

## Annotated bibliography on the Frege-Russell 'Is' ambiguity thesis

### Bibliography

1. Angelelli, Ignacio. 2015. "The Meaning(s) of "Is": Normative vs. Naturalistic Views of Language." In *The Road to Universal Logic: Festschrift for the 50th Birthday of Jean-Yves Beziau. Volume II*, edited by Koslow, Arnold and Buchsbaum, Arthur, 171-179. Cham (Switzerland): Birkhäuser.  
Abstract: "One of the founders of modern logic, G. Frege, has insisted on the variety of meanings of the little word "is." He explicitly distinguished four such meanings (sheer predication or subsumption, identity, assertion, and existence); a fifth meaning (subordination) follows from Frege's new theory of predication. It is part of the Fregean doctrine that special symbols corresponding to different meanings of "is" are to be used. Such distinctions have been strongly challenged by J. Hintikka, in a twofold way: theoretically and historiographically. Neither challenge is regarded as successful. Behind the conflict on "is" two opposite conceptions of language may be perceived: language as culture versus language as nature ("natural language")."
2. Boger, George. 2018. "Existential Import and an Unnecessary Restriction on Predicate Logics." *History and Philosophy of Logic* no. 39:109-134.  
Abstract: "Contemporary logicians continue to address problems associated with the existential import of categorical propositions. One notable problem concerns invalid instances of subalternation in the case of a universal proposition with an empty subject term. To remedy problems, logicians restrict first-order predicate logics to exclude such terms. Examining the historical origins of contemporary discussions reveals that logicians continue to make various category mistakes. We now believe that no proposition per se has existential import as commonly understood and thus it is unnecessary to restrict first-order predicate logics to non-empty classes. After introducing the problem, we trace some nineteenth century treatments of the issue to locate a source of misconstruing propositional import in misconceptions of 'implies' and 'affirms' and name the process/product fallacy, along with the translation of categorical sentences using quantifiers and accommodating an empty class. Next we treat some metalogical matters to orient our discussion by which we provide a more precise nomenclature about 'sentence' and 'proposition' to correct previous misconceptions; here we uncover a common category mistake in respect of a proposition's efficacy. The semantic distinction between agent and force is helpful in this connection. We conclude by showing that logicians have reinserted existence as a predicate, a position previously excised by Kant, and that the Frege-Russell ambiguity thesis applies only to relationships within a categorical sentence between grammatical predicate and subject."
3. Corazza, Eros. 2018. "Names, Identity, and Predication." *Philosophical Studies* no. 175:2631–2647.  
Abstract: "It is commonly accepted, after Frege, that identity statements like "Tully is Cicero" differ from statements like "Tully is Tully". For the former, unlike the latter, are informative. One way to deal with the information problem is to postulate that the terms 'Tully' and 'Cicero' come equipped with different informative (or cognitive) values. Another approach is to claim that statements like these are of the subject/predicate form. As such, they should be analyzed along the way we treat "Tully walks". Since proper names can appear in predicative position we could go as far as to dismiss the sign of identity altogether, some told us. I will try to discuss

- the advantages and/or disadvantages of this approach and investigate whether Frege's view that the 'is' of identity must be distinguished from the 'is' of predication (copula) can be reconciled with the fact that names can appear in predicative position."
4. Dancy, R. M. 2006. "Hintikka, Aristotle, and Existence." In *The Philosophy of Jaakko Hintikka*, edited by Auxier, Randall E. and Hahn, Lewis Edwin, 311-328. La Salle: Open Court.
  5. Dejnozka, Jan. 1996. *The Ontology of the Analytic Tradition and its Origins. Realism and Identity in Frege, Russell, Wittgenstein, and Quine*. Lanham: Littlefield Adams Books.  
Paperback edition reprinted with corrections, 2002; reprinted with further corrections, 2003.
  6. Floyd, Juliet. 2006. "On the Use and Abuse of Logic in Philosophy: Kant, Frege and Hintikka on the Verb "To Be"." In *The Philosophy of Jaakko Hintikka*, edited by Auxier, Randall E. and Hahn, Lewis Edwin, 137-187. La Salle: Open Court.
  7. Haaparanta, Leila. 1985. *Frege's Doctrine of Being*. Helsinki: Acta Philosophica Fennica.  
Contents: Preface 3; A note on the textual references and the bibliography 5; I. Introduction 9; II. The interpretational framework 27; III. The origin of the thesis concerning the ambiguity of the word 'Is' 47; IV. Identity and predication 59; V. Existence 128; VI. Concluding remarks 159; Bibliography 162; Index of names 179.  
"The purpose of this work is to clarify the philosophical basis of Frege's doctrine concerning the word 'is'. Frege's doctrine of being is partly considered in its historical setting, formed mainly by Leibniz and Kant. Since the ambiguity thesis is one of the cornerstones of Frege's new logic, this work will, to some extent, help to indicate how Frege arrived at his great logical innovation. I shall proceed by first presenting a short survey of the different approaches to Frege's philosophy and thereafter outlining Frege's historical setting (Chapter II.1.). Then I shall present the main features of Frege's view of logic (Chapter II.2.). After that, I shall say a few words of the history of the word 'being' in philosophical and philological literature and study Frege's texts concerning the ambiguity doctrine (Chapter III). In Chapter IV there is a discussion on Frege's distinction between identity and predication with reference to Leibniz's and Kant's thought and some remarks are also made on class-inclusion. In Chapter V there are comments on Frege's doctrine of existence with reference to Kant's ideas. Finally, I shall make some concluding remarks on Frege in a wider historical context (Chapter VI). Chapter II will give the interpretational framework for considering Frege's doctrine of being. Chapters IV and V are meant to show how this general hypothesis works in the textual material and thereby to yield a detailed interpretation of Frege's view." (pp. 16-17)
  8. ———. 1986. "Frege on Existence." In *Frege Synthesized: Essays on the Philosophical and Foundational Work of Gottlob Frege*, edited by Haaparanta, Leila and Hintikka, Jaakko, 155-174. Dordrecht: Reidel.  
From the General Introduction by Leila Haaparanta and Jaakko Hintikka: "In her article 'Frege on Existence' Leila Haaparanta emphasizes that Frege's greatest insight was the idea of first-order language, which, to a large extent, motivated the rest of his innovations. Haaparanta focuses her attention on Frege's concept of existence, which receives special attention in Frege's thought in connection with the thesis concerning the ambiguity of such words for being as the English 'is'. The ambiguity thesis was an important part of the Fregean paradigm of first-order logic. Haaparanta argues that Frege does not only assume the word 'is' to be ambiguous but that he considers 'exists', or the 'is' of existence, to be an equivocal word. She suggests that the equivocality view has a metaphysical and epistemological background in Frege's thought. Her paper thus pushes a great deal further the suggestions of Jaakko Hintikka mentioned earlier in this Introduction." (p. 6)

9. ———. 1986. "On Frege's Concept of Being." In *The Logic of Being. Historical Studies*, edited by Hintikka, Jaakko and Knuuttila, Simo, 269-289. Dordrecht: Reidel.
10. ———. 2012. "On "Being" and Being: Frege between Carnap and Heidegger." In *Categories of Being: Essays on Metaphysics and Logic*, edited by Haaparanta, Leila and Koskinen, Heikki J., 319-337. New York: Oxford University Press.
11. ———. 2020. "Frege on "Es gibt," Being in a Realm and (Meta)Ontology." In *Metametaphysics and the Sciences: Historical and Philosophical Perspectives*, edited by Kjosavik, Frode and Serck-Hanssen, Camilla, 81-98. New York: Routledge.
12. Hintikka, Jaakko. 1979. "Frege's Hidden Semantics." *Revue Internationale de Philosophie* no. 33:716-722.
13. ———. 1979. "'Is", Semantical Games, and Semantical Relativity." *Journal of Philosophical Logic* no. 8:433-468.  
Reprinted in J. Hintikka, J. Kulas, *The Game of Language: Studies in Game-Theoretical Semantics and Its Applications*, Dordrecht: Reidel 1983, pp. 161-200 and in J. Hintikka, *Selected Papers Vol. 4: Paradigms of Language Theory and Other Essays*, Dordrecht: Kluwer 1998, pp. 71-106.
14. ———. 1981. "The Unambiguity of Aristotelian Being." *The Society for Ancient Greek Philosophy Newsletter* no. 238:1-26.
15. ———. 1981. "Kant on Existence, Predication, and the Ontological Argument." *Dialectica* no. 35:127-146.  
Reprinted in S. Knuuttila, J. Hintikka (eds.), *The Logic of Being: Historical Studies*, Dordrecht: Reidel 1986, pp. 249-268.
16. ———. 1983. "Semantical Games, the Alleged Ambiguity of 'is', and Aristotelian Categories." *Synthese* no. 54:443-467.  
Revised reprint in J. Hintikka, J. Kulas, *The Game of Language: Studies in Game-Theoretical Semantics and Its Applications*, Dordrecht: Reidel 1983, pp. 201-229 and in J. Hintikka, *Selected Papers Vol. 6: Analyses of Aristotle*, Dordrecht: Kluwer 2004, pp. 23-43.
17. ———. 1986. "The Varieties of Being in Aristotle." In *The Logic of Being: Historical Studies*, edited by Knuuttila, Simo and Hintikka, Jaakko, 81-114. Dordrecht: Reidel.
18. ———. 1995. "Meinong in a Long Perspective." *Grazer Philosophische Studien* no. 50:29-45.  
"Meinong's thought is considered in relation to several major conceptual problems, including the Frege-Russell thesis that words like *is* are multiply ambiguous and Aristotle's treatment of existence. This treatment leads to a problem of how to interpret quantifiers. The three main possible interpretations are: (i) quantifiers as ranging over actual individuals (or individuals existing in some one world); (ii) quantifiers as ranging over a set of possible individuals; (iii) quantifiers merely as a way of specifying the interdependencies of the concepts (forms) specified by syllogistic terms. The subsequent history of philosophers' and logicians' treatments of existence is characterized by a tension between (i)-(iii). Meinong's position is in the main (iii) whereas Russell in his *On Denoting* defended (i). The contrast between (i) and (iii) has a counterpart in nineteenth-century discussions about foundations of mathematics."
19. ———. 1999. "On Aristotle's Notion of Existence." *The Review of Metaphysics* no. 52:779-805.  
Reprinted in: J. Hintikka, *Analyses of Aristotle*, Dordrecht: Kluwer 2004, pp. 1-22.
20. ———. 2004. "On the Different Identities of Identity: A Historical and Critical Essay." In *Philosophical Problems Today: Volume 2: Language, Meaning, Interpretation*, edited by Fløistad, Guttorm, 117-139. Dordrecht: Kluwer.

21. ———. 2006. "Ta Meta Ta Metaphysika: The Argumentative Structure of Aristotle's Metaphysics." In *Mind and Modality: Studies in the History of Philosophy in Honour of Simo Knuuttila*, edited by Hirvonen, Vesa, Holopainn, Toivo J. and Tuominen, Mira, 41-53. Leiden: Brill.
22. ———. 2006. "Reply to R. M. Dancy." In *The Philosophy of Jaakko Hintikka*, edited by Auxier, Randall E. and Hahn, Lewis Edwin, 329-333. La Salle: Open Court.
23. ———. 2007. "It All Depends on What 'Is' Is: A Brief History (and Theory) of Being." In *On Language: Analytic, Continental and Historical Contributions*, edited by Burmeister, Jon and Sentesy, Mark, 51-62. Newcastle: Cambridge Scholars Publishing.
24. Hintikka, Jaakko, and Vilkko, Risto. 2006. "Existence and Predication from Aristotle to Frege." *Philosophy and Phenomenological Research* no. 73:359-377. "One of the characteristic features of contemporary logic is that it incorporates the Frege-Russell thesis according to which verbs for being are multiply ambiguous. This thesis was not accepted before the nineteenth century. In Aristotle existence could not serve alone as a predicate term. However, it could be a part of the force of the predicate term, depending on the context. For Kant existence could not even be a part of the force of the predicate term. Hence, after Kant, existence was left homeless. It found a home in the algebra of logic in which the operators corresponding to universal and particular judgments were treated as duals, and universal judgments were taken to be relative to some universe of discourse. Because of the duality, existential quantifier expressions came to express existence. The orphaned notion of existence thus found a new home in the existential quantifier."
25. Kolak, Daniel, and Symons, John. 2004. "The Results are in: The Scope and Import of Hintikka's Philosophy." In *Quantifiers, Questions and Quantum Physics: Essays on the Philosophy of Jaakko Hintikka*, edited by Kolak, Daniel and Symons, John, 209-271. Dordrecht: Springer.
26. Mill, James. 1829. *Analysis of the Phenomena of the Human Mind*. London: Baldwin and Cradock. Two volumes. Reprinted Hildesheim: Georg Olms, 1982 and Bristol, Thoemmes, 2001. See Vol. I, Chapter IV. *Naming* § 4 *Predication*.
27. Mion, Giovanni. 2019. "Hintikka on the "Kant-Frege View": A Critical Assessment." *Logica Universalis* no. 13:171-178. Abstract: "In "Kant on Existence, Predication, and the Ontological Argument" (1981), Hintikka argues that the so-called "Kant-Frege view" (i.e., the claim that Kant is a forerunner of Frege's treatment of existence) is wrong, for its supporters erroneously assume that for Kant 'is' is ambiguous. In this paper, I will first critically evaluate Hintikka's arguments against the Kant-Frege view. Then, I will attempt to prove that Kant's claim that existence is not a real predicate and Frege's claim that existence is a quantifier are in fact logically interdependent. Finally, I will use the Kant-Frege view in order to reconcile the various claims that Kant makes about existence."
28. Santayana, George. 1915. "Some Meanings of the Word *Is* [First version]." *Journal of Philosophy, Psychology and Scientific Method* no. 12:66-68.
29. ———. 1924. "Some Meanings of the Word *Is* [Second version]." *Journal of Philosophy* no. 21:365-377. Expanded version of the article published in 1915 (reprinted in Justus Buchler and Benjamin Schwartz, eds., *Obiter Scripta. Lectures, Essays and Reviews by George Santayana*, New York: Scribner's Sons, 1936, pp. 189-212); reprinted also in: Martin A. Coleman (ed.), *The Essential Santayana: Selected Writings*, Bloomington: Indiana University Press, 2009, pp. 138-148.

"This selection first appeared in *The Journal of Philosophy* (21 [1924]: 365-77), A shorter version with the same title was published in 1915 (*The Journal of Philosophy, Psychology, and Scientific Methods*, 12 (1915 1:66-68). As early as 1914 Santayana had intended the article as the first chapter of his *Realms of Being*. The 1924 article was republished in *Obiter Scripta*, and in a letter to the editors of that volume Santayana wrote: "I am also glad that you have rescued the 'Meanings of the Word "Is"'. On re-reading that article, I feel that it contains my whole philosophy in a very clear and succinct form; I was dissuaded by a friend from putting it into *The Realm of Essence*, and also by my own feeling that it covered too much ground to go into that volume. Here [in *Obiter Scripta*] it is in its place." (*The Letters of George Santayana*, Book Five, 1933-1936: *The Works of George Santayana*, Volume V, Book Five, Cambridge: The MIT Press, 2003, p. 158). The seven meanings of the word "is" that Santayana distinguished demonstrate different realms of being that make up his ontological system." (M. Coleman, p. 138 of the 2009 reprint)

30. Vilikko, Risto. 2006. "Existence, Identity, and the Algebra of Logic." In *Foundations of the Formal Sciences. The History of the Concept of the Formal Sciences*, edited by Löwe, Benedikt, Peckhaus, Volker and Räscher, Thomas, 255-265. London: College Publications.

"One of the most interesting open problems in the history of philosophy concerns the genesis of contemporary logic epitomized by the Frege-Russell theory of quantifiers. One of the cornerstones of this theory is the distinction between the allegedly different meanings of ordinary-language verbs for being. According to the received view, such verbs are multiply ambiguous between the is of predication, the is of existence, the is of identity, and the is of subsumption. This assumption (a.k.a. Frege-Russell ambiguity thesis) is built into the notations that have been used in logic since Frege and Russell, in that the allegedly different meanings are expressed in the usual logical notations differently. It turns out that no philosopher before the 19th century assumed the Frege-Russell thesis.

It can be shown that Aristotle considered the Frege-Russell distinction but rejected it. He treated existence as a part of the force of a predicate term. Some people have ascribed it to Kant. However, it is false to say that Kant created, or maintained, the Frege-Russell thesis. His discussion of existence is often said to include a criticism of the idea that existence is a predicate. Strictly speaking it includes a stronger criticism, viz. the rejection of the idea that existence could be as much as a part of the force of a predicate term. Hence, after Kant the notion of existence became an orphan, as far as the logical representation of different propositions in syllogistic logic was concerned.

The next main development in logical theory was the algebra of logic that originated in England around the mid-19th century. The following two ideas came to the forefront: (1) the operators corresponding to our universal quantifier and existential quantifier were treated as duals; (2) universal quantifier expressions were taken to be relative to some universe of discourse, and was inevitably taken as the non-existence of exceptions in that domain. Because of the duality, existential quantifier expressions came to express existence. The orphaned notion of existence thus found a home, no longer in the predicative is but in the existential quantifier. This helps to explain the independent discovery of quantifiers by Frege and by Peirce.

This paper concentrates on what happened to the notion of existence after Kant and before Frege. Particular attention is paid to the English developments around mid-19th century and to the work of George Boole and Augustus De Morgan in particular."

31. Wiggins, David. 1995. "The Kant–Frege–Russell View of Existence: Toward the Rehabilitation of the Second-Level View." In *Modality, Morality and Belief. Essays in Honor of Ruth Barcan Marcus*, edited by Sinnott-Armstrong, Walter, Raffman, Diana and Asher, Nicholas, 93-115. Cambridge: Cambridge University Press.

"At the acme of the influence in philosophical logic of Russell and Frege, few can have predicted that, after their deaths, the idea that they both sought to discredit of existence as a first-level concept (or property of individuals) would so soon be restored.

(...)

This was that the existence of an item (or items)  $x$  of level  $n$  is always a property of  $x$ 's concept, which is a level  $(n + 1)$  concept, not a level  $(n + 2)$  property of  $x$  itself. But the situation nobody predicted would appear to be the actual one. As something believed and positively advocated in its Fregean purity, the Frege-Russell view has virtually disappeared from sight.

Such an outcome might prompt an adherent of the Frege-Russell view to try to refute the new first level doctrine. But, in the absence of any attempt to refurbish the Frege- Russell account or resolve its difficulties, that would be absurdly premature. It would be still more premature to try to explore the relation of the restated Frege-Russell account to the substitutional interpretations of quantifiers whose possibility our admired honorand has so long and persistently defended against cavil and misrepresentation. The most I shall attempt here is to make the Frege-Russell view visible again. (pp. 93-94)

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