

Bibliography on Metaontology (including ontological commitment, and some philosophy of mathematics)

Ted Sider, Spring 2006

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Karen Bennett: <http://www.princeton.edu/~kbennett/metasyllabus05.htm>
Matti Eklund: <http://www.people.cornell.edu/pages/me72/ontologysyll.pdf>
Steve Yablo: <http://www.mit.edu/~yablo/501.html>

Abstracts from *The Philosopher's Index*, except when indicated parenthetically, or when in SMALLCAPS (the latter are by me).

Alston, William P. "Ontological Commitments.", *Philosophical Studies*. 1958; 9,8-16

This article considers the task of translating linguistic expressions, such as sentences of the form 'there are p's', to sentences of some other form. The author is especially concerned with the view that such translations enable us to avoid "ontological commitments." he takes an example from morton white which allegedly provides a case of a translation which avoids ontological commitments and argues that if the translation is adequate then it is used to make the same assertion as the original and so makes the same commitments. He concludes that those who take avoidance of ontological commitment as the point of linguistic translations are obstructing our view of the real point of such translations.

Anderson, Alan Ross. 1959. Church on Ontological Commitment. *Journal of Philosophy* 56: 448-451.

Austin, J. L. 1962. *Sense and Sensibilia* (Oxford University Press).

Azzouni, Jody. 2004. *Deflating Existential Consequence: A Case for Nominalism*. Oxford: Oxford University Press.

Belnap, Nuel. 1961-62. "Tonk, Plonk and Plink", *Analysis* 22: 130-134.

Benacerraf, Paul. 1965. 'What Numbers Could Not Be.' *Philosophical Review* 74: 47 - 73.

Benacerraf, Paul. 1973. 'Mathematical Truth.' *Journal of Philosophy* 70: 661 - 79.

Bennett, Karen. 2007. "Composition, Coincidence, and Metaontology", in David Chalmers, David Manley, and Ryan Wasserman, eds., [title to be determined], Oxford University Press.

Bonevac, Daniel A. *Reduction in The Abstract Sciences*, Hackett : Indianapolis, 1982

This work argues for nominalism in the philosophy of mathematics and in metaphysics. Only by

eliminating abstract objects via ontological reduction, it urges, can we reconcile ontology and epistemology. After developing an account of reduction for abstracta, it allays benacerratt's fear of multiple reductions and quine's fear of a world of numbers. Finally it presents a theory of ontological commitment, relating it to ontology in general and devising an epistemological criterion for ontic decision.

Boolos, George. 1975. 'On Second-Order Logic.' *Journal of Philosophy* 72: 509 - 27. Reprinted in Boolos 1998, pp. 37-53.

Boolos, George. 1984. 'To Be is to Be a Value of a Variable (or to Be Some Values of Some Variables).' *The Journal of Philosophy* 81: 430 - 49. Reprinted in Boolos 1998, pp. 54-72.

MUST-READ

Boolos, George. 1985. "Nominalist Platonism", *Philosophical Review* 94: 327-344. Reprinted in Boolos 1998, 73-87.

Boolos, George. 1997. "Is Hume's Principle Analytic?", R. G. Heck Jr., ed., *Language, Thought and Logic* (Clarendon Press, Oxford), 245-61.

Boolos, George. 1998. *Logic, Logic and Logic*. Harvard University Press.

Burgess, John and Gideon Rosen. 1997. *A Subject with no Object*. Oxford: Clarendon Press.

Carnap, Rudolf. 1950. 'Empiricism, Semantics, and Ontology.' Reprinted as a supplement to *Meaning and Necessity: A Study in Semantics and Modal Logic*. Chicago: University of Chicago Press, 1956, pp. 205 - 21.

Cartwright, Richard. 1994. "Speaking of Everything", *Noûs* 28, 1-20.

Chisholm, Roderick M. 1973. "Beyond Being and Nonbeing", *Philosophical Studies* 24: 245-255.

ABOUT MEINONGIANISM

Church, Alonzo. Symposium: Ontological Commitment. *Journal of Philosophy*. 1958; 55,1008-1014

Cooper, Neil. 1966. "Ontological Commitment.", *Monist* 50,125-129

In this paper quine's criterion of ontological commitment is examined and rejected as incapable of distinguishing genuine from bogus ontological commitments. Applying quine's strict test for ambiguity, "exists" is shown to have two senses in application to properties, classes and numbers, a formal sense and a material sense. In the material sense, to say that a property exists is to say that it has instances; in the formal sense, to say that a property exists is to say that it is possible to use a property-expression meaningfully. The distinction is clarified by means of the notion of "semantic ascent." such ascent is essential for explaining the meaning of formal existence-statements. These are vacuous and do not genuinely commit one to the existence of anything. Quine's purely formal test does not reveal this and thus is responsible for setting spurious problems about "countenancing" abstract entities.

Creath, Richard. 1980. "Nominalism by Theft.", *American Philosophical Quarterly*, 17,311-318

A consistent interpretation of mathematical discourse is given in which numerals do not denote, and in which no ontological commitment is made to abstracta. The approach is formalistic, but unlike in historical versions of formalism, the usual theorems of pure mathematics are counted among the genuine truths rather than as mere marks. Applied mathematics is also investigated, and classical theories of measurement are developed into a semantics for sentences involving mathematical and non-mathematical terms.

Crittenden, Charles. 1974. "Ontological Commitments of Everyday Language.", *Metaphilosophy* 5,198-215

Fictional characters are referred to but not conceived as existing, by speakers of everyday language. So the view that ordinary reference always presupposes existence, from which the inference is drawn that everyday language has a "bloated ontology," is mistaken. Thus it is not necessary to turn to scientific reference for a criterion for ontological commitment. Scientific references do generally denote existents, because science is an extension of "some" of the techniques conceived as dealing with reality. But there are other such techniques: everyday speakers employ a number of criteria for distinguishing fictions from real things, among them spatio-temporal location, perceivability, suffering and producing causal effects, and ability to think. These criteria admit existents of different kinds: a country, e.g., has a location and produces effects, though not perceivable and concrete.

Dako, Martin. 1986. "In Defense of Substitutional Quantification.", *International Logic Review* 17,50-61

Quine's approach to ontological commitment even in natural language has been to employ objectual existential quantification. The ineliminability of singular referring expressions from natural language presents the challenge of presenting a type of substitutional interpretation of quantifiers, which turns out to be a defensible one. Statements in which ineliminable singular expressions occur can be interposed between quantified ones and reference to the nonlinguistic world in this version of substitutional quantification.

Divers, John; Miller, Alexander. 1995. "Minimalism and the Unbearable Lightness of Being", *Philosophical Papers* 24(2), 127-139

Crispin Wright's case for arithmetical Platonism emerges in a refined version from his recent and important work on truth ("Truth and Objectivity"). In this paper we pursue the question of the adequacy of that general minimalist approach to ontology that supports Wright's arithmetical Platonism. We suspect that minimalism yields a conception of being which is at once too wide and too light to be acceptable. We articulate our suspicion by showing that the minimalist criteria of ontological commitment that sustain Wright's arithmetical Platonism will also secure an ontological commitment to fictional objects.

Dorr, Cian. 2005. "What We Disagree about When We Disagree about Ontology", in Mark Kalderon, ed., *Fictionalist Approaches to Metaphysics*, Oxford University Press.

In this paper I attempt two things. First, I argue that one can coherently imagine different communities using languages structurally similar to English, but in which the meanings of the quantifiers vary, so that the answers to ontological questions, such as 'Under what circumstances do some things compose something?', are different. Second, I argue that nevertheless, one can make sense of the idea that of the various possible assignments of meanings to the quantifiers, one is especially fundamental, so that there is still room for genuine debate as regards the answers to ontological questions construed in the fundamental way. My attempt to explain what is distinctive about the fundamental senses of the quantifiers involves a

generalisation of the idea that claims of existence are never analytic. (Abstract from his web site. Penultimate draft available online: <http://www.pitt.edu/~csd6/papers/Ontology.pdf>)

Dorr, Cian. Forthcoming. “There are No Abstract Objects”, in John Hawthorne, Theodore Sider, and Dean Zimmerman, eds., *Contemporary Debates in Metaphysics* (Blackwell). Available online: <http://www.pitt.edu/~csd6/papers/NoAbstractObjects.pdf>.

I explicate and defend the claim that, fundamentally speaking, there are no numbers, sets, properties or relations. The clarification consists in some remarks on the relevant sense of ‘fundamentally speaking’ and the contrasting sense of ‘superficially speaking’. The defence consists in an attempt to rebut two arguments for the existence of such entities. The first is a version of the indispensability argument, which purports to show that certain mathematical entities are required for good scientific explanations. The second is a speculative reconstruction of Armstrong’s version of the One Over Many argument, which purports to show that properties and relations are required for good philosophical explanations, e.g. of what it is for one thing to be a duplicate of another. (Abstract from his web site.)

Dorr, Cian and Gideon Rosen. 2003. “Composition as a Fiction”. In *The Blackwell Guide to Metaphysics*, ed. Richard M. Gale. Oxford: Blackwell.

We introduce several theories of composition, including Nihilism, according to which there are no composite objects; Universalism, according to which any objects whatsoever compose something; and an intermediate position we attribute to common sense. We argue that neither common sense nor science can give us an adequate reason to rule out any of these theories. We suggest that as long as one cannot rule out the hypothesis that composite objects are much rarer than common sense takes them to be, one should adopt a policy of regulating one’s talk and verbalised thought in accordance with the fiction that common sense is right about composition. (Abstract from Dorr’s web site. Penultimate draft available online: <http://www.pitt.edu/~csd6/papers/CompositionAsAFiction.pdf>)

Eklund, Matti. Forthcoming A. “Fiction, Indifference and Ontology”, *Philosophy and Phenomenological Research*. Available online: <http://www.people.cornell.edu/pages/me72/fio.pdf>

Eklund, Matti. Forthcoming B. “The Picture of Reality as an Amorphous Lump”, in John Hawthorne, Theodore Sider, and Dean Zimmerman, eds., *Contemporary Debates in Metaphysics* (Blackwell). Available online <http://www.people.cornell.edu/pages/me72/cdm.pdf>

Eklund, Matti. Forthcoming C. “Metaontology”, *Philosophy Compass*.

Eklund, Matti. Unpublished A. “Putnam on Ontology”.

Eklund, Matti. Unpublished B. “Neo-Fregean Ontology”. Available online: <http://www.people.cornell.edu/pages/me72/pnfo.pdf>

Eklund, Matti. Unpublished C. “Maximalist Ontology”.

Field, Hartry. 1980. *Science Without Numbers*. (Princeton: Princeton University Press).

Field, Hartry. 1984. “Critical Notice of Crispin Wright: *Frege’s Conception of Numbers as*

Objects”, *Canadian Journal of Philosophy* **14**: 637-662. Reprinted as “Platonism for Cheap? Crispin Wright on Frege’s Context Principle” in Field 1989.

Field, Hartry. 1989. *Realism, Mathematics and Modality*. (Oxford: Basil Blackwell).

Field, Hartry. 1993. “The Conceptual Contingency of Mathematical Objects”, *Mind* **102**: 285-299.

Fine, Kit. 2001. “The Question of Realism”, *Philosopher’s Imprint* 1
(<http://www.umich.edu/~philos/Imprint/index.html>)

This paper distinguishes two kinds of realist issue -- the issue of whether the propositions of a given domain are factual and the issue of whether they are fundamental. It criticizes previous accounts of what these issues come to and suggests that they are to be understood in terms of a basic metaphysical concept of reality. This leaves open the question of how such issues are to be resolved; and it is argued that this may be done through consideration of what grounds the facts of a given domain, when fundamentality is in question, and what grounds our engagement with the putative facts, when factuality is in question. (From the *Philosopher’s Imprint* web site.)

Fine, Kit. 2002. *The Limits of Abstraction*. (New York: Oxford University Press.)

Fine, Kit. Forthcoming. “Relatively Unrestricted Quantification”, forthcoming in Agustín Rayo and Gabriel Uzquiano (eds.). *Absolute Generality*. Oxford University Press.

Geach, P T. 1951. “On What There Is, Part I.” *Aristotelian Society* Suppl 25,125-136. (This symposium also included papers by Ayer and Quine.)

Goodman, Nelson. 1978. *Ways of Worldmaking* (Hackett Publishing Company).

Gottlieb, Dale; McCarthy, Timothy. 1979. “Substitutional Quantification and Set Theory.”, *Journal of Philosophical Logic* 8,315-331

Our concern in this paper is to defend the use of substitutional quantification in set theory as a way of avoiding ontological commitment to sets. Specifically, two objections to this procedure are addressed. (1) Charles Parsons claims that substitutional quantification (at least in set theory) is not ontologically neutral, but rather expresses a “bona fide” sense of existence. We argue that he has failed to distinguish between meta-linguistic commitment to expressions on the one hand and ontological commitment to sets in the object language on the other. (2) T. S. Weston claims that a substantial interpretation of the quantifiers of Zermelo-Frankel set theory (ZF) is inconsistent with obvious theses of semantics. We argue that he has artificially limited the ways in which the quantification of ZF can be rendered substitutional due to a misunderstanding of the finiteness requirements for semantics. With the limitation removed, we give an example of a substitutional interpretation of ZF which is consistent if ZF itself is.

Gottlieb, Dale. 1976 “A Method for Ontology, with Application to Numbers and Events.”, *Journal of Philosophy* 73,637-651.

Substitutional quantification is defended as an ontologically neutral device for collecting sentences in referential languages. An attempt is made to interpret the quantifiers of first-order arithmetic and Davidsonian action sentences substitutionally so as to avoid commitment to numbers and events. The

criterion of ontological commitment is then reformulated in accordance with this method.

Gottlieb, Dale. 1978 "The Truth about Arithmetic.", *American Philosophical Quarterly* 15,81-90.

First-order arithmetic is interpreted via substitutional quantification so that no ontological commitment to numbers is incurred, and all axioms are logically true. An account of certain kinds of applicability of arithmetic is suggested as the basis for understanding the atomic sentences of arithmetic.

Gottlieb, Dale. 1980. *Ontological Economy*. Clarendon: Oxford.

Hale, Bob. 1987. *Abstract Objects*. Oxford: Blackwell.

Hale, Bob and Crispin Wright. 1992. "Nominalism and the Contingency of Abstract Objects", *Journal of Philosophy* 89: 111-135.

Hale, Bob and Crispin Wright. 2000. "Implicit Definition and the *A Priori*", in Paul Boghossian and Christopher Peacocke, eds., *New Essays on the A Priori* (Oxford: Oxford University Press), 286-319.

Hale, Bob and Crispin Wright. 2001. *The Reason's Proper Study*. (Oxford).

Hazen, A P. 1993. "Against Pluralism", *Australasian Journal of Philosophy* 71, 132-144.

It has been argued (by, e.g., George Boolos and David Lewis) that the interpretation of second-order variables as plural terms shows that at least monadic second-order logic is free of ontological commitment to classes. I refute this contention.

Heck, Richard. 1999. "Frege's theorem: an introduction". *Harvard Review of Philosophy* 7. Available online: <http://hcs.harvard.edu/hrp/issues/1999/Heck.pdf>

Heil, John. 2003. *From an Ontological Point of View*. (Oxford: Oxford University Press.)

Hilpinen, Risto. 1996. "On Some Formulations of Realism, or How Many Objects are there in the World?". In R. S. Cohen, R. Hilpinen and Qiu Renzong, eds., *Realism and Anti-Realism in the Philosophy of Science*. The Netherlands: Kluwer.: 1-10.

Hinckfuss, Ian. 1993. "Suppositions, Presuppositions, and Ontology", *Canadian Journal of Philosophy*. 1993; 23(4), 595-618

There is no inconsistency and a lot of common sense in taking the so-called truth conditions' and associated theories of formal semantics' to be false, though logically useful, presupposed conservative extensions of a more economical system. Hence there is no need to regard such semantics' as engendering an ontological commitment to sets, functions, or possible worlds. A similar approach would allow the withdrawal of physical properties, space, time and other non-material entities from our ontological commitments.

Hirsch, Eli. 2002a. "Quantifier Variance and Realism", in *Philosophical Issues* 12: 51-73.

Hirsch, Eli: 2002b, "Against Revisionary Ontology", *Philosophical Topics* 30: 103-27.

Hirsch, Eli. 2004. "Sosa's Existential Relativism", in John Greco, ed., *Ernest Sosa and His Critics* (Malden, Blackwell Publishing), 224-232.

Hirsch, Eli. 2005. "Physical-Object Ontology, Verbal Disputes, and Common Sense", *Philosophy and Phenomenological Research*, 70, 67-97.

Hirsch, Eli. Forthcoming. "Ontological arguments: interpretive charity and quantifier variance", in John Hawthorne, Theodore Sider, and Dean Zimmerman, eds., *Contemporary Debates in Metaphysics* (Cambridge, MA: Blackwell.)

Hodes, Harold T. 1990 "Ontological Commitment: Thick and Thin In *Meaning and Method: Essays in Honor of Hilary Putnam*. Cambridge Univ Pr : New York.

Discourse carries thin commitment to objects of a certain sort iff it says or implies that there are such objects. It carries a thick commitment to such objects iff an account of what determines truth values for its sentences say or implies that there are such objects. This paper presents two model theoretic semantics for mathematical discourse, one reflecting thick commitment to mathematical objects, the other reflecting only a thin commitment to them. According to the latter view, for example, the semantic role of number-words is not designation but rather the encoding of cardinality-quantifiers. I also present some reasons for preferring this view.

Hodes, Harold T. 1984. "Logicism And The Ontological Commitments of Arithmetic.", *Journal of Philosophy* 81,123-149

The author contends that these notions of "intrinsicity" and of "standardness" are unintelligible. Accepting this theory is like thinking that algebraists who speak of "the countable atomless boolean algebra" are referring to a particular structure; instead the "standard" representor, and thus the cardinal numbers, are fictions introduced to encode a fragment of third-order logic into first-order clothing. The third-order nature of arithmetic discourse is disguised partly by the success of this encoding, and partly by an ambiguity between local and global notions of logical form. The author elaborates on the distinctive nature of mathematical fictionality, and sketches the formal logic underlying the encoding. The author also sketches the way to handle two apparent difficulties: that of numbers applied to higher-type entities, and the possibility that there are finitely many actual objects.

Hofweber, Thomas. 2005. "A Puzzle about Ontology", *Nous* 39: 256-283.

DEFENDS A LINGUISTICALLY SOPHISTICATED DISTINCTION BETWEEN "LOADED" AND "UNLOADED" QUANTIFICATION. COMPARES TO CARNAP'S DISTINCTION BETWEEN INTERNAL AND EXTERNAL QUESTIONS.

Horwich, Paul. 1997. Implicit Definitions, Analytic Truth and Apriori Knowledge", *Nous* 31: 423-440.

Hylton, Peter. 2000. "Reference, Ontological Relativity, and Realism", *Aristotelian Society Supplement* 74: 281-299.

Hylton, Peter. 2004. "Quine on Reference and Ontology, in *The Cambridge Companion to*

Quine (Cambridge University Press), Roger Gibson Jr (ed), 115-150.

Jackson, Frank. 1980 "Ontological Commitment And Paraphrase.", *Philosophy* 55,303-315

In this paper, I defend a modified referential theory of ontological commitment. I start by considering difficulties for quinean approaches over the role of paraphrase in eliminating ontological commitment.

Jubien, Michael. 1972 "The Intensionality of Ontological Commitment", *Nous* 6,378-387

Jubien, Michael. 1974 "Ontological Commitment to Particulars.", *Synthese* 28,513-531

An intensional notion of interpreted first-order theory is introduced and semantical criteria for commitment of such theories to particular concrete and (possibly) impure abstract entities are developed. Commitment "de dicto" and "de re" are distinguished and numerous examples are discussed. The work is extended to "kinds" of entities and to theories treating pure abstract entities in a later paper in the same journal.

Jubien, Michael. 1975 "Ontological Commitment to Kinds.", *Synthese* 31,85-106.

This paper presupposes and extends work done in "ontological commitment to particulars" ("synthese", volume 28, 1974). A semantical criterion of commitment to objects of a given kind is developed for the class of intensional interpreted theories introduced in the earlier paper. Next the question of the commitments of theories apparently treating pure abstract entities (especially mathematical theories) is taken up and a criterion is offered. Finally the criteria are modified so as to deal with theories apparently treating both pure and non-pure entities.

Jubien, Michael. 1977. 'Ontology and Mathematical Truth.' *Nous* 11: 133 - 50.

Kaminsky, Jack. Church on Ontological Commitment. *Journal of Philosophy*. 1959; 56,452-457

Kripke, Saul. 1976. "Is There a Problem about Substitutional Quantification?", in G. Evans and J. McDowell (eds), *Truth and Meaning: Essays in Semantics* (Oxford: Clarendon Press), 325-419.

Lavine, Shaughan. 2000. "Quantification and Ontology", *Synthese* 124, 1-43.

Quineans have taken the basic expression of ontological commitment to be an assertion of the form 'there is something that is a phi'. Here I take the existential quantifier to be introduced, not as an abbreviation for an expression of English, but via Tarskian semantics. I argue, contrary to the standard view, that Tarskian semantics, in fact, suggests a quite different picture: one in which quantification is of a substitutional type apparently first proposed by Geach. The ontological burden is borne by constant symbols and truth is defined separately from reference.

Liebman, David and Matti Eklund. Unpublished. "Sider on the Existential Quantifier".
Lewis, David and Stephanie Lewis. 1970. "Holes", *Australasian Journal of Philosophy* 48: 206-212. Reprinted in *Philosophical Papers, volume 1* (Oxford: Oxford University Press, 1983), 3-9.

Lewis, David. 1983. "New Work for a Theory of Universals". *Australasian Journal of Philosophy* 61: 343-377. Reprinted in *Papers in Metaphysics and Epistemology*

(Cambridge: Cambridge University Press, 1999), 8-55.

Lewis, David. 1984. "Putnam's Paradox". *Australasian Journal of Philosophy* 62: 221-236. Reprinted in *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press, 1999), 56-77.

Lewis, David. 1990. "Noneism or Allism?", *Mind* 99: 23-31. Reprinted in *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press, 1999), 152-163.

Lewis, David 1991. *Parts of Classes*. (Oxford: Basil Blackwell).

THE STUFF ON PLURAL QUANTIFICATION IS PARTICULARLY RELEVANT

Lowe, E. J. 1995. 'The Metaphysics of Abstract Objects.' *Journal of Philosophy* 92: 509 - 24.

Ludlow, Peter. 2003. "Presentism, Triviality, and the Varieties of Tensism", *Oxford Studies in Metaphysics, volume 1*: pp. 21-36.

Macbride, Fraser. 2003. "Speaking with Shadows: A Study of Neo-Logicism", *British Journal for the Philosophy of Science* 54: 103-163.

Martin, R M. 1962. "Existential Quantification and the "Regimentation" of Ordinary Language", *Mind* 71,525-529.

Martin, R M. 1960. "On Church's Notion of Ontological Commitment." *Philosophical Studies*.; 11, 3-6.

McGinn, Colin. 2000. *Logical Properties : Identity, Existence, Predication, Necessity, Truth*. (Oxford : Clarendon Press).

Melia, Joseph. 1995. 'On What There Isn't.' *Analysis* 55: 223 - 9.

Merricks, Trenton. 2000a. "'No Statues'," *Australasian Journal of Philosophy* 78: 47-52.

Parsons, Terence. 1970. "Various Extensional Notions of Ontological Commitment.", *Philosophical Studies* 21,65-74

In this paper several different (and non-equivalent) characterizations of ontological commitment are extracted from the writings of w. v. quine, and some of their characteristics noted. Then each is evaluated with respect to its conformity to an intuitive notion of "what a theory says there is".

Parsons, Terence. 1967. "Extensional Theories of Ontological Commitment.", *Journal of Philosophy* 64,446-450.

The paper examines theories of ontological commitment which construe commitment to be an extensional relation between theories and objects. It is argued that any such theory which assigns the same commitments to logically equivalent theories, and which assigns at least as many commitments to a theory

as to its logical consequences, will assign exactly the same commitments to all one-sentence theories whose sentences are of the form '(ex)ax', regardless of what atomic predicate 'a' is.

Price, Huw. 1997. "Carnap, Quine and the Fate of Metaphysics", *The Electronic Journal of Analytic Philosophy* 5. <http://ejap.louisiana.edu/EJAP/1997.spring/contents.html>.

Prior, A. N. 1971. "Platonism and Quantification", in *Objects of Thought* (Oxford: Oxford University Press), 31-47.

Prior, A. N. 1960. "The Runabout Inference Ticket", *Analysis* 21: 38-39.

Putnam, Hilary. 1967. 'Mathematics Without Foundations.' *Journal of Philosophy* 64: 5 -22.

Putnam, Hilary. 1971. *Philosophy of Logic*. New York: Harper.

Putnam, Hilary. 1987a. *The Many Faces of Realism*. (LaSalle, Ill.: Open Court).

LECTURES 1 AND 2 ESPECIALLY

Putnam, Hilary. 1987b. "Truth and Convention: On Davidson's Refutation of Conceptual Relativism", *Dialectica* 41: 69-77.

Putnam, Hilary. 2004. *Ethics without Ontology*. Cambridge: Harvard University Press.

Quine, W. V. O. 1936. "Truth by Convention", in O. H. Lee, ed., *Philosophical Essays for A. N. Whitehead* (New York: Longmans). Reprinted in *The Ways of Paradox* (New York: Random House, 1966), 70-99.

Quine, W. V. 1948. "On What There Is", *Review of Metaphysics* 2: 21-38. Reprinted in *From a Logical Point of View* (Cambridge: Harvard University Press, 1953): 1-19.

Quine, W. V. 1951a. "Ontology and Ideology", *Philosophical Studies* 2 : 11-15.

Quine, W. V. 1951b. "On Carnap's views on ontology", *Philosophical Studies* 2: 65-72. Reprinted in *The Ways of Paradox* (New York: Random House, 1966): 126-134.

Quine, W. V. O. 1951c. "Two Dogmas of Empiricism", *Philosophical Review* 60: 20-43, reprinted in *From a Logical Point of View* (Cambridge: Harvard University Press, 1953): 20-46.

Quine, W. V. 1953. "Logic and the Reification of Universals", in *From a Logical Point of View* (Cambridge: Harvard University Press): 102-129.

Quine, W. V. O. 1960. "Carnap and Logical Truth", *Synthese* 12: 350-374. Reprinted *The Ways of Paradox* (New York: Random House, 1966), 100-125.

Quine, W. V. 1968. "Ontological Relativity", *Journal of Philosophy* 65: 185-212. Reprinted in

Ontological Relativity and Other Essays (New York: Columbia University Press, 1969), 26-68.

Quine, W. V. 1969. "Existence and Quantification", in *Ontological Relativity and other Essays* (New York: Columbia University Press): 91-113.

Rayo, Agustín. "Logicism Reconsidered". In Stewart Shapiro (ed.), *The Oxford Handbook for Logic and the Philosophy of Mathematics*, Oxford University Press, 2005. Available online: <http://web.mit.edu/arayo/www/lr.pdf>

I show that the truth-values of various logicist theses can be conclusively established on minimal assumptions. In addition, I develop a notion of 'content-recarving' as a constraint on logicism, and offer a critique of 'Neo-Logicism'. (Abstract from his web site.)

Rayo, Agustín. Unpublished. "On Commitment". Available online: <http://web.mit.edu/arayo/www/oc.pdf>

I argue that standard characterizations of ontological commitment rely on unwarranted assumptions about the connection between commitment and semantics. I go on to defend an alternate characterization, and show that it can be used to solve a puzzle in the philosophy of mathematics. (Abstract from his web site.)

Rayo, Agustín and Gabriel Uzquiano (eds.). Forthcoming. *Absolute Generality*. Oxford University Press. Introduction to this book available online: <http://web.mit.edu/arayo/www/Introduction.pdf>

Rayo, Agustín and Stephen Yablo. 2001. "Nominalism Through De-Nominalization", *Nous* 35: 74-92.

Rosen, Gideon. 1993. "The Refutation of Nominalism(?)", *Philosophical Topics* 21: 149-186

Salmon, Nathan. 1987. "Existence", in J. Tomberlin, ed., *Philosophical Perspectives*, 1, *Metaphysics* (Atascadero, CA: Ridgeview), 49-108.

Sanford, David. 1993. "The Problem of the Many, Many Composition Questions, and Naïve Mereology", *Noûs* 27: 219-228.

Sayward, Charles. "What Is a Second Order Theory Committed To?", *Erkenntnis*. 1983; 20,79-92

Against views about ontological commitment urged by Quine, I argue that "no" second order theory is ontologically committed to anything beyond what its "individual" variables range over.

Shapiro, Stewart. "Modality and Ontology", *Mind*. 1993; 102(407), 455-481

This paper concerns the relationship between ideology and ontology. The starting point is a series of recent programs whose strategy is to reduce ontology in mathematics by invoking some ideology, typically a modal operator. In each case, there are straightforward, often trivial, translations from the set-theoretic

language of the realist to the proposed language with added ideology, and vice-versa. The contention is that, because of these translations, neither system can claim a major epistemological advantage over the other. The prima facie intractability of knowledge of abstract objects indicates an intractability concerning knowledge of the “new” notions. The prevailing criterion of ontological commitment, due to Quine, is that the ontology of a theory is the range of its bound variables; but recall that Quine insists on a fixed, and very austere ideology. It is proposed here that, when this constraint is relaxed, the Quinean criterion is flawed, and an alternative, in structuralist terms, is developed.

Sidelle, Alan. 1992. “Identity and the Identity-Like”. *Philosophical Topics* 20: 269-292.

Sidelle, Alan. 1998. “A Sweater Unraveled: Following One Thread of Thought for Avoiding Coincident Entities”, *Noûs* 32: 423-448.

Sidelle, Alan. 2002. “Is There a True Metaphysics of Material Objects?”, *Philosophical Issues* 12 (Supplement to *Noûs*): 118-145.

Sider, Theodore. 1999. “Presentism and Ontological Commitment”, *The Journal of Philosophy* 96: 325-347.

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SEE ESPECIALLY THE REPLY TO HIRSCH

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THIS EXPANDS ON SIDER 2001A, 2001B (INTRODUCTION), AND 2004.

Sider, Theodore. Unpublished. “NeoFregeanism and Quantifier Variance”. Draft online: http://fas-philosophy.rutgers.edu/sider/papers/neofregeanism_and_quantifier_variance.pdf

Simons, Peter. “Higher-Order Quantification and Ontological Commitment”, *Dialectica*. 1997; 51(4), 255-271

George Boolos’s employment of plurals to give an ontologically innocent interpretation of monadic higher-order quantification continues and extends a minority tradition in thinking about quantification and ontological commitment. An especially prominent member of that tradition is Stanislaw Lesniewski, and shall first draw attention to this work and its relation to that of Boolos. Secondly, I shall stand up briefly for plurals as logically respectable expressions, while noting their limitations in offering ontologically

deflationary accounts of higher-order quantification. Thirdly, I shall focus on the key idea of ontological commitment and investigate its connection with the idea of truth-making. Fourthly, I shall consider how different interpretations of quantification may sideline Boolos's work, but finally I shall largely support his analysis of quantification involving nominal expressions, while arguing, in the spirit of Arthur Prior, that non-nominal quantification is noncommitting.

Simons, Peter. "Who's Afraid of Higher-Order Logic?", *Grazer Philosophische Studien*. 1993; 44, 253-264

Suppose you hold the following opinions in the philosophy of logic. First-order predicate logic is expressively inadequate to regiment concepts of mathematic and natural language; logicism is plausible and attractive; set theory as an adjunct to logic is unnatural and ontologically extravagant; humanly useable languages are finite in lexicon and syntax; it is worth striving for a Tarskian semantics for mathematics; there are no Platonic abstract objects. Then you are probably already in cognitive distress. One way to decrease your unhappiness, short for embracing Platonism, is to accept higher-order logic and look, as did Arthur Prior, for a plausible way to neutralize the ontological commitment to abstract entities that this acceptance appears to entail.

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This is a general survey about nominalism in metaphysics. It differs from some others in spending more time on general questions regarding ontological commitment. Although I tried to be evenhanded, my anti-nominalist biases no doubt shine through. (Abstract from his web site.)

Thomasson, Amie. 2007. "Answerable and Unanswerable Questions", in David Chalmers, David Manley, and Ryan Wasserman, eds., [title to be determined], Oxford University Press.

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van Inwagen, Peter. "Searle on Ontological Commitment in *John Searle and His Critics*, Lepore, Ernest (ed)", Blackwell : Cambridge, 1991

This article discusses Searle's criticism of Quine's "criterion of ontological commitment" in "Speech Acts". I argue that Searle has misunderstood Quine in several important respects, and that his arguments do not refute Quine's real theses on "ontological commitment."

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