

Leibniz on Logic, Language and Semiotics.

Annotated bibliography (Second Part: L - Z)

First Part of the Bibliography: A - K

[Other pages on the History of Logic in the Section: "Ontological Topics in the History of Philosophy"](#)

Selected Bibliography

1. Lenders Winfried. *Die analytische Begriffs- und Urteilstheorie von G.W. Leibniz und Chr. Wolff*. Hildesheim: Georg Olms 1971.
2. Lenzen Wolfgang. Leibniz und die Entwicklung der modernen Logik. In *Leibniz, Werk und Wirkung. IV. Internationaler Leibniz-Kongress (Hannover, 14 - 19 November 1983)*. Hannover: Gottfried Wilhelm Leibniz Gesellschaft 1983. pp. 418-425
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 15-22
3. Lenzen Wolfgang, "Zur 'extensionalen' und 'intensionalen' Interpretation der Leibnizschen Logik," *Studia Leibnitiana* 15: 129-148 (1983).
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 23-46.
"Against the prevailing opinion expressed, e.g., by L. Couturat it is argued that the so-called "intensional" point of view which Leibniz mostly preferred to the nowadays usual extensional interpretation is neither "*confuse et vague*" nor may it be made responsible for the alleged "*échec final de son système*" (Couturat, *La logique de Leibniz*, 387). We present a precise definition of an "intensional" semantics which reflects the Leibnizian ideas and which may be proven to be equivalent to standard extensional semantics."
4. Lenzen Wolfgang, "'Unbestimmte Begriffe' bei Leibniz," *Studia Leibnitiana* 16: 1-26 (1984).
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 99-131.
"In many of his logical writings, G. W. Leibniz makes use of two kinds of symbols: while a, b, c,...stand for certain determinate or definite concepts, x, y, z,...are referred to as "indefinite concepts." We investigate the various roles played by these variables and show: I) that their most important function consists in serving as (hidden) quantifiers; II) that Leibniz's elliptic representation of the quantifiers (both universal and existential) by means of two sorts of "indefinite concepts" leads to certain difficulties; III) that despite these problems Leibniz anticipated the most fundamental logical principles for the quantifiers and may thus be viewed as a forerunner of modern predicate logic."
5. Lenzen Wolfgang, "Leibniz und die Boolesche Algebra," *Studia Leibnitiana* 16: 187-203 (1984).
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 47-64.
"It is well known that in his logical writings Leibniz typically disregarded the operation of (conceptual) disjunction, confining himself to the theory of conjunction and negation. Now, while this fact has been interpreted by Couturat and others as indicating a serious incompleteness of the Leibnizian calculus, it is shown in this paper that actually Leibniz's conjunction-negation logic, with '*est ens*', i.e., 'is possible' as an additional (although definable) logical operator, is provably equivalent (or isomorphic) to Boolean algebra. Moreover, already in the "Generales inquisitiones" of 1686 Leibniz had established all basic principles that are necessary for a complete axiomatization of "Boolean" (or better: Leibnizian) algebra. In this sense Leibniz should be acknowledged as the true inventor of the algebra of sets."
6. Lenzen Wolfgang, "'Non est' non est 'est non'. Zu Leibnizens Theorie der Negation," *Studia Leibnitiana* 18: 1-37 (1986).
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 133-179.
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. "Leibniz's development

of a "calculus universalis" stands and falls with his theory of negation. During the entire period of the elaboration of the algebra of concepts, L1, Leibniz had to struggle hard to grasp the difference between propositional and conceptual negation. Within the framework of (scholastic) syllogistic, this difference seems to disappear because 'omne a non b' may be taken to be equivalent to 'omne a est non-b'. Within the "universal calculus", however, the informal quantifier expression 'omne' is to be dropped. Accordingly, 'a non est b' expresses only the propositional negation of (the U A) 'a est b' and is hence logically weaker than (the UN) 'a est non-b'. Besides Leibniz's cardinal error of confusing propositional and conceptual negation the following issues are dealt with in this paper: "aristotelian" vs "scholastic syllogistic; metalinguistic theory of the truth-predicate; individual-concepts vs concepts in general."

7. Lenzen Wolfgang. Leibniz's calculus of Strict Implication. In *Initiatives in logic*. Edited by Szrednicki Jan. Dordrecht: Reidel 1987. pp. 1-35
Translated in German and revised in: W. Lenzen - *Calculus Universalis* (2004) pp. 281-308.
8. Lenzen Wolfgang, "Zur Einbettung der Syllogistik in Leibnizens 'Allgemeinen Kalkül'," *Studia Leibnitiana.Sonderheft* 15: 38-71 (1988).
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 181-216.
9. Lenzen Wolfgang. Mögliche Individuen und mögliche Welten. Eine begriffslogische Axiomatisierung der Leibnizschen Ontologie. In *Leibniz. Tradition und Aktualität. V. Internationaler Leibniz-Kongress (Hannover, 14-19 November 1988)*. Hannover: Gottfried Wilhelm Leibniz Gesellschaft 1989. pp. 464-470
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 325-330.
10. Lenzen Wolfgang. Concepts vs. predicates. Leibniz's challenge to modern logic. In *The Leibniz Renaissance. International workshop, Firenze, 2-5 giugno 1986*. Firenze: Olschki 1989. pp. 153-172
11. Lenzen Wolfgang. Arithmetical vs. 'real' addition. A case study of the relation between logic, mathematics, and metaphysics in Leibniz. In *Leibnizian inquiries. A group of essays*. Edited by Rescher Nicholas. Lanham: University Press of America 1989. pp. 149-157
12. Lenzen Wolfgang. Arithmetizismus, oder Wie man die Mengenlehre aus dem kleinen Einmaleins ableitet. In *Traditionen und Perspektiven der analytischen Philosophie. Festschrift für Rudolf Haller*. Edited by Gombocz Wolfgang, Rutte Heiner, and Sauer Werner. Wien: Hölder-Pichler-Tempsky 1989. pp. 462-473
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 217-227.
13. Lenzen Wolfgang. *Das System der Leibnizschen Logik*. Berlin : de Gruyter 1990.
Inhalt: Vorwort VII; Danksagung XIII; Leseanweisung XV-XVI; 1. Syllogisti 1; 2. Die Algebra der Begriffe 28; 3. Quantorenlogik 84; 4. Syllogistik im allgemeinen Kalkül 122; 5. Satzlogik 159; 6. Metaphysik 178; Verzeichnis der Formeln 213; Verzeichnis der Zitate 225; Sachverzeichnis 231-235.
14. Lenzen Wolfgang. Precis of the history of logic from the point of view of the leibnizian calculus. In *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*. Edited by Angelelli Ignacio and D'Ors Angel. Pamplona: Ediciones Eunate 1990. pp. 13-38
15. Lenzen Wolfgang, "On Leibniz's Essay 'Mathesis rationis' (Critical Edition and Commentary)," *Topoi* 9: 29-59 (1990).
16. Lenzen Wolfgang, "Leibniz on privative and primitive terms," *Theoria.Revista de Teoria, Historia y Fundamentos de la Ciencia* 6: 83-96 (1991).
"We first present an edition of the manuscript LH VII, B2 39, in which Leibniz develops a new formalism in order to give rigorous definitions of positive, of private, and of primitive terms. This formalism involves a symbolic treatment of conceptual quantification which differs quite considerably from Leibniz's "standard" theory of "indefinite concepts" as developed, e.g., in the "General Inquiries". In the subsequent commentary, we give an interpretation and a critical evaluation of Leibniz's symbolic apparatus. It turns out that the definition of privative terms and primitive terms lead to certain inconsistencies which, however, can be avoided by slight modifications."
17. Lenzen Wolfgang. Leibniz on ens and existence. In *Existence and explanation. Essays presented in honor of Karel Lambert*. Edited by Lambert Karel et al. Dordrecht: Kluwer 1991. pp. 59-75

Translated in German as: '*Ens' und 'existens' bei Leibniz* in: W. Lenzen - *Calculus Universalis* (2004) pp. 75-98

18. Lenzen Wolfgang. Frege und Leibniz. In *Logik und Mathematik. Frege-Kolloquium Jena 1993*. Edited by Ingolf Max and Stelzner Werner. Berlin: de Gruyter 1995. pp. 82-92
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 65-74.
"In the essay "*Booles rechnende Logik und die Begriffsschrift*" of 1880 and in the posthumously published paper "*Ueber den Zweck der Begriffsschrift*" Gottlob Frege had briefly discussed the main elements of Leibniz's logic. By way of comparison with Boole's logic, Frege came to interpret Leibniz's expressions *ens'* and *non ens'* as equivalent to Boole's 1' (= universe of discourse) and 0' (= empty domain), respectively. This interpretation is not fully warranted, however. A closer examination of Leibniz's formal representation of the categorical forms in terms of *ens'* and *non ens'* reveals that *A est ens'* does not mean that (the extension of) concept A is equal to 1. Instead it only says that (the extension of) A in nonempty or--from an "intensional" point of view--that concept A is self-consistent."
19. Lenzen Wolfgang, "Wenn $0=1$, dann ist die, 'reine Inhaltslogik' unmöglich. Bemerkungen zu Liskes Kritik der Leibnizschen Begriffstheorie," *Studia Leibnitiana* 32: 105-116 (2000).
"In a 1994 paper entitled *Ist eine reine Inhaltslogik möglich?*, M. Liske attempted to show that Leibniz's theory of intensional concepts suffers from a serious inadequacy. Liske begins by defining the intension of a concept in two slightly different ways. *Broadly* conceived, $\text{Int}(A)$ is the set of *all* concepts B which are contained in A, while in a *narrow* sense, $\text{Int}(A)$ consists of all such B other than A itself."
20. Lenzen Wolfgang, "Guilielmi Pacidii Non plus ultra, oder: Eine Rekonstruktion des Leibnizschen Plus-Minus-Kalküls," *Logical Analysis and History of Philosophy* 3: 71-118 (2000).
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 229-279.
"In the first part of this paper a short review of the recently published 4th volume of Series 6 (*Philosophical Writings*) of the Akademie-Ausgabe of Leibniz's *Sämtliche Schriften und Briefe* is given. This 3,000-page volume was edited by the Leibniz-Forschungsstelle in Münster, Germany. It contains unsurpassable, text-critical versions of more than 500 pieces which Leibniz composed between 1677 and 1690. One major topic dealt with in these essays is "Scientia Generalis, Characteristica, Calculus Universalis". Here we find in particular various fragments of a logical calculus that Leibniz developed around 1687. The main part of this paper presents a detailed reconstruction of this so-called "plus-minus-calculus" which, by way of its somewhat unorthodox operators of "addition" and "subtraction", inclusion and identity, "communication", "commune" and "nothing", provides an interesting alternative to the Boolean algebra of sets."
21. Lenzen Wolfgang. Zur Logik alethischer und deontischer Modalitäten bei Leibniz. In *Zwischen traditioneller und moderner Logik. Nichtklassische Ansätze*. Edited by Stelzner Werner and Stöckler Manfred. Paderborn: Mentis 2001. pp. 335-351
Reprinted in revised form in: W. Lenzen - *Calculus Universalis* (2004) pp. 309-324.
22. Lenzen Wolfgang, "Grundfragen des logischen Kalküls. Eine Art Rezension von F. Schupp (Hrg.), *G. W. Leibniz, Die Grundlagen des logischen Kalküls*," *History and Philosophy of Logic* 24: 141-162 (2003).
23. Lenzen Wolfgang. *Calculus Universalis. Studien zur Logik von G. W. Leibniz*. Paderborn: Mentis Verlag 2004.
Inhaltverzeichnis: Vorwort 5; 1. Leibniz und die (Entwicklung der) moderne(n) Logik 15; 2 Zur extensionalen und "intensionalen" Interpretation der Leibnizschen Logik 23; 3. Leibniz und die Boolesche Algebra 47; 4 Frege und Leibniz 65; 5 'Ens' und 'existens' bei Leibniz 75; 6. "Unbestimmte Begriffe" bei Leibniz 99; 7 'Non est' non est 'est non' - Zu Leibniz' Theorie der Negation 133; 8. Zur Einbettung der Syllogistik in Leibniz' "Allgemeinen Kalkül" 181; 9. Arithmetizismus, oder: Wie Leibniz die Mengenlehre aus dem kleinen Einmaleins ableitet 217; 10. Guilielmi Pacidii Non plus ultra 229; 11. Leibni' Kalkül der strikten Implikation 281; 12. Zur Logik alethischer und deontischer Modalitäten bei Leibniz 309; 13. Mögliche Individuen und mögliche Welten - Eine begrifflogische Reknstruktionen von Leibniz' Ontologie 325; 14. Leibniz' ontologischer Gottesbeweis und das Problems de unmöglichen Dinge 331; 15 Anhänge 343; Literaturverzeichnis 367; Personenverzeichnis 373; Sachverzeichnis 376-380.

24. Lenzen Wolfgang. Leibniz's logic. In *The rise of modern logic: from Leibniz to Frege*. Edited by Gabbay Dov and Woods John. Amsterdam: Elsevier 2004. pp. 1-83
Handbook of the History of Logic: Vol. 3
25. Lenzen Wolfgang. Logical criteria for individual (concepts). In *Individuals, minds and bodies: themes from Leibniz*. Edited by Carrara Massimiliano, Nunziante Antonio-Maria, and Tomasi Gabriele. Stuttgart: Steiner 2004. pp. 87-107
Studia Leibnitiana. Sonderhefte 32
26. Lenzen Wolfgang. Leibniz on alethic and deontic modal logic. In *Leibniz et les puissances du langage*. Edited by Berlioz Dominique and Nef Frédéric. Paris: Vrin 2005. pp. 341-362
27. Levey Samuel, "Leibniz and the sorites," *Leibniz Review* 12: 25-49 (2002).
28. Lewis Clarence Irving. *A survey of symbolic logic*. Berkeley: University of California Press 1918. See Chapter I. *The development of symbolic logic* pp. 1-117. (On Leibniz pp. 5-18 and *Appendix. Two fragments from Leibniz* pp. 373-388).
Reprinted New York, Dover Publishing 1960, with the omission of chapter V and VI.
29. Madouas Sébastien. L'Adam vague et la constitution des mondes possibles: une pensée modale de l'individu. In *L'actualité de Leibniz: les deux labyrinthes*. Edited by Berlioz Dominique and Nef Frédéric. Stuttgart: Franz Steiner 1999. pp. 363-388
30. Martin Gottfried. *Leibniz: logic and metaphysics*. Manchester: Manchester University Press 1964. German edition: *Leibniz. Logik und Metaphysik* - Berlin, de Gruyter 1967; reprint: New York, Garland, 1985
31. Mates Benson. Leibniz on possible worlds. In *Logic, methodology, and philosophy of science III*. Edited by Van Rootselaar Bob and Staal Johan Frederik. Amsterdam: North-Holland 1968. pp. 507-529
Reprinted in: Harry Frankfurt (ed.) - *Leibniz. A collection of critical essays* - New York, Doubleday, 1972, pp. 335-364 and in: Roger Woolhouse (ed.) - *Gottfried Wilhelm Leibniz. Metaphysics and its foundations - Gottfried Wilhelm Leibniz. Critical assessments* - Vol. I - New York, Routledge, 1994, pp. 208-229.
32. Mates Benson, "The *Lingua Philosophica*," *Studia Leibnitiana. Sonderheft* 8: 59-66 (1979).
33. McCadden Carlos, "Leibniz's Principle of Contradiction is not what Aristotle called the most certain of all principles," *Aletheia. An International Journal of Philosophy*: 469-485 (2001).
"The object of this article is to show that the principle of contradiction in Leibniz is not the same principle that Aristotle called "the most certain of all principles". The five parts of this study are as follows: the first part shows the importance of the problem; the second is an *exposé* of Aristotle's thought on "the most certain of all principles." The third part treats of the principle of contradiction according to Leibniz; the fourth compares the thought of the two philosophers and draws some conclusions about the ramifications of their differences; the fifth part is a summary."
34. Mertz Donald, "Leibniz's monadic treatment of relations," *Auslegung* 7: 256-269 (1980).
"Continuing in the line of Ishiguro and Hintikka, this paper explicates further the form of Leibniz's brief logical/syntactical program for relations, and this is then contrasted with his metaphysical/semantical treatment of them. The analysis shows a similar though not identical treatment of relations under both programs. The similarity lies in Leibniz's treating multi-term relations as one-term, monadic predicates with all other term-places being either instantiated, or bound by existential quantifiers, depending upon the program. Both programs require Leibniz to introduce a new non-truth-functional, yet "relational" connective between propositions."
35. Mondadori Fabrizio, "Leibniz and the doctrine of inter-world identity," *Studia Leibnitiana* 7: 22-57 (1975).
Reprinted in: R. Woolhouse (ed.) - *Gottfried Wilhelm Leibniz. Critical Assessments*, Volume 1 - New York, Routledge, 1994, pp. 256-289
36. Mondadori Fabrizio. Leibniz on compossibility: some Scholastic sources. In *The medieval heritage in early modern metaphysics and modal theory, 1400-1700*. Edited by Friedman Russell L. and Nielsen Luge O. Dordrecht : Kluwer 2003. pp. 309-338
37. Moriconi Enrico and Offenberger Niels, "Zur Frage der IV syllogistischen Figur in der *Dissertatio de arte combinatoria*: eine Jugendsunde Leibnizens?," *Studia Leibnitiana* 16: 212-216 (1984).
"This paper is a discussion of Leibniz's juvenile thesis according to which "quarta figura aequae bona

est ac ipsa prima; imo si modo, non praedicationis, ut vulgo solent, sed subjectionis, ut aristoteles, eam enunciemus, ex IV fiet I et contra" (*Dissertatio de Arte Combinatoria*, 25). The authors maintain that that thesis is syllogistically untenable, since the reduction device Leibniz suggested does not change the logical function of termini, but introduces a difference only from a grammatical point of view."

38. Mugnai Massimo, "Bertrand Russell e il problema delle relazioni in Leibniz," *Rivista di Filosofia* 64: 356-362 (1973).
39. Mugnai Massimo. *Astrazione e realtà. Saggio su Leibniz*. Milano: Feltrinelli 1976.
40. Mugnai Massimo, "Bemerkungen zu Leibniz' theorie der relationen," *Studia Leibnitiana* 10: 2-21 (1978).
"Many of the problems traditionally related to the interpretation of Leibniz' theory of relations may be seen in a better light considering essentially two factors: 1) the different plans (ontological, metaphysical, psychological and logical-linguistic) implied by Leibniz reflections on the subject; 2) the reference to scholastic and late-scholastic texts read or consulted by Leibniz. Relations for Leibniz are, from a metaphysical point of view, denominations only seemingly external, they are in reality "denominaciones intrinsecas", and are founded on the general connection of all things. From a psychological point of view they are abstract entities that our mind builds by resemblance. From an ontological point of view they are individual accidents inherent to the substances. From a logical-linguistic point of view they are abstract structures that connect the one to the other at least two subjects. The propositions in which they appear, as for example the proposition "Paris loves Helen" are transformed by Leibniz in equivalent propositions joined by operators, which in medieval logic were known as "termini reduplicantes" (terms which define mostly intensional contexts)."
41. Mugnai Massimo, "Contesti intensionali e termini reduplicativi nella *grammatica rationalis* di Leibniz," *Rivista di Filosofia* 70: 32-44 (1979).
42. Mugnai Massimo, "A systematical approach to Leibniz's theory of relations and relational sentences," *Topoi* 9: 61-81 (1990).
43. Mugnai Massimo. *Leibniz's theory of relations*. Stuttgart: Franz Steiner 1992.
44. Nef Frédéric. La philosophie modale de Leibniz est-elle cohérente?: essai sur des problèmes d'interprétation de notions modales leibniziennes à propos du mythe de Sextus et de l'oracle de Kégila. In *L'actualité de Leibniz: les deux labyrinthes*. Edited by Berlioz Dominique and Nef Frédéric. Stuttgart: Franz Steiner 1999. pp. 277-305
45. Nef Frédéric. *Leibniz et le langage*. Paris: Presses Universitaires de France 2000.
46. Nef Frédéric. Accidents et relations individuelles che Leibniz. Analyse linguistique et formes logiques. In *Leibniz et les puissances du langage*. Edited by Berlioz Dominique and Nef Frédéric. Paris: Vrin 2005. pp. 125-139
47. Nelson Alan. Leibniz on modality, cognition, and expression. In *A Companion to Rationalism*. Edited by Nelson Alan. Malden: Blackwell 2005. pp.
48. Noordraven Andreas. Leibniz' Onto-Logik und die transzendente Logik Kants. In *Kant und die Berliner Aufklärung. Akten des 9. Internationalen Kant-Kongresses. Band V: Sektionen XV-XVIII*. Edited by Gerhardt Volker, Horstmann Rolf-Peter, and Schumacher Ralph. Berlin: de Gruyter 2001. pp. 55-64
49. O'Briant Walter H., "Leibniz's preference for an intensional logic," *Notre Dame Journal of Formal Logic* 8: 254-256 (1967).
"G. H. R. Parkinson's contention that Leibniz was led to interpret his logic intensionally because of his desire to deny existential import to universal propositions is shown to be defective because (i) it disregards evidence such as that from 'General investigations' (1686) that Leibniz never adopted a definitive attitude on the issue of existential import and (ii) misinterprets Leibniz's statement that "concepts do not depend upon the existence of individuals". The author claims that Leibniz's preference is based primarily on his doctrine that the basic relation between concepts in a proposition is that of containment."
50. Padilla-Gálvez Jesús, "Las lógicas modales en confrontación con los conceptos básicos de la lógica modal de G. W. Leibniz," *Theoria.Revista de Teoria, Historia y Fundamentos de la Ciencia* 6: 115-127 (1991).
"In the first section we examine Leibniz's "termini necessitas-possibilitas". In the second section we

propose a minimal modal logic, L (subscript) LM, arises from the addition of modal principles. In the final section we examine his complex study towards the interpretation of modal language in the possible worlds. The resulting interplay between the minimal modal logic and the possible world perspective is one of the main charms of semantics."

51. Padilla-Gálvez Jesús. Modalisatoren und mögliche Welten in den logisch-semantischen Untersuchungen um 1686. In *Nihil sine ratione. Mensch, Natur und Technik im Wirken von G. W. Leibniz. Band 2*. Edited by Poser Hans et al. Hannover: Gottfried-Wilhelm-Leibniz-Gesellschaft 2001. pp. 926-933
Akten der VII. Internationaler Leibniz-Kongress (Berlin, 10. - 14. September 2001)
52. Parkinson George H. *Logic and reality in Leibniz's metaphysics*. Oxford : Clarendon Press 1965. Reprint: New York, Garland 1985
53. Parkinson George H. Philosophy and logic. In *The Cambridge Companion to Leibniz*. Edited by Jolley Nicholas. Cambridge: Cambridge University Press 1995. pp. 199-223
54. Patzig Günther, "Leibniz, Frege und die sogenannte 'lingua characteristicistica universalis'," *Studia Leibnitiana.Sonderheft*: 103-112 (1969).
Akten des Internationale Leibniz-Kongresses Hannover 14-19 November 1966 - Vol. 3: Erkenntnislehre, Logik, Sprachphilosophie, Editionsberichte
55. Peckhaus Volker. *Logik, Mathesis universalis und allgemeine Wissenschaft. Leibniz und die Wiederentdeckung der formalen Logik im 19. Jahrhundert*. Berlin: Akademie Verlag 1997.
Contents: Vorwort VII-VIII; 1. Einleitung 1; 2. Die Idee der *mathesis universalis* bei Leibniz 25; 3. Die frühe Rezeption Leibnizscher *mathesis universalis* und Logik 64; 4. Die "logische Frage" und die Entdeckung der Leibnizschen Logik 130; 5. Leibniz und die englische Algebra der Logik 185; 6. Ernst Schröder: "Absolute Algebra" und Leibnizprogramm 233; 7. Schluss 297; Verzeichnisse 309-412.
56. Peckhaus Volker. Die Entdeckung der Leibnizschen Logik. In *Medium Mathematik. Anregungen zu einem interdisziplinären Gedankenaustausch. Band 1*. Edited by Löffladt Günter and Toepell Michael. Hildesheim: Franzbecker 2002. pp. 149-169
57. Peckhaus Volker, "Calculus ratiocinator versus characteristicistica universalis? The two traditions in logic, revisited," *History and Philosophy of Logic* 25: 3-14 (2004).
58. Peña Lorenzo, "De la logique combinatoire des 'Generales Inquisitiones' aux calculs combinatoires contemporains," *Theoria.Revista de Teoria, Historia y Fundamentos de la Ciencia* 6: 129-159 (1991).
"In his 1686 essay, Leibniz undertook to reduce sentences to noun-phrases, truth to being. Such a reduction arose from his equating proof with conceptual analysis. Within limits, Leibniz's logical calculus provides a reasonable way of surmounting the dichotomy, thus allowing a reduction of hypothetical to categorical statements. However it yields the disastrous result that whenever A is possible and so is B there can be an entity being both A and B. Yet, Leibniz was the forerunner of twentieth century combinatory logic, which (successfully!) practices -- sometimes for reasons not entirely unlike Leibniz's own grounds -- reductions of the same kinds he tried to carry out."
59. Plaisted Dennis. *Leibniz on purely extrinsic denominations*. Rochester: University of Rochester Press 2002.
60. Pombo Olga. *Leibniz and the problem of a universal language*. Münster: Nodus Publikationen 1987.
61. Pombo Olga. The Leibnizian theory of representativity of the sign. In *History and Historiography of Linguistics. Vol. II*. Edited by Niederehe Hans-Joseph and Koerner Konrad. Philadelphia: John Benjamins 1990. pp. 447-459
62. Pombo Olga, "Comparative lines between Leibniz's theory of language and Spinoza's reflexions on language themes," *Studia Spinozana* 6: 147-177 (1990).
63. Pombo Olga. Leibnizian strategies for the semantical foundation of the Universal Language. In *Im Spiegel des Verstandes. Studien zu Leibniz*. Edited by Dutz Klaus D. and Gensini Stefano. Münster: Nodus Publikationen 1996. pp. 161-171
64. Pombo Olga, "La théorie leibnizienne de la pensée aveugle en tant que perspective sur quelques-unes des apories linguistiques de la modernité," *Cahiers Ferdinand Saussure* 51: 63-75 (1998).

65. Poser Hans, "Zum Logischen und Inhaltlichen Zusammenhang der Modalbegriffe bei Leibniz," *Kant Studien* 60: 436-451 (1969).
66. Rabouin David, "Logique, mathématique et imagination dans la philosophie de Leibniz," *Corpus.Revue de Philosophie* 49: 165-198 (2005).
67. Rauzy Jean-Baptiste, "Quid sit natura prius"? La conception leibnizienne de l'ordre," *Revue de Métaphysique et de Morale* 98: 31-48 (1995).
 "It is well known that Leibniz's logic is grounded in the inherence of the predicate in the subject and in the compossibility of notions. It naturally stresses, therefore, relations of equivalence, rather than of order. Nevertheless, Leibniz provided a logical analysis of order, i.e., an account of the meaning of "prior", "subsequent", "concomitant". His account comprises three points: 1) Given two beings, the one that is more simple (i.e., the one whose analysis requires less operations of the mind) is prior by nature ("natura prius"); hence, concomitant ("simul") being. 2) The degree of composition of being corresponds to its degree of perfection. Hence, prior beings being simpler, subsequent beings are more perfect. 3) Given two beings such that one is simpler and the other more perfect, they differ temporally if they also contradict each other; conversely, two compossible beings contradict each other if, and only if, they are not simultaneous (i.e., if they do not belong to the same "state of the universe"). It will be shown that this relation makes it possible to characterize the axiomatic order of incomplete notions (in the field of the "mathesis universalis"). But the attempt to explain the terms prius, posterius and simul in a metaphysical manner, i.e., by laying the stress on the order among substances, raises grave philosophical problems."
68. Rauzy Jean-Baptiste. *La doctrine leibnizienne de la vérité. Aspects logiques et ontologiques*. Paris: Vrin 2001.
 "Jean-Baptiste Rauzy writes here on Leibniz's theory of truth, construed broadly, mostly in Leibniz's earlier periods (to 1686). He focuses mostly on Leibniz's logical theory, particularly as given in the logical papers, published only with Couturat and others, in 1901 and following. Unlike a lot of the secondary literature, Rauzy's book gives much detail about how Leibniz's various logical models work out and apply to more general issues such as the reduction of relations, the ontological square (first given in Aristotle's Categories 2), haecceity, and the problem of universals. In addition to using the full opera of Leibniz, Rauzy incorporates a wide range of sources into his discussion: the secondary literature on Leibniz; Leibniz's contemporaries and predecessors, including not merely those like Malebranche and Hobbes, but also Marius Nizolius, Joachim Jungius, Francisco Suárez, and Thomas Aquinas. For he contends that, as in metaphysics, Leibniz in logic looks to the past, despite what some have thought (pp. 10, 14-16)." (from the review by Allan Bäck - *Review of Metaphysics* - March 2003)
69. Rescher Nicholas, "Leibniz's interpretation of his logical calculi," *Journal of Symbolic Logic* 19: 1-13 (1954).
 Reprinted in: N: Rescher - *Nicholas Rescher collected papers. Vol. 10. Studies in the history of logic* - Frankfurt, Ontos Verlag, 2006, 141-157
70. Risse Wilhelm, "Die *Characteristica Universalis* bei Leibniz," *Studi Internazionali di Filosofia* 1: 107-116 (1969).
71. Risse Wilhelm, "Zur Klassifizierung der Urteile und Schlüsse durch Leibniz," *Studia Leibnitiana* 1: 23-53 (1969).
72. Robinet André. *Lexicographie et caractéristique universelle*. In *Neuzeitliches Denken. Festschrift für Hans Poser zum 65. Geburtstag*. Edited by Abel Günter, Engfer Hans-Jürgen, and Hubig Christoph. Berlin: de Gruyter 2002. pp. 163-172
 "Les questions leibniziennes relatives à la 'caractéristique universelle' ont été amplement étudiées dans les travaux publiés par H. Poser. Est-ce que la lexicographie statistique, telle qu'elle s'est développée au cours de notre *Informatikzeitalter*, est susceptible de contribuer à l'édification du grand projet de Leibniz? Ces procédures linguistiques, hautement mathématiques et technologiques, sont survenues dans la lignée même des objectifs dégagés à partir du calcul binaire, des calculs statistiques et probabilitaires, dans la direction d'une simulation cybernétique des procédures pensantes. La machine à calculer en fonction de la table pythagoricienne des nombres ne pouvait être qu'une approximation de ce qui deviendrait réalisable à partir de la *Dualzahltheorie*. Mais une table combinatoire des concepts était d'une toute autre envergure et exigeait d'abord qu'on dominât

la genèse et la composition des langues pour en venir à une logique des pensées. Il fallait, pour cela, résoudre d'abord le problème du signifiant, corollairement au problème des signes qui seraient mis en regard. La signification devenait ainsi l'étude du rapport possible entre un signifié *de* nature réelle ou conceptuelle et un signifiant naturel ou artificiel. Indépendamment des considérations concernant les langues vernaculaires et leurs éventuelles correspondances (cf. des opérations leibniziennes comme '*pater noster*' ou 'langue commune'), Leibniz se meut à trois niveaux quand il approche la question de la caractéristique universelle: 1) inventer *des* procédures sémiotiques pour en rendre le contenu opérationnel; 2) dégager les notions-clés d'une sémantique générale; 3) examiner si, sur ce trajet constructif, intervient cette autre discipline scientifique leibnizienne qu'est la recherche d'une langue primitive. En un mot, est-ce que les procédures d'une caractéristique universelle convergent vers les fonctions qu'on peut observer dans la primitivité expressive du langage?"

73. Rochhausen Rudolf. Leibniz und die Einheit von Logik, Kombinatorik und Erkenntnis. In *Gottfried Wilhelm Leibniz. Wissenschaftliche Methoden heute*. Edited by Heinz Melitta and Reiprich Kurt. Leipzig: Rohrbacher Kreis 1997. pp. 21-34
74. Roncaglia Gino, "Modality in Leibniz' essays on logical calculus of April 1679," *Studia Leibnitiana* 20: 43-62 (1988).
75. Ross George MacDonald, "Logic and ontology in Leibniz," *Studia Leibnitiana.Sonderheft* 9: 20-26 (1981).
76. Rossi Jean-Gérard, "Sur deux types de rapport entre sujets et prédicats dans la philosophie leibnizienne," *Studia Leibnitiana* 29: 103-111 (1997).
77. Rossi Paolo. The twisted roots of Leibniz' Characteristic. In *The Leibniz Renaissance*. Firenze: Olschki 1989. pp. 271-289
78. Rossi Paolo. *Logic and the art of memory. The quest for a universal language*. Chicago: University of Chicago Press 2000.
Translated from Italian with an introduction by Stephen Clucas.
First edition: *Clavis universalis. Arti mnemoniche e logica combinatoria da Lullo a Leibniz* - Napoli, Ricciardi, 1960; Second revised edition: Bologna, Il Mulino, 1983.
See in particular Chapter VII. *The construction of a universal language* pp. 145-175 and VIII. *The sources of Leibni'z universal character* pp. 176-193
79. Royse James R., "Leibniz and the reducibility of relations to properties," *Studia Leibnitiana* 12: 179-204 (1980).
"On the basis of his remarks concerning metaphysics and logic, the thesis that relations are reducible to properties has often been ascribed to Leibniz. Russell and others have opposed this thesis, primarily by reference to asymmetrical relations and several precise formulations of the thesis prove in fact to be false. However, Leibniz's ontology may be seen as justifying a version of type theory, in which one form of reducibility can be demonstrated. The method used here shows also how two monads, each possible in itself, are not able to exist together, and thus how impossibility can arise."
80. Russell Bertrand. *A critical exposition of the philosophy of Leibniz. With an appendix of leading passages*. London: Routledge 1900.
Second edition with a new preface 1937; reprint: New York, Cosimo Classics, 2008
81. Rutherford Donald. Truth, predication and complete concept of an individual substance. In *Leibniz. Questions de logique*. Edited by Heinekamp Albert. Stuttgh: Steiner Verlag 1988. pp. 130-144
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83. Sainati Vittorio, "Sulla logica leibniziana," *Filosofia* 21: 221-258 (1970).
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86. Sanchez-Maza Miguel, "Actualisation, developpement et perfectionnement des calculs logiques arithmetico-intensionnels de Leibniz," *Theoria.Revista de Teoria, Historia y Fundamentos de la Ciencia* 6: 175-259 (1991).

87. Scheine Erhard. *Calulemus! Das Problem der Anwendung von Logik und Mathematik*. In *Leibniz' Auseinandersetzung mit Vorgängern und Zeitgenossen*. Edited by Heinekamp Albert and Marchlewitz Ingrid. Stuttgart: F. Steiner 1990. pp. 200-216
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88. Schmidt Franz, "Die Symbolisierten elemente der Leibnizschen Logik," *Zeitschrift für Philosophische Forschung* 20: 595-605 (1966).
89. Schneider Martin, "Weltkonstitution durch logische Analyse: Kritische Überlegungen zu Leibniz und Carnap," *Studia Leibnitiana* 27: 67-84 (1995).
"The question of the possibility of a world-constitution by logical analysis (i.e., as to the extent the ontological problem of the explanation of the structure of the real world by logical means can be achieved) is exemplarily investigated for two philosophers. Both of them try to the same extent to solve the problem in the context of a universal method (*Einheitswissenschaft, scientia generalis*) founded on the basis of formal logic, while each of them follows opposing aims: on the one hand the foundation (Leibniz), on the other the elimination (Carnap) of metaphysics by logical analysis of language."
90. Schulz Dietrich J., "Die Funktionen analytischer Sätze in Leibniz's Frühen Entwürfen zur Charakteristik," *Studia Leibnitiana* 2: 127-134 (1970).
91. Shim Michael. Leibniz and modal realism. In *Aufklärung durch Kritik. Festschrift für Manfred Baum zum 65. Geburtstag*. Edited by Baum Manfred et al. Berlin: Duncker & Humblot 2004. pp. 95-111
92. Skosnik Jeffrey, "Leibniz and Russell on existence and quantification theory," *Canadian Journal of Philosophy* 10: 681-720 (1980).
93. Sommers Fred. Leibniz's program for the development of logic. In *Essays in memory of Imre Lakatos*. Edited by Cohen Robert., Feyerabend Paul, and Wartofsky Marx. Dordrecht: Reidel Publishing Company 1976. pp. 589-615
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94. Sommers Fred. Frege or Leibniz? In *Studies on Frege. Logic and semantics*. Edited by Schirn Matthias. Stuttgart-Bad Cannstatt: Frommann-Holzboog 1976. pp. 11-34
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97. Spruit Leen, "Reasoning and computation in Leibniz," *History and Philosophy of Logic* 11: 1-14 (1990).
"Leibniz's overall view of the relationship between reasoning and computation is discussed on the basis of two broad claims that one finds in his writings, concerning respectively the nature of human reasoning and the possibility of replacing human thinking by a mechanical procedure. A joint examination of these claims enables one to appreciate the wide scope of Leibniz's interests for mechanical procedures, concerning a variety of philosophical themes further developed both in later logical investigations and in methodological contributions to cognitive psychology."
98. Swoyer Chris, "Leibniz's calculus of real addition," *Studia Leibnitiana* 26: 1-30 (1994).
"I examine what is probably Leibniz's most complete logical system and show that it is well-developed formal logic with a number of original and important features. Among other things, Leibniz discusses alternative interpretations of his system, provides detailed proofs of over twenty theorems about (what are now known as) semilattices and shows their relevance to logic, and he develops what is probably the first formal theory of the part- whole relation. I then show how Leibniz's system illuminates other aspects of his logic and philosophy, including his views on the structure of concepts and on infinite analysis."
99. Swoyer Chris, "Leibniz on intension and extension," *Noûs* 29: 96-114 (1995).
"Leibniz is well-known for his intensional interpretation of logic, but he also discusses, and sometimes even employs, an extensional approach. I examine Leibniz's views on intension, extension, and the connections between them. I show that Leibnizian intensions and extensions

share a common structure that explains the relationships among the various interpretations he proposes for his logics, that because of this common structure extensions express intensions in Leibniz's important, technical sense of expression, and that Leibniz's views on intension and extension (in conjunction with his views about truth) require that Leibnizian concepts be extensional."

100. Thiel Christian. From Leibniz to Frege: mathematical logic between 1679 and 1879. In *Logic, methodology and philosophy of science, VI*. Edited by Cohen Jonathan. Amsterdam: North-Holland 1982. pp. 755-770
Proceedings of the Sixth International Congress of logic. methodology and philosophy of science, Hannover 1979.
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"In the April papers of 1679 Leibniz expounds an arithmetical model of the logic of categorical sentences. In later works one hardly finds any remaining trace of this project. This fact gave rise to the question why Leibniz abandoned his views of 1679. Several answers have been given. In this paper it is shown that all these answers are wrong and, moreover, that the question itself is pointless. It is argued that, although the arithmetical calculi are defective, Leibniz never abandoned them. Instead, he looked upon them as equivalent alternatives to his later deduction-theoretic representations of the same logic."
102. Varani Giovanna, "Ramistische Spuren in Leibniz' Gestaltung der Begriffe, 'dialectica', 'topica' und 'ars inveniendi'," *Studia Leibnitiana* 27: 135-156 (1995).
"Vers la fin du XVIIe siècle, le ramisme se répandit en Allemagne, gagna un grand nombre de prosélytes et fit preuve d'une remarquable vitalité. L'histoire de ses effets constitue un intéressant, néanmoins peu recherché chapitre de l'historiographie de la philosophie, et la question portant sur les "dettes" éventuelles de Leibniz envers le ramisme se tient au cœur de cet essai. En premier lieu, quelques caractères théoriques du ramisme allemand et surtout du philippo-ramisme sont mis en évidence, après cela on analyse l'emploi de Leibniz (jusqu'au 1680) des notions "dialectica", "topica" et "ars inveniendi" et l'on découvre une syntonisation conceptuelle entre cet emploi et la manière de penser des ramistes. Sans en tirer des conclusions hasardeuses, on peut comprendre le ramisme comme un ingrédient essentiel de l'univers leibnizien complexe et comme un thème de plus en plus important pour Leibniz."
103. Velarde Lombraña Julián, "Leibniz y la lógica," *Themata.Revista de Filosofía* 29: 217-231 (2002).
"This paper is a commented review of the studies about Leibniz's logic made in Spain during the last thirty years. In order to achieve a better treatment, I have divided the specific topics of Leibniz's logic in the following sections: (1) *Characteristica*; (2) Universal Language; (3) Calculi; (4) General Science (Encyclopaedia): Method of Analysis/Synthesis; (5) Truth; (6) Panlogism."
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