

## Some readings about Sortal Logic.

This topic has two different strands. One is the “philosophy of language and metaphysics” direction wherein the whole notion of a sortal is justified and a bunch of claims concerning sortals are made. The other concerns the topic of a “logic for sortals” and the “formal semantics of sortals”. Although one can understand the first without knowing or caring about the second, it is difficult to do it the other way around, since a condition on the adequacy of a sortal logic is that it give a formal account of the intuitions generated in the first strand.

### Sortals in Philosophy of Language and Metaphysics:

There are a huge number of readings here, and I will mention only a few that I know of. This hit its heyday in the 1960s and 1970s, but as you will see in the literature below there has been a recent upsurge of interest.

All studies in the topic should start with Peter Strawson’s *Individuals* (1959), especially Part II. Everyone also should read at least parts of Peter Geach’s *Reference and Generality* (1962). In a later collection of Geach’s papers there are a lot of articles that are related, especially those on “relative identity” ...a topic that many people think is inextricably bound to sortals.

Mei, Tsu-Lin (1961) “Subject and Predicate, A Grammatical Preliminary” *Phil. Rev.* **70**: 153-175.

Wiggins, David (2001) *Sameness and Substance Renewed* (revised version of earlier *Sameness and Substance* (1980), which was a much expanded version of *Sameness and Substance* (1967).)

Noonan, H.W. (1978) “On the Notion of a Sortal Concept” *Philosophical Quarterly* **28**: 58-64.

E.J. Lowe has written a lot about sortals. There is his 1989 book *Kinds of Being: A Study of Individuation, Identity and the Logic of Sortal Terms*, and his 1998 book *The Possibility of Metaphysics: Substance, Identity, and Time* (Oxford)

Ayers, Michael <I can’t find this article or book...sometime in 80s?)

Gupta, Anil (1980) *The Logic of Common Nouns* (this is also a book about the logic of sortals)

Lappin, Shalom (1981) *Sorts, Ontology, and Metaphor: The Semantics of Sortal Structure*

Xu, Fei (1997) “From Lot’s Wife to a Pillar of Salt: Evidence that ‘Physical Object’ is a Sortal Concept” *Mind and Language* **12**: 365-392.

Ayers, Michael (1997) “Is ‘Physical Object’ a Sortal Concept? A Reply to Xu” *Mind and Language* **12**: 393-405.

Wiggins, David (1997) “Sortal Concepts: A Reply to Xu” *Mind and Language* **12**: 413-421.

Burke, Michael (1994) “Preserving the Principle of One Object to a Place: A Novel Account of the Relations among Objects, Sorts, Sortals, and Persistence Conditions” *Philosophy and Phenomenological Research* **54**: 591-624.

### **Sortals in Linguistic Semantics and Logic (sortal logic):**

(In addition to the stuff below, there is also a bunch of things in the literature that are on “relative identity”...although most of this stuff is not about the *logic* of relative identity, but about metaphysical issues concerning identity and about “being constituted of”).

Hailpinen, T. (1957) “Restricted Quantification” *Jour. Symbolic Logic*

Stevenson, Leslie (1975) “A Formal Theory of Sortal Quantification” *Notre Dame Journal of Formal Logic* **16**: 185-207.

Stevenson, Leslie (1977) “Extensional and Intensional Logic for Criteria of Identity” *Logique et Analyse* **20**: 268-285.

Thomason, R. (1972) “A Semantic Theory of Sortal Incorrectness” *Journal of Philosophical Logic* **1**: 209-258.

Martin, R. L. (1974) “Sortal Ranges for Complex Predicates” *Journal of Philosophical Logic* **3**: 159-167.

Cocchiarella, Nino (1977) “Sortals, Natural Kinds and Re-Identification” *Logique et Analyse* **20**: 439-474.

Gupta, A. (1980) *The Logic of Common Nouns: An Investigation of Quantified Modal Logic*. Yale Univ. Press.

Krifka, Manfred (1990) “Four Thousand Ships Passed Through the Lock” *Linguistics and Philosophy* **13**: 487-520.

Keenan, Edward (1993) “Natural Language, Sortal Reducibility and Generalized Quantifiers” *Journal of Symbolic Logic* **58**: 314-325.

(Also look in Ed Keenan (ed) *Formal Semantics of Natural Language*, 1975, Cambridge UP, to see if there are relevant articles in there)

Löbner, Sebastian (1985) “Definites” *Journal of Semantics* **4**: 279-326.

Freund, Max (2000) “A Complete and Consistent Formal System for Sortals” *Studia Logica* **65**: 367-381.

### **Some stuff on Relative Identity:**

Fred Feldman, “Geach and Relative Identity,” *Review of Metaphysics* **22** (1969): 547–55, and “A Rejoinder,” *Review of Metaphysics* **22** (1969): 560–1.

Michael Dummett, Frege, ch. 16; *The Interpretation of Frege’s Philosophy* (Cambridge, MA: Harvard University Press, 1981), ch. 11; and “Does Quantification Involve Identity?” in *Peter Geach: Philosophical Encounters*, ed. Harry Lewis (Dordrecht: Kluwer, 1991).

Nicholas Griffin, *Relative Identity*, ch. 8.

Richard Routley and Nicholas Griffin (1979) “Towards a Logic of Relative Identity” *Logique et Analyse* **22**: 65-83.

Peter Geach (1977) *Relative Identity* Clarendon Press.

Jack Nelson, "Relative Identity," *Noûs* **4** (1970): 241–60.

Douglas Odegard, "Identity Through Time," *American Philosophical Quarterly* **9** (1972): 29–38.

John Perry, "The Same F," *Philosophical Review* **79** (1972): 181–200.

W. V. O. Quine, review of *Reference and Generality*, by Peter Geach, *Philosophical Review* **73** (1964): 100–4.

For additional, general criticisms of the doctrine of relative identity, see John Hawthorne, "Identity," in *The Oxford Handbook for Metaphysics*, ed. Michael Loux and Dean Zimmerman (Oxford: Oxford UP, 2003).