century 775; 17. Richmond Thomason: Logic and artificial intelligence 848; 18. J. N. Mohanty, S. R. Saha, Amita Chatterjee, Tushar Kanti Sarkar, Sibajiban Bhattacharyya: Indian logic 903; Index 963-994.

15. "I Simposio De Historia De La Lógica, 14-15 De Mayo De 1981." 1983. *Anuario Filosófico de la Universidad de Navarra Pamplona* no. 16.  
Contents: I. Angelelli: Presentación del Simposio 7; Mario Mignucci: La teoria della quantificazione del predicato nell'antichità classica 11; Claude Imbert: Histoire et formalisation de la logique 43; Klaus Jacobi: Aussagen über Ereignisse. Modal- und Zeitlogische Analysen in der Mittelalterlichen Logik 89; Vicente Muñoz Delgado: Pedro de Espinosa (+ 1536) y la lógica en Salamanca hasta 1550 119; Angel d'Ors: Las *Summulae* de Domingo de Soto. Los límites de la regla '*tollendo tollens*' 209; José Luis Fuertes Herreros: Sebastián Izquierdo (1601-1681): un intento precursor de la lógica moderna en el siglo XVII 219; Larry Hickman: The *Logica Magna* of Juan Sanchez Sedeño (1600). A Sixteenth century addition to the Aristotelian *Categories*

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16. Angelelli, Ignacio, and D'Ors, Angel, eds. 1990. *Estudios De Historia De La Lógica. Actas Del Ii Simposio De Historia De La Lógica, Universidad De Navarra, Pamplona, 25-27 De Mayo De 1987*. Pamplona: Ediciones Eunate.  
 Indice: I. Angelelli: Presentación; E. J. Ashworth: The doctrine of signs in some early sixteenth-century Spanish logicians 13; I. Boh: On medieval rules of obligation and rules of consequence 39; Alexander Broadie: Act and object in Late-Scholastic logic 103; Hans Burkhardt: Contingency and probability: a contribution to the Aristotelian theory of science 125; Jeffrey S. Coombs: John Mair and Domingo de Soto on the reduction of iterated modalities 161; Donald Felipe: Johannes Felwinger (1659) and Johannes Schneider (1718) on syllogistic disputation 183; Norbert Hinske: Kant by computer. Applications of electronic data processing in the humanities 193; Herbert Hochberg: Predication, relations, classes and judgment in Russell's philosophical logic 213; Joachim Hruschka: The hexagonal system of deontic concepts according to Achenwall and Kant 277; Simo Knuuttila: Varieties of natural necessity in medieval thought 295; Wolfgang Lenzen: Precis of the history of logic from the point of view of the leibnizian calculus 321; Juan Carlos Leon, Alfredo Burrieza: Identity and necessity from the fregean perspective 341; Albert C. Lewis: An introduction to the Bertrand Russell editorial project: axiomatics in Russell 353; Christopher Martin: *Significatio nominis* in Aquinas 363; Mario Mignucci: Alexander of Aphrodisias on inference and syllogism 381; Vicente Muñoz Delgado: El análisis de los enunciados '*de incipit et desinit*' en la logica de Juan de Oria (1518) y en la de otros españoles hasta 1540 413; Niels Offenberger: Die Oppositionstheorie strikt partikulärer Urteilsarten aus der Sicht der Vierwertigkeit 489; Angel d'Ors: La doctrina de las proposiciones insolubles en las *Dialecticae introductiones* de Agustín de Sbarroya 499; Juana Sánchez Sánchez: Quine y Kripke sobre el análisis objetual de los enunciados de identidad 553; Christian Thiel: Must Frege's role in the history of philosophy of logic be rewritten? 571; Lista de participantes 585; Indice 589-591.
17. Angelelli, Ignacio, and Cerezo, María, eds. 1996. *Studies on the History of Logic. Proceedings of the Iii. Symposium on the History of Logic*. Berlin: Walter de Gruyter. Contents: Preface V; List of Contributors XI; Mario Mignucci: Aristotle's theory of predication 1; Robin Smith: Aristotle's regress argument 21, Hermann Weidemann: Alexander of Aphrodisias, Cicero and Aristotle's definition of possibility 33; Donald Felipe: Fonseca on topics 43; Alan Perreiah: Modes of scepticism in medieval philosophy 65; Mikko Yrjönsuuri: Obligations as thoughts experiments 79; Angel d'Ors: *Utrum propositio de futuro sit determinate vera vel falsa* (Antonio Andrés and John Duns Scotus) 97; Earline Jennifer Ashworth: Domingo de Soto (1494-1560) on analogy and equivocation 117; Allan Bäck: The *Triplex Status Naturae* and its justification 133; William E. McMahon: The semantics of Ramon Llull 155; Paloma Pérez-Ilzarbe: The doctrine of descent in Jerónimo Pardo: meaning, inference, truth 173; Jeffrey Coombs: What's the matter with matter: *Materia propositionum* in the post-medieval period 187; Rafael Jiménez Cataño: *Copulatio* in Peter of capua (12th century) and the nature of the proposition 197; Lynn Cates: Wyclif on *sensus compositus et divisus* 209; Mauricio Beuchot: Some examples of logic in New Spain

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18. Knuuttila, Simo, ed. 1988. *Modern Modalities. Studies of the History of Modal Theories from Medieval Nominalism to Logical Positivism*. Dordrecht: Kluwer. Contents: Simo Knuuttila: Introduction VII-XIV; Lilli Alanen and Simo Knuuttila: The foundations of modality and conceivability in Descartes and his predecessors 1; Ilkka Patoluoto: Hobbes's system of modalities 71; Jaakko Hintikka: Was Leibniz Deity an *Akrates*? 85; Martin Kusch and Juha Manninen: Hegel on modalities and monadology 109; Pascal Engel: Plenitude and contingency: modal concepts in Nineteenth century French philosophy 179; Leila Haaparanta: Frege and his German contemporaries on alethic modalities 239; Ilkka Niiniluoto: From possibility to probability: British discussions on modality in the Nineteenth century 275; Hans Poser: The failure of Logical Positivism to cope with problems of modal theory 311; Index of names 329; Index of subjects 341.

"The word "modern" in the title of this book refers primarily to post-medieval discussions, but it also hints at those medieval modal theories which were considered modern in contradistinction to ancient conceptions and which in different ways influenced philosophical discussions during the early modern period. The medieval developments are investigated in the opening paper, 'The Foundations of Modality and Conceivability in Descartes and His Predecessors', by Lilli Alanen and Simo Knuuttila.

Boethius's works from the early sixth century belonged to the sources from which early medieval thinkers obtained their knowledge of ancient thought. They offered extensive discussions of traditional modal conceptions the basic forms of which were: (1) the paradigm of possibility as a potency striving to realize itself; (2) the "statistical" interpretation of modal notions where necessity means actuality in all relevant cases or omnitemporal actuality, possibility means actuality in some relevant cases or sometimes, and impossibility means omnitemporal non-actuality; and (3) the "logical" definition of possibility as something which, being assumed, results in nothing contradictory. Boethius accepted the Aristotelian view according to which total possibilities in the first sense must prove their mettle through actualization and possibilities in the third sense are assumed to be realized in our actual history. On these presumptions, all of the above-mentioned ancient paradigms imply the Principle of Plenitude according to which no genuine possibility remains unrealized. (For the many-faceted role of the Principle of Western thought, see A.O. Lovejoy, *The Great Chain of Being. A Study of the History of an Idea*, Harvard University Press, Cambridge, Mass. 1936, and S. Knuuttila (ed.), *Reforging the Great Chain of Being. Studies of the History of Modal Theories* (Synthese Historical Library 20), Dordrecht, Reidel 1981.)

Boethius sometimes says that there can be opposite diachronic possibilities vis-à-vis future moments of time, but even in these cases unrealized alternatives cease to be possibilities when one of them is actualized. The idea of spelling out the meaning of modal notions with the help of synchronic alternative states of affairs hardly played any role in ancient thought; after having been suggested by some Patristic thinkers, it became a systematic part of modal thinking only in the twelfth century. It was realized that even if the traditional philosophical conceptions might be applicable to the phenomenal reality, possibilities of God, acting by choice, refer to alternative providential plans or histories. Although there were not many twelfth or thirteenth century figures who, like Gilbert of Poitiers or Robert Grosseteste, would have understood the theoretical significance of the idea of modality as referential multiplicity, the doctrine of special theological modalities motivated new kinds of discussions of the nature of natural necessities and the relations between the notions of possibility, conceivability, and knowability.

In ancient metaphysics, modality and intelligibility were considered real moments of being. A Christian variant of this doctrine can be found in such thirteenth century Parisian scholars as Thomas Aquinas, Bonaventura, and Henry of Ghent. They thought that God's infinite act of understanding contains the ideas of all conceivable kinds of beings. Ideas as possibilities have an ontological foundation, however, because God's act of thinking consists of understanding the infinite ways in which his essence could be imitated by finite beings. Because the ontological foundation of possibilities remains as such unknown to men, it is claimed that we usually cannot decide whether an alleged unrealized possibility really is a possibility or not.

In Duns Scotus's modal theory, the ontological foundation of thinkability is given up. The area of logical possibility is characterized as an infinite domain of thinkability which, without having any kind of existence, is objective in the sense that it would be identical in any omniscient intellect thinking about all thinkable things. This theory of the domain of possibility as an absolute precondition of all being and thinking was accepted by Ockham and many other medievals, and through Suárez's works it was commonly known in the seventeenth century, too. Another historically important feature of Scotus's modal theory is that it systematically developed the conception of modality as referential multiplicity. The domain of possibility as an a priori area of conceptual consistency is partitioned into equivalence classes on the basis of relations of compossibility. One of them is the actual world." pp. VII-IX.

19. Drucker, Thomas, ed. 2008. *Perspectives on the History of Mathematical Logic*. Boston: Birkhäuser.
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Indice: RELAZIONI. Evandro Agazzi: Attuali prospettive sulla storia della logica 3; Carlo Augusto Viano: Problemi e interpretazioni nella storia della logica antica 25; Franco Alessio: Prospettive e problemi della storia della logica medievale 37; Cesare Vasoli: La logica europea nell'età dell'Umanesimo e del Rinascimento 61; Francesco Barone: Sviluppi della logica nell'età moderna 95; Corrado Mangione: Indicazioni per una storia della logica matematica 113; COMUNICAZIONI. 1) STORIA DELLA LOGICA CLASSICA. Vittorio Sainati: La matematica della scuola eudossiana e le origini dell'apodittica aristotelica 131; Mario Mignucci: Universalità e necessità nella logica di Aristotele 151; Walter Leszl: Conoscenza dell'universale e conoscenza del particolare in Aristotele 169; Lorenzo Pozzi: Il nesso di implicazione nella logica stoica 177; Enzo Maccagnolo: La "proprietas veritatis" in Anselmo d'Aosta 189; Giovanni Versace: La teoria della "suppositio simplex" in Occam e in

Burley 195; Giulio Cesare Giacobbe: La "quaestio de certitudine mathematicarum" all'interno della scuola padovana 203; 2) STORIA DELLA LOGICA MATEMATICA. Ettore Carruccio: Teorema della pseudo-Scoto e sue applicazioni matematiche 215; Gabriele Lolli: Il concetto di definibilità nella discussione sui fondamenti dell'inizio del secolo 227; Domenico Costantini: Il postulato della permutazione di W. E. Johnson e gli assiomi carnapiani dell'invarianza 237; Giulio Giorello: Osservazioni sulle strutture non-standard della aritmetica e dell'analisi 243; Maria Luisa Dalla Chiara Scabia: Ampliamenti della logica classica: logica quantistica e logiche temporali non-standard 261; Silvio Bozzi: Alcune osservazioni storiche sui rapporti tra semantica e teoria dei modelli 269; Ugo Volli: Sviluppi recenti nei rapporti fra logica e linguistica 285-292.

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24. Büttgen, Philippe, Dieble, Stéphane, and Rashed, Marwan, eds. 1999. *Théories De La Phrase Et De La Proposition De Platon À Averroès*. Paris: Éditions Rue d'Ulm. Sommaire: Philippe Büttgen, Stéphane Diebler et Marwan Rashed: Avant-propos VII-IX; I. Aux origines ontologiques du langage rationnel; Claude Imbert: Le dialogue platonicien en quête de son identité 3; Denis O'Brien: Théories de la proposition dans le *Sophiste* de Platon 21; Francis Wolff: Proposition, être et vérité: Aristote ou Antisthène? 43; II. Entre logique et sémantique: l'autonomie problématique de la théorie aristotélicienne; Barbara Gernez: La théorie de la *lexis* chez Aristote 67; Jacques Brunschwig: Homonymie et contradiction dans la dialectique aristotélicienne 81; Pierre Chiron: La période chez Aristote 103; III. La théorie stoïcienne et ses enjeux; Jean-Baptiste Gourinat: La définition et les propriétés de la proposition dans le stoïcisme ancien 133; Frédérique Ildefonse: La théorie stoïcienne de la phrase (énoncé, proposition) et son influence chez les grammairiens 151; Marc Baratin: La conception de l'énoncé dans les textes grammaticaux latins 171; IV - D'Aristote à l'aristotélisme; Henri Hugonnard-Roche: La théorie de la proposition selon Proba, un témoin syriaque de la tradition grecque (VI<sup>e</sup> siècle) 191; Philippe Hoffmann: Les analyses de l'énoncé: catégories et parties du discours selon les commentateurs néoplatoniciens 209; Abdelali Elamrani-Jamal: La proposition assertorique (*de inesse*) selon Averroès 249; Ali Benmakhlouf: Averroès et les propositions indéfinies 269; Maroun Aouad: Les prémisses rhétoriques selon les *Isarat* d'Avicenne 281; Épilogue; Jean Jolivet: Sens des propositions et ontologie chez Pierre Abélard et Grégoire de Rimini 307; Index des auteurs anciens 325; Index des auteurs modernes 333-336.
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Revised translation from the original Dutch (1971) by E. M. Barth and T. C. Potts. Table of Contents: Preface XIX; Preface to the original edition XXI; On the use of symbols and graphical types XXIII-XXV; Part 1. The problem. I. Introduction: problems and sources 3; II. Naming what is 34; III. The semantics of the logical constants 50; Part 2. Historical survey. IV. From the history of the logic of indefinite propositions 75; V. From the history of the logic of individual propositions 141; VI. Singular - General - Indefinite 180; VII. The identity theories of the copula 204; Part 3. Descent. VIII. Argument by analogy 291; IX: The problem of the logic of relations and its connection with the logic of the articles 337; Part 4. X: Introduction of indefinite propositions by ekthesis 381; XI. Conjunction, potentiality, and disjunction 417; XII. Summary and conclusion 457; Bibliography 482; Index of proper names 502; Index of subjects 509.
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"The scope of this article is to present a broad survey of the relations between logic and ontology as they have been conceived of in the history of Western thought. While it is true that Hindu philosophy offers a similar field of research, the impression is that we are not yet prepared to handle it in any synthetic way. We simply do not know enough about the details of the Hindu doctrines."
30. ———. 1981. "The General Sense and Character of Modern Logic." In *Modern Logic - a Survey. Historical, Philosophical, and Mathematical Aspects of Modern Logic and Its Applications*, edited by Agazzi, Evandro, 3-14. Dordrecht: Reidel.
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"The author surveys recent contributions to the history of logic and develops methodological reflections aiming to show that a proper treatment of the discipline requires a wide-scope investigation taking into account not only formal theories acceptable by present-day standards of adequacy, but also the relationship between formalization and ordinary language, the philosophical, and the material heuristic motivations."
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34. ———. 1965. "The History of the Question of Existential Import of Categorical Propositions." In *Logic, Methodology and Philosophy of Science. Proceedings of the 1964 International Congress*, edited by Bar-Hillel, Yehoshua, 417-424. Amsterdam: North-Holland.
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"This paper sketches a history of definition of identity from Aristotle's "Tpics" down to the modern set theory. The author tries to explain particularly, first, how the transformation of the concept of predicate at the end of the Nineteenth century made it necessary to revise the Leibnizian definition of the identity of individuals; secondly, why Dedekind, Peano, Schroder, etc., made, between two possible definitions of identity of predicates or of sets, a choice which later made it necessary to postulate in set theory the axiom of extensionality."
38. Gensler, Harry. 2006. *Historical Dictionary of Logic*. Lanham: Scarecrow Press.  
Contents: Editor's Foreword by Jon Woronoff IX; Preface XI; Notation XIII; Chronology XV; Introduction XXIX-XLIV; The Dictionary 1; Bibliography 255;

About the author 307.

This book is an encyclopedia of logic. It introduces the central concepts of the field in a series of brief, nontechnical "dictionary entry" articles. These deal with topics like logic's history, its various branches, its specialized vocabulary, its controversies, and its relationships to other disciplines. While the book emphasizes deductive logic, it also has entries on areas like inductive logic, fallacies, and definitions -- and on key concepts from epistemology, mathematics, and set theory that are apt to arise in discussions about logic. Following the series guidelines, *Historical Dictionary of Logic* tries to be useful for specialists (especially logicians in areas outside their subspecialties) but understandable to students and other beginners; so I avoid topics or explanations that are so technical that only math majors would understand.

The major part of this book is the dictionary section, with 352 entries. While these are arranged alphabetically, there is also an organization based on content. Four very general entries start with "logic:" and serve mainly to point to more specific entries (like "propositional logic"); these in turn often point to related topics (like "negation," "conditionals," "truth tables," and "proofs"). So we have here a hierarchy of topics. Here are the four "logic:" entries:

logic: deductive systems points to entries like propositional logic, modal logic, deontic logic, temporal logic, set theory, many-valued logic, mereology, and paraconsistent logic.

logic: history of is about historical periods and figures and includes entries like medieval logic, Buddhist logic, twentieth-century logic, Aristotle, Ockham, Boole, Frege, and Quine.

logic: and other areas relates logic in an interdisciplinary way to other areas and includes entries like biology, computers, ethics, gender, God, and psychology.

logic: miscellaneous is about everything else (including technical terms) and includes entries like abstract entities, algorithm, ad hominem, inductive logic, informal/formal logic, liar paradox, metalogic, philosophy of logic, and software for learning logic.

The entries vary in length from a sentence or two to several pages. The front of the book has three important parts:

A short notation section gives the main logical symbols that I use in the book, along with alternative symbols that others sometimes use.

A chronology lists some of the main events in the history of logic.

An introduction tries to give an overall view of logic, the big picture, in order to give a broader context for the dictionary entries.

The back of the book has a substantial bibliography on related readings." (from the Preface).

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42. Kotarbinski, Tadeusz. 1964. *Leçons Sur L'histoire De La Logique*. Paris: Presses universitaires de France.  
Traduit de l'édition original polonaise (1957) par Anna Posner.
43. Lejewski, Czeslaw. 1981. "Logic and Ontology." In *Modern Logic - a Survey*.

*Historical, Philosophical, and Mathematical Aspects of Modern Logic and Its Applications*, edited by Agazzi, Evandro, 379-398. Dordrecht: Reidel.

"My discussion of the topic prescribed by the title of the paper will consist of two parts. In Part I, I propose to discuss, in very general and informal terms, the nature of logic and ontology, and the relationship that seems to connect these two disciplines. In Part II, I intend to examine, in some detail, a certain specific problem, which concerns logicians as well as ontologists, a problem which has been with us for about forty years, and which lacks a generally acceptable solution." p. 379.

44. Lewis, Clarence Irving. 1918. *A Survey of Symbolic Logic*. Berkeley: University of California Press.  
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45. Mangione, Corrado, and Bozzi, Silvio. 1993. *Storia Della Logica. Da Boole Ai Nostri Giorni*. Milano: Garzanti.
46. Mates, Benson. 1965. "A Brief Outline of the History of Logic." In *Elementary Logic*, 205-230. New York: Oxford University Press.  
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47. Nidditch, Peter H. 1962. *The Development of Mathematical Logic*. London: Routledge & Kegan Paul.  
Contents: 1. Purpose and language of the Book 1; 2. Aristotle's syllogistic 3; 3. The idea of a complete, automatic language for reasoning 14; 4. Changes in algebra and geometry, 1825-1900 23;  
5. Consistency and metamathematics 30; 6. Boole's algebra of logic 33; 7. The algebra of logic after Boole: Jevons, Peirce and Schroeder 44; 8. Frege's logic 59; 9. Cantor's arithmetic of classes 66; 10. Peano's logic 73; 11. Whitehead and Russell's 'Principia Mathematica' 77; 12. Mathematical logic after 'Principia Mathematica': Hilbert's metamathematics 79; Further reading 86; Index 87.
48. Nuchelmans, Gabriel. 1973. *Theories of Proposition. Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*. Amsterdam: North-Holland.  
Contents: Preface V; 1. Introduction 1; 2. Plato 13; 3. Aristotle 23; 4. The Stoic *lekton* 45; 5. The Stoic *axioma* 75; 6. Later developments in Greek antiquity 89; 7. The transition to the Latin West 105; 8. Boethius and the beginning of the Middle Ages 123; 9. Abelard 139; 10. The doctrine of the *dictum* in the century after Abelard 165; 11. Preliminaries to the fourteenth century debate 177; 12. The *complexum* theory of Ockham and Holkot 195; 13. Some reist opponents of Ockham and Holkot 209; 14. The theory of the *complexe significabile* 227; 15. The oppositions against the theory of the *complexe significabile* 243; 16. The significate of a true *propositio* 273; Selective bibliography 281; Indices 289-309.  
"This book is intended as the first part of a history of those problems and theories in the domain of philosophical semantics which nowadays are commonly referred to as problems and theories about the nature and the status of propositions. Although the conceptual apparatus and the terminology by means of which questions concerning propositions were asked and answered have considerably varied from period to period, the main types of disputes and solutions have remained remarkably constant. One of the aims of this study is precisely to trace the vicissitudes of the vocabulary in which this refractory topic was treated in the remote past. As is evident from the Bibliography, many parts of the field have been explored by predecessors. Guided by their results, I have tried to fill in more details and to design a provisional map of the area as a whole." (From the Preface).
49. ———. 1980. *Late-Scholastic and Humanist Theories of Proposition*. Amsterdam:

North-Holland.

Contents: Part One: Late-Scholastic theories of the proposition. 1. Introduction 3; 2. Different kinds of propositions and their ways of signifying 9; 3. The tie between the principal parts of a proposition 27; 4. The adequate signification and the adequate significate of a proposition 45; 5. Disguised propositions 74; 6. Judgment 90; 7. The object of judgment 103; 8. Propositions as bearer of truth-values 114; Part Two: Humanist theories of proposition. 9. Introduction 143; 10. The first attempt at reorientation 146; 11. The Melanchtonian treatment of a theme 159; 12. Peter Ramus 168; 13. The diffusion of Ramist terminology 180; 14. Eclectics 189; Epilogue 204; Bibliography 209; Indices 224-237.

"After publishing, more than six years ago, my *Theories of the Proposition. Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*, I initially intended to cover the remaining phases of the history of the semantics of declarative sentences in one volume. As the material proved more abundant and unwieldy than I had anticipated, I decided to limit the next instalment to the period between 1450 and 1650. Accordingly, the present book treats the theories of the proposition put forward by late-scholastic and humanist philosophers. It will be followed, in the not too distant future, I hope, by a third volume which will continue the account until the first decades of the nineteenth century.

In making my way through the intricate mass of sources, which are often works that are completely forgotten and extremely hard to obtain, I was greatly assisted by Professor Ashworth's pioneering book on *Language and Logic in the Post-Medieval Period*. Moreover, when I had practically finished my manuscript, she was kind enough to send me the draft of an article entitled 'Theories of the Proposition: Some Early Sixteenth Century Discussions'. As this article is based on a corpus of texts which is slightly different from mine, it enabled me to check some of my results against the findings of a very competent collaborator in this lonely field of research. I can only advise the reader to do the same when the article will have been published (in *Franciscan Studies* [38, 1978 pp. 81-121])."

50. ———. 1983. *Judgment and Proposition. From Descartes to Kant*. Amsterdam: North-Holland.

Contents: 1. The legacy of scholasticism and humanism 9; 2. Idea and judgment in Descartes 36; 3. Repercussions of Descartes' theory of judgment 55; 4. Arnauld and the Port-Royal *Logic* 70; 5. Some eighteenth-century critics of the Port-Royal view 88; 6. Geulincx's contribution to Cartesian philosophy of logic 99; 7. Ideas and Images. Gassendi and Hobbes 121; 8. The heyday of British empiricism 139; 9. Sensationalism and its critics in France 174; 10. Common sense philosophy and nominalism in Great Britain 194; 11. Leibniz's logical realism 214; 12. The German enlightenment 233; 13. Some problems in Kant and his contemporaries 246; Epilogue 257; Bibliography 262; Indices 280-295.

"This volume completes -- for the time being -- a series of investigations that were undertaken with the purpose of tracing in some detail the development of that field of logico-semantic research for which the foundations were laid in the first chapters of Aristotle's *De interpretatione* and which, in honour of that pioneer, might perhaps be called apophantics. The first part -- *Theories of the Proposition. Ancient and Medieval Conceptions of the Bearers of Truth and Falsity* -was published in 1973, followed by a second part -- *Late-Scholastic and Humanist Theories of the Proposition* -- in 1980. The last instalment takes the account from the beginning of the modern period to roughly that point in the nineteenth century from which on discussions of the subject in the recent past and contemporary systematic treatment tend to coalesce. " (From the Preface).

51. Prantl, Carl. 1997. *Geschichte Der Logik Im Abendlande*. Hildesheim: Georg Olms. Anastatic reprint of the original edition printed in four volumes Leipzig, S. Hirzl, 1855-1867.
- " It is a remarkable fact, unique perhaps in the writing of history, that Carl Prantl, the first to write a comprehensive history of western logic, on which task he spent a lifetime, did it precisely to prove that Kant was right, i.e. that formal logic has no history at all.
- His great work contains a collection of texts, often arranged from a wrong standpoint, and no longer sufficient but still indispensable. He is the first to take and discuss seriously all the ancient and scholastic logicians to whom he had access, though mostly in a polemical and mistaken spirit. Hence one can say that he founded the history of logic and bequeathed to us a work of the highest utility.
- Yet at the same time nearly all his comments on these logicians are so conditioned by the prejudices we have enumerated, are written too with such ignorance of the problems of logic, that he cannot be credited with any scientific value. Prantl starts from Kant's assertion, believing as he does that whatever came after Aristotle was only a corruption of Aristotle's thought. To be formal in logic, is in his view to be unscientific. Further, his interpretations, even of Aristotle, instead of being based on the texts, rely only on the standpoint of the decadent 'modern' logic. Accordingly, for example, Aristotelian syllogisms are misinterpreted in the sense of Ockham, every formula of propositional logic is explained in the logic of terms, investigation of objects other than syllogistic characterized as 'rank luxuriance', and so of course not one genuine problem of formal logic is mentioned.
- While this attitude by itself makes the work wholly unscientific and, except as a collection of texts, worthless, these characteristics are aggravated by a real hatred of all that Prantl, owing to his logical bias, considers incorrect. And this hatred is extended from the teachings to the teachers. Conspicuous among its victims are the thinkers of the Megarian, Stoic and Scholastic traditions. Ridicule, and even common abuse, is heaped on them by reason of just those passages where they develop manifestly important and fruitful doctrines of formal logic." (From: I. M. Bochenski - *A history of formal logic* - Notre Dame, University of Notre Dame Press, 1961, pp. 6-8).
52. Prior, Arthur Norman. 1962. *Formal Logic*. Oxford: Clarendon Press. Second edition (First edition 1955).
- "This book is designed primarily as a textbook; though like most writers of textbooks I hope it will prove to be of interest to others beside Logic students. Part I covers what I would regard as the 'fundamentals' of the subject-the propositional calculus and the theory of quantification. Part II deals with the traditional formal logic, and with developments which have taken that as their starting-point. I do not regard this as covering different ground from that covered in Part I under quantification theory, but rather as covering the same ground in a different way. Both ways seem to me to have their merits, and to throw light on one another and the subject. I would say the same of the logic of classes and relations in extension, discussed in Part III, Ch. III ; but the other chapters of this last Part deal with what I take to be genuine extensions of the subject-matter opened up in Part I, in two different directions -modal logic, and 'non-classical' systems of propositional calculus. Negatively, I have attempted to keep within the range indicated by my title: I have touched hardly at all upon 'scientific method', and have indulged in a minimum of metaphysical reflection (avoiding, for example, such topics as the relations between 'propositions' and sentences).In the greater part of the book the symbolic notation used is that of Łukasiewicz, with minor modifications. This seems to me unquestionably the best

logical symbolism for most purposes, and I should like to have helped to show that it is. In Part III, Ch. III, however, I have used the notation of Principia Mathematica a (referred to throughout this work as PM) ; in the particular field there covered, there is no other as fully developed or as deservedly well known. It does students no harm to learn to use two different notations, and to employ the one that is best for whatever they may have in hand at the time. Other innovations beside the symbolism are these: (i) throughout the book, a fairly frequent setting out of formal proofs (something to which the Polish notation particularly lends itself) ; (ii), in Part I, the devotion of particular attention to completeness proofs, and to forms of the propositional calculus not yet widely studied, especially to varieties of it which use the 'standard false proposition'  $\circ$ , and variable operators as well as propositional variables; (iii), in Part II, considerable use of scholastic material and of material from the writings of de Morgan. I have included these items from a sense of their importance rather than of their novelty, and have placed them where their appearance seems to me most rational and economical; but if any teacher wishes to use this book for a more orthodox type of logic course, there are various ways in which he may do so. If, for example, he wishes to introduce the traditional logic at an early stage, he could pass to Part II immediately from Part I, Ch. I, Ch. II, § 1, and Ch. IV, §§ and 2. (This procedure would have in any case the advantage of giving the student an interval of rest from pure symbolism before passing to the more interesting but more difficult aspects of the propositional calculus.) If he wishes to give the more usual sort of 'modern' course, he could pass immediately on from the same portions of Part I to Part III, Ch. I, § 2 and Ch. III." (from the Preface to the first edition).

"Apart from one or two very small corrections, I have in this edition left the body of the work just as it was, but have completely revised the two original appendixes and placed a wholly new appendix (the present Appendix II) between them. These alterations and additions will, I hope, make the appendixes much more valuable both for general reference and for pedagogical use. In the latter connexion I would particularly recommend that what I have said in the body of the book on quantification theory - which has met with some just criticisms - be read in conjunction with § 4 of Appendix I. There is also abundant material for exercises in simply verifying some of the relations asserted to hold between postulate-sets in this Appendix, using to this end the techniques sketched in the one that follows it." (from the Preface to the Second edition).

53. Scholz, Heinrich. 1961. *Concise History of Logic*. New York: Philosophical Library. Translated from the German edition "*Abriss der Geschichte der Logik*" (1931) by Kurt F. Leidecker.  
Translated in Italian as: "*Breve storia della logica*" Milano, Silva Editore 1967.  
Contents: Preface to the first edition (1931) V; Introduction by Kurt F. Leidecker IX; Abbreviations XIII-XIV; Types of logic 1; The Classical type of formal logic 24; The Modern type of formal logic 50; Bibliographic appendix 76; Supplementary observation 86; Notes 89; Index of names 137-140.  
"The reader of this *Concise History of Logic* is entitled to know what the objections to this book are and why it was nevertheless published.  
Carl Prantl (1820-1888) produced between 1855 and 1870 a standard work and source book for the history of logic from Aristotle to the end of the 15th century in which it is possible even now to appreciate an admirable mastery of the material, an exemplary punctiliousness in presenting the sources, and a nearly equally perfect intuitive certainty with which the material has been selected. For the history of modern logic there simply does not exist any work which could remotely be compared with Prantl's. Indeed, such a work will be written only when more shelf

footage of monographs is available and each monograph can be considered on a par with the one Louis Couturat (1868-1914) wrote on the logic of Leibniz. (1)

It is, therefore, incumbent on us to state boldly that the present concise history is a hazardous enterprise. For, it is impossible to summarize knowledge which does not even exist as yet, and which cannot since his time. However, in our endeavor we must never lose sight of the fact that the logic of antiquity, and to a considerable degree the logic of the middle ages, have come down to us in heaps of fragments. A third and very great flaw is the multiplicity of forms in which logic manifested itself, particularly in three stages; when it was raised to the first power in the days after the Logic of Port Royal (1662); when it was raised to the second power after Kant; and finally when it was raised to the third power after Hegel, a stage in which we have witnessed a plethora of forms right down to the present where we are no longer able to survey them.

I have risked writing this brief history nevertheless, supported by my belief in the new logic, a belief that has aided me in conquering my inhibitions. This belief has encouraged me again and again in the difficult task of condensing the vast material into the limited space available. I owe thanks to my publisher for the understanding which prompted him to acknowledge the necessity of my going beyond the limits which I had agreed to at the outset. This made it possible to produce a little volume in which not merely beliefs could be stated, but knowledge could be spread out; knowledge, I might add, which I can back up completely by my own researches. Nothing has been referred to or touched upon in this concise history which has not passed through my fingers or which has not been thoroughly studied by me. All dates, likewise, were checked so that I have been able to correct, and that without much ado, not a few of the errors in Eisler's indispensable Philosophen Lexikon as well as other, older, reference works.

I am sending this little volume into the world in  
be created by a tour de force in mere sampling of, what can only be actually gotten hold of by most thorough and painstaking research, and even at that not so without reliance on one's intuition and an eye sharpened by long experience.

Another and still greater flaw in the enterprise is this. When Prantl wrote his history of logic the type of modern formal logic which is now available in the shape of symbolic logic had not yet been called into being. There was, therefore, no dependable position by which such a history could be oriented and from which it could be surveyed. For, what formal logic really is we know only because symbolic logic provided the 'conceptual equipment needed to answer this problem. In general, too, the extant gains registered by the modern symbolic treatment of logic have become such an essential factor in making pronouncements regarding the history of logic that we are constrained to say that an essential knowledge and mastery of the results of symbolic logic have become an indispensable condition for any and all fruitful study of the history of logic. Prantl had to rely completely on himself in sifting the material, in highlighting and playing down certain aspects. He worked under a serious handicap by virtue of the nonexistence of exact formal logic in his day. This resulted in the formation of value judgments which, measured by the standards of rigorous critical thinking now in demand, are shot through with very bad blunders. These value judgments, thus, should first be corrected. Then the entire magnificent material which Prantl spread out before us must be subjected to a fresh and thorough reinterpretation, making use of all the material contributions that have been made the hope that I might thereby kindle in the reader a confidence, which he might not have had before, in the new logic upon which I have based my history, hoping of course that he may overcome all obstacles with which we have to reckon.

Furthermore, I possess faith that the history of logic, with the new light which can be thrown on it today, will become a beautiful and fascinating chapter of western civilization, so that at long last it may be studied with pleasure and sympathy. This accomplished, there will follow the labors of scholars as a matter of course which will close the gaps in the history of logic which we still, regretfully, have to admit today." (Preface).

54. Ueberweg, Friedrich. 2001. *System of Logic and History of Logical Doctrines*. Bristol: Thoemmes Press.  
Reprint of the 1871 edition translated from the German, with notes and appendices by Thomas M. Lindsay.
55. Velarde Lombrana, Julián. 1989. *Historia De La Lógica*. Oviedo: Universidad de Oviedo.  
Indice de materias: Prologo de Gustavo Bueno Martínez V-XV; Introducción 17; I. Los orígenes 19; II. Aristoteles 31; III: Megarico-Estoicos 84; IV. Epicureos 97; V. El fin de la Antigüedad clásica 100; VI. La Edad Media 109; VII: Ramón Llull 153; VIII. Humanistas y Cartesianos 154; IX. Leibniz 166; X. La lógica simbólica en el siglo XVIII 207; XI. Lógica filosófica en los siglos XVIII y XIX 218; XII: El algebra de la lógica 244; XIII. La logística hasta a Russell 300; XIV. Russell 365; XV. El programa Hilbertiano 397; Apéndice: lógica polivalente 409; Bibliografía de carácter general 419; Indice de autores 421-431.
56. Weinberg, Julius R. 1965. *Abstraction, Relation, and Induction. Three Essays in the History of Thought*. Madison: University of Wisconsin Press.

## BIBLIOGRAPHIES ON THE HISTORY OF LOGIC

1. Rabus, Leonhard. 1868. "Logische Literatur. Erste Abtheilung. Bis zum Bekanntwerden der byzantinischen und arabischen Logik im Abendlande." In *Logik und Metaphysik. I. Erkenntnislehre, Geschichte der Logik, System der Logik*, 453-518. Erlangen: Andreas Deichert.  
"... the best bibliography of logic (*Neuzeit*) has been, before Risse's work, the impressive list printed in the year 1868 by Verlag von Andreas Deichert (Druck der Universitäts-Buchdruckerei von E. Th. Jacob in Erlangen) as appendix to Rabus' *Logik und Metaphysik*. And even with respect to Risse's *Bibliographia Logica* one may assert that Rabus has not been completely defeated; there are in fact some authors (such as N. Wallerius and S. Hasenmüller) mentioned by Rabus but not by Risse.  
(...)  
It is curious to observe how the *Logische Literatur* of G.L. Rabus has been so much overlooked. (...) It occupies pages 443 to 518 and provides more than 1200 authors. This enormous list is distributed in six chronological sections. Rabus' bibliography is a remarkable and original contribution: almost 1000 authors are recorded from the *Aufkommen des Protestantismus* until the year 1865. In this sense it is a necessary complement to Prantl's unfinished work. But, in contrast with Prantl, Rabus offers to the XXth century reader a pure masterpiece of historical research, free from subjective interfering commentaries. The seventh section of the bibliography: *Hilfsmittel zum Studium der Geschichte der Logik* shows the very wide frame in which Rabus conducted his work although it is not clear whether the quoted sources

were exhaustively investigated.

Rabus' bibliography from the Renaissance onwards is also a remarkable supplement to I. M. Bochenski's bibliography (*Formale Logik*, first ed. 1956) and offers to contemporary logicians interested in the history of logic, the possibility of exploring a wide terra incognita. In fact, until now historical research from the point of view of contemporary logic has concentrated on centuries previous to the Renaissance (see I. M. Bochenski, *Formale Logik*, p. 297 and W. and M. Kneale, *The Development of Logic*, p. 298)."

From: Ignacio Angelelli, *The "Logische Literatur" of L. Rabus*, in: W. Arnold, H. Zeltner (Eds.), *Tradition und Kritik. Festschrift für Rudolf Zocher zum 80. Geburtstag*, Frommann Verlag: Stuttgart, 1967, pp. 39-42.

2. Church, Alonzo. 1936. "A Bibliography of Symbolic Logic (First part)." *Journal of Symbolic Logic* no. 1:121-216.  
Current bibliographies regularly thereafter.  
"There is presented herewith what is intended to be a complete bibliography of symbolic logic for the period 1666-1935 inclusive.  
In the compilation use has been made of existing bibliographies, including those in Venn's *Symbolic logic*, Schröder's *Vorlesungen Über die Algebra der Logik* (vol. 1 and vol. 2 part 2), Lewis's *A survey of symbolic logic*, the Royal Society index, the International catalogue of scientific literature, and the bibliographical journals, *Jahrbuch Über die Fortschritte der Mathematik* and *Zentralblatt für Mathematik und ihre Grenzgebiete*, as well as many bibliographies of special authors or special subjects. In addition many titles have been included as a result of search through bound volumes of journals, or from references found in the literature, or from information supplied by authors themselves or others. So far as possible the original work (or a reprint of it) has been consulted in each case before its inclusion in the bibliography. In a number of cases where it has proved to be very difficult to obtain a copy of the original work, titles have been included on the basis of what was believed to be good authority as to existence and content, checking, however, one source of information against another in order to avoid the reproduction of typographical and other errors.  
It has been the intention to confine the bibliography to symbolic logic proper as distinguished from pure mathematics on the one hand and pure philosophy on the other. The line is, of course, difficult to draw on both sides, and perhaps has not herein always been drawn consistently, but the attempt has been necessary in order to (keep) within reasonable limits of length.  
By symbolic logic is understood the formal structure of propositions and of deductive reasoning investigated by the symbolic method." (p. 121)
3. ———. 1938. "A Bibliography of Symbolic Logic (Second part)." *Journal of Symbolic Logic* no. 3:178-212.
4. ———. 1952. "Brief Bibliography of Formal Logic." *Proceedings of the American Academy of Arts and Sciences* no. 80:155-172.
5. Risse, Wilhelm. 1965. *Bibliographia logica. I. Verzeichnis der Druckschriften zur Logik mit Angabe ihrer Fundorte (1472-1800)*. Hildesheim: Georg Olms.  
"No other branch of philosophy presently possesses a bibliography quite so extensive and comprehensive as this one for logic, which is a by-product, as the *Vorwort* explains, of Risse's systematic history of the development of logic, *Die Logik der Neuzeit*.  
Volume 1 (1965, 293p.) lists in chronological arrangement monographs published

from 1472 to 1800. Volume 2 (1973, 494p.) does the same for the period 1801-1969. Both volumes cite holding libraries (mainly European but also some American) for most of the works listed. Volume 3 (1979, 412p.) lists articles published both in periodicals and in anthologies, arranged according to a detailed classification system outlined in the front. Volume 4 (1979, 390p.) is a catalogue of 3,006 manuscripts, arranged by author if known and by title if anonymous, with separate sections for medieval and more recent manuscripts. Holding libraries or archives are indicated. All volumes are thoroughly indexed."

From: Hans E. Bynagle, *Philosophy: A Guide to the Reference Literature. Third edition*, Westport: Libraries Unlimited 2006, pp. 724-725.

6. ———. 1973. *Bibliographia logica. II. Verzeichnis der Druckschriften zur Logik mit Angabe ihrer Fundorte (1801-1969)*. Hildesheim: Georg Olms.

7. ———. 1979. *Bibliographia logica. III. Verzeichnis der Zeitschriftenartikel zur Logik*. Hildesheim: Georg Olms.

"Preface: The third volume of the "Bibliographia Logica" lists papers on logic and the history of logic which have appeared in periodicals and anthologies. The list is incomplete for two reasons: (1) Numerous works were inaccessible to me, particularly earlier periodicals and those published outside Germany; (2) applications of logic in other disciplines are included only if logical themes are mentioned in the titles.

The variety of themes and conceptions of logic led to an arrangement of titles in three categories:

A: Logic ("traditional logic", "classical logic"), starting with Aristotle;

B: Logistics ("symbolic logic", "mathematical logic"), representations of logic in the mathematical tradition and using mathematical means;

C: History of logic.

The criterion used in categorizing the individual titles is the theme dealt with, not the point of view of the author.

The three categories are indicated by letters; sub - categories by numbers. The arrangement of material is given in the table of contents in German, English, and French (p. 9\*). Titles of frequently quoted periodicals are abbreviated (Table of symbols p. 401)."

8. ———. 1979. *Bibliographia logica. IV. Verzeichnis der Handschriften zur Logik*. Hildesheim: Georg Olms.

9. Ashworth, Earline Jennifer. 1974. "Some Additions to Risse's *Bibliographia Logica*." *Journal of the History of Philosophy* no. 12:361-365.

"One of the greatest contributions to the history of logic in recent years was the publication in 1965 of Wilhelm Risse's *Bibliographia Logica*, Vol. I, which covers the years from 1472 to 1800. However, despite the fact that Risse's monumental work lists an estimated 8,000 logical works, it is still far from comprehensive, as Mr. Hickman pointed out in an earlier article in this journal. Why this should be the case immediately becomes apparent when one starts to work in a library such as the Bodleian at Oxford with its handwritten catalogue of books printed before 1920 and its lack of any specialized bibliographies such as the British Museum has provided for early printed books. Even in well catalogued libraries such as the University Library at Cambridge it can be difficult to locate texts, and one often stumbles across a new logical work through the accident of its being bound in the same volume as better known works. As a result of my researches over the last few years, I have put together a list of works which do not appear in Risse in the hope that other historians

of logic may benefit from my discoveries. I cannot, however, claim that I have exhausted the resources of the libraries which I have visited. Doubtless there are still not only new editions but new authors left to be discovered." (p. 361)

"This paper concerns logic texts published between 1472 and 1800. I list 20 items whose authors do not appear in Risse, 12 items whose authors appear in Risse in connection with another title or other titles, and 58 items which appear in Risse in another edition or in other editions. I indicate the libraries in which all these items are to be found, and I also list some useful bibliographical works."

10. ———. 1978. *The Tradition of Medieval Logic and Speculative Grammar from Anselm to the End of the Seventeenth Century. A Bibliography from 1836 Onwards*. Toronto: Pontifical Institute of Medieval Studies.

Contents: Preface VII; Part One. Anselm to Paul of Venice (items 1-632) 1; Part Two. After Paul of Venice (items 633-879) 73; Index of Names 101; Index of Texts 105; Index of Translations 107; Index of Subjects 109.

"My main interest in drawing up this bibliography was to list all the books and articles which have to do with formal logic and semantics from the time of Anselm to the end of the seventeenth century. I see this area as including such topics as consequences, syllogistic, supposition theory, and speculative grammar, but as excluding such topics as the categories, the struggle between nominalism and realism, and pure grammar. It is not, of course, always easy to draw a line between works which are concerned with formal logic and semantics and works which are not so concerned, and inevitably my choice of borderline cases will seem too restrictive to some and too liberal to others. However, my hope is that I have not excluded any book or article which obviously falls into the area I have delimited.

I have used the phrase "the tradition of medieval logic" in the title in order to indicate that although I include the seventeenth century, I am not concerned with the contributions of modern philosophy. The work of men such as Pascal, Descartes, Arnauld, Leibniz and Locke carries us far indeed from medieval discussions of logic and semantics. Moreover, there is already such an extensive literature on these figures that to include them in my bibliography would completely change its character. On the other hand, I do include humanist logic and renaissance Aristotelianism, since they involve a reaction to the medieval tradition which can only properly be understood in the light of that tradition.

This is a bibliography of secondary works and of modern editions of early texts. Accordingly I have excluded those nineteenth century reprints of earlier works such as Aldrich's *Artis Logicae Compendium* which were produced merely as text books, and I have also excluded modern facsimile editions of early printed texts unless they are accompanied by substantial editorial material. In addition, I have omitted a list of the various editions of Milton's *Artis Logicae Plenior Institutio*, since printings of his complete works are both numerous and easily found. The earliest book I list is Victor Cousin's 1836 edition of Abelard, since this can properly be viewed as the starting point of modern scholarly work on medieval logicians.

I do not refer to short edited or translated passages in books of readings. I have included only the more lengthy book reviews, and only a few unpublished dissertations. I have not included biographical and general historical works unless they have some specific contribution to make to the history of logic. I have tried to include all relevant material published before 1977, but the listing of 1976 publications is inevitably incomplete, given the delays which so often occur in the printing of books and journals.

I have endeavoured to look at each item personally, and to include as much information as possible. In those cases where I have failed to locate an item, or have

located it in a place where I could not conveniently see it, I have made a note of my failure. The reader should bear in mind that these entries may be quite inaccurate. Where I have only been able to see a copy of an article, I have added the note: "Journal not seen."

Works which deal with the period as a whole will be found in Part One.

Where an author has more than one book or article, the items are arranged chronologically.

Below each item I list the headings under which it is indexed and, where relevant, cross-references to reviews, discussions, translations and reprints. The ordering of the headings corresponds to the four indexes I have provided: (1) an index of names; (2) an index of texts; (3) an index of translations; (4) an index of subjects. Only substantial texts and translations are indexed. In the few cases where a book review is not crossreferenced, the reason is that only the review contains material relevant to my purposes. It is my hope that these indexes, which are based on my knowledge of a work's contents rather than its title alone, will prove one of the most valuable aspects of my bibliography.

Readers who wish to find articles dealing with related fields or published after 1976 are recommended to consult two bibliographical sources in particular. They are:

1. *Repertoire Bibliographique de la Philosophie*. Publié par l'Institut supérieur de philosophic de l'Université catholique de Louvain.
2. *The Philosopher's Index*. An International Index to Philosophical Periodicals.

Readers who wish to remedy the omissions I describe in my first three paragraphs are also recommended to consult the following:

Risse, Wilhelm. *Bibliographia Logica*. Band II. 1801-1969. Hildesheim-New York: Georg Olms Verlag, 1973.

Risse's work is far more comprehensive than my own, since he includes not only formal logic, but what might be described as the logic of ideas.

On the other hand, his bibliography is arranged chronologically rather than alphabetically; and inevitably, given the scope of his work, he does not give full publication details and his indexes are minimal. Volume II contains only books, and it is to be hoped that the volume listing journal articles will appear before too long.

(\*)

I owe a great debt of gratitude to those people who went through an earlier version of this bibliography and provided me with a large number of extra references. In particular I would like to thank William McMahon, Jan Pinborg, Charles Schmitt, and Paul Vincent Spade. I would also like to thank the editorial staff of the Pontifical Institute of Mediaeval Studies for their helpful advice on organization and presentation, the staff of Inter-Library Loan at the University of Waterloo for their unfailing help, and the Canada Council for various grants which have enabled me to work in British libraries. Finally, I should like to thank the Humanities Research Council of Canada for aiding the publication of this book." (*Preface*, pp. VII-IX)

(\*) [Bibliographia logica. III. *Verzeichnis der Zeitschriftenartikel zur Logik*.

Hildesheim-New York: Georg Olms Verlag, 1979].

11. Pironet, Fabienne. 1997. *The Tradition of Medieval Logic and Speculative Grammar: A bibliography (1977-1994)*. Turnhout: Brepols.

This book is a continuation of Earline Jennifer Ashworth's bibliography, *The Tradition of Medieval Logic and Speculative Grammar from Anselm to the End of the Seventeenth Century: A Bibliography from 1836 Onwards*, that is the reason why the title is partly adopted from it.

The aim and the general principles are the same as Ashworth's ones, but I have broadened the field: this bibliography itemizes books and articles written between

1977 and 1994 on logic and grammar from Boethius to the end of the seventeenth century, not excluding topics as the categories and, in some extension, the struggle between nominalism and realism nor works of or on men such as Pascal, Descartes, Arnauld, Leibniz and Locke. Of course, main topics are still consequences, syllogistic, supposition theory, insolubles, obligations, semantics, speculative grammar, etc., but I think that the extension to subjects and authors mentioned above corresponds to the way researches in that field evolved last years. First, we note that the number of editions, translations and studies on medieval logic and grammar has considerably increased: about 1000 items from 1836 to 1976, about 2000 from 1977 to 1994. Second, we see that it is difficult to make a clear distinction between different branches of knowledge, this is why many people work on the relations between logic or grammar and related matters, such as metaphysics, physics, theology, etc. Third, always more people working on modern philosophy tend to go back to medieval philosophy to search for the roots of the texts they study, while medievalists are interested to know which influence medieval philosophers have had on their successors.

With a very few exceptions, book reviews and articles from general works are not included.

I have tried to check each item personally or, at least, to ask the author to check the references I collected. The note "Not seen" means that I can not guarantee the accuracy of given informations.

When an author has more than one book or article, the items are arranged chronologically.

Informations in square brackets below each item indicate headings in the indexes or, if necessary, give cross-references. Most collective works have been listed under the name of the (main) editor, and articles published in such works refer to them.

Four indexes are provided: index of names, index of texts, index of translations and index of subjects:

102 refers to item 120;

S: 120 refers to item 120 in the supplement to Ashworth's bibliography.

Items 231, 649, 780 are not forgotten. After last minute changes, they disappeared while others have been added (e.g. 1486b or 1602b).

I can not pretend that this bibliography is exhaustive, especially for its second part, I just hope that I have not forgotten important items that should have been included in. I thank here all the colleagues who accepted to help me, some of them went through the first version of this work, others checked or sent me references. In particular, I would like to thank Jennifer Ashworth for the special attention she turned to this work. She also furnished me most of the informations for the supplement to her bibliography." (*Preface*, pp. VII-VIII)

12. Müller, Gert Heinz, and Lenski, Wolfgang, eds. 1987. *[Omega] - Bibliography of Mathematical Logic*. Berlin: Springer.
- Six volumes: 1. Classical logic edited by Wolfgang Rautenberg; 2. Non-classical logics edited by Wolfgang Rautenberg; 3. Model theory edited by Heinz-Dieter Ebbinghaus; 4. Recursion theory edited by Peter G. Hinman; 5. Set theory edited by Andreas R. Blass; 6. Proof theory; Constructive mathematics edited by Jane E. Kister, Dirk van Dalen, Anne S. Troelstra.
- "This collection of six hefty, orange volumes is a dream come true for anyone interested in mathematical logic and its history. It contains a remarkably complete bibliography of the field, from 1879, the year of Frege's *Begriffsschrift*, through 1985.
- (...)

Each volume has a number of introductory sections, including a general survey of work in the volume, and useful appendices of various sorts.

However, the core of each volume consists of three indices: Subject Index, Author Index, and Source Index." (p. 524)

Jon Barwise, *Review*, in: *Bulletin of the American Mathematical Society*, Vol. 19, 1988, pp. 524-528.

13. Anellis, Irving A. 1995. "Studies in the Nineteenth-Century History of Algebraic Logic and Universal Algebra. A Secondary Bibliography." *Modern Logic* no. 5:1-120.  
with the assistance of Thomas L. Drucker, Nathan Houser, Volker Peckhaus and Christian Thiel.  
"This bibliography lists all the nineteenth and twentieth century secondary materials on the history of algebraic logic (03Gxx), universal algebra (08Bxx) and closely related topics, including in particular lattice theory (06-xx), known to the compilers up to the time of printing.  
Also included are secondary studies on such areas as linear and multilinear algebras (15-xx) and what in the early nineteenth century such British algebraists as George Peacock and Charles Babbage called "symbolical algebra." The principle of selection in the latter case was to include studies concerning the work of such researchers as Peacock and Babbage, Benjamin Peirce, James Joseph Sylvester, Arthur Cayley, and Hermann Grassmann since their work significantly influenced the direction of the logical researches of such men as Charles Peirce and Alfred North Whitehead. We exclude studies of researchers such as Camille Jordan, despite the fact that the work of such researchers as Jordan, although relating to linear and multilinear algebra, is not known to have had any significant influence on Peirce, Schröder or any of their colleagues working in algebraic logic." (p. 4)
14. Schüling, Hermann. 1963. *Bibliographie der im 17. Jahrhundert in Deutschland erschienenen logischen Schriften*. Giessen: Universitätsbibliothek.
15. Redmond, Walter Bernard. 1972. *Bibliography of the Philosophy in the Iberian Colonies of America*. The Hague: Martinus Nijhoff.  
Contents: Preface VII; Abbreviations XIII-XIV; Catalogue of manuscripts and printed works on Philosophy from the Colonial Period in Latin America; Philosophical works from Colonial Latin America 1; Anonymous works 111; Appendix of some Colonial philosophical works which have become lost 134; Bibliography of the secondary literature concerning the philosophy of the Colonial Period of Latin America 139-174.  
"The first part of this bibliography is a catalogue of philosophical writings from colonial Latin America which, on the basis of the secondary literature, are presumed to be extant. It is followed by a short appendix listing some colonial authors whose philosophical works are lost, but which perhaps still exist. The second part of the bibliography contains the secondary literature: studies on the philosophy of colonial Latin America as well as subsequently published texts and translations of the works of the colonial authors. It also contains non-philosophical works to which reference is made in the first section. A brief digest of the content of each philosophical work follows the entry." (p. VIII)

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