ontology through *Der Gedanke* (XVIII 93), in which he acknowledges the existence of ideal objects which are not "events" but "beings" (pp. 261–263).

Concerning the author's interpretation of Frege's "semantical turning point," the reviewer would remark that no substantiation is given for the identification of senses with concepts. No reference is made either to Frege's statements contradictory to this thesis (see 499, p. 198: "concept is denotation (*Bedeutung*) of a predicate"; see also *ibid.*, p. 193n, and the 1906 manuscript quoted by Dummett in *The philosophical review,* vol. 65 (1956), pp. 229–230) or to discussions on this point (for example, the one between Marshall and Dummett in the same journal (vol. 62 (1953), pp. 374–390; vol. 64 (1955), pp. 96–107, 342–361; vol. 65 (1956), pp. 229–230, 342–361)). Moreover, the reviewer cannot see what place is left, in the author's view, for senses of proper names (a notion widely acknowledged by Frege).

Furthermore, if the identification of *sense* with *concept* is not secured, then both of the author's interpretations are open to question—that of the *Begriffsschrift* as dealing with senses, and that of Frege's semantical innovation as being the addition of denotations and objects to senses. Nevertheless, the reviewer acknowledges that considering concepts to be senses (without denying that names, too, have a sense) is theoretically right, although it is a dubious interpretation of Frege (see Church's XXII 286).

Although the passages concerning formal logic are admittedly a secondary topic, they could be more clearly and carefully stated, and there are some shortcomings. For example, it is said that "the universal affirmative judgment, which was the premiss of the syllogisms of the first figure, stays ... in the last place in Frege's axiomatic theory, because the universal quantifier ... has no primitive character but is deducible from the primitive scheme of implication" (p. 126), whereas the fourth modus of the first figure (Ferio) has no such premiss, and the universal quantifier does not seem to be deducible from the scheme here mentioned. Moreover, some historical views seem to be oversimplified: All logics prior to that of the *Begriffsschrift* are considered extensional (p. 77), and Kant's narrow conception of analyticity is said to be "classical" (p. 179) and "traditional" (p. 181).

The author is not careful to follow Frege's own advice to distinguish "the sign from the thing signified" (see pages 206, 213, 244–245, 257). For example, Frege's statement on page 18 of 497, "Gegenstand *ist alles ... dessen Ausdruck* keine leere Stelle mit sich führt" is wrongly translated as "object *is ... an expression ...*" ("oggetto *è ... una espressione ...*") instead of "object *is anything ... so that an expression for it ...*" (p. 206, italics added).

Notwithstanding these defects, the work is an interesting piece of research in the field of Frege's ontology. FRANCESCA RIVETTI BARBÒ

DAVID WIGGINS. *Identity and spatio-temporal continuity.* Basil Blackwell, Oxford 1967, viii + 83 pp.

"This is the same river I bathed in Saturday, but this is different water than what I bathed in Saturday." Does this mean that there are things (a thing?) identical "under one description but not under another"? So some philosophers have claimed, and one at least has drawn much more dramatic consequences. The resolution of the problems and confusions surrounding such examples lies in an analysis of the role of sortal terms, such as "river," in identifying objects. The first two parts of Professor Wiggins's book are intended as a contribution to this task. In the first part, Wiggins gives an adequate if not elegant refutation of Geach's views as expressed in *Reference and generality* (Cornell University Press, Ithaca, N.Y., 1962). In the second part, Wiggins presents his own explanation.

Geach holds that sortals, in statements like the one at the beginning of this review, tell us which relation of identity is being asserted to hold between the relata. On Geach's view, such "relative identities" as "... is the same cow as ..." and "... is the same horse as ..." cannot plausibly be regarded as restrictions on some more basic relation of identity, as Frege seems to have held. Geach has a belief which, were it correct, could be a good reason for rejecting the Fregean analysis of relative identities, namely that there are true statements, of which the above is an example, of the form "x is the same *F* as y, but x is a different *G* than y," where "*F*" and "*G*" are sortals, and identity, not merely some sort of resemblance or similarity, is being in turn asserted and denied of x and y.

Wiggins first points out that this analysis conflicts with Leibniz's Law. This is obvious once Geach's view is spelled out as above; the substitution apparently licensed by the first conjunct of a statement of the mentioned form results, when made in the second conjunct, in something of the form "x is a different G than x," which seems unacceptable.

Having shown the dire consequences of Geach's view, Wiggins destroys the most obvious motivation for it. He considers a number of examples that might be thought to be properly described by statements of the above-mentioned form; none survives close scrutiny. In the example with which the review begins, the second conjunct is not plausibly regarded as a denial of identity, but only of a certain kind of resemblance.

In the second part of his book, Wiggins attempts, in his words, to give the "rationale of the 'same what' question." He first claims to have shown (pp. 27, 28) that it is a "tautology" that if a is identical with b, then there is some sortal predicate "F" such that a is the same F as b. His argument (p. 27) seems to depend on a not very subtle equivocation on "what a is"; he reasons that if a exists then something is a, and so there is an answer to the question "what is a?" But since "a sortal predicate is by definition no more than the sort of predicate which answers this question, there must automatically exist a sortal predicate f which a satisfies. . . ." Validity aside, the argument illuminates nothing. The subsequent discussion of the relation between phase sortals (e.g. "young man," "puppy") and ordinary sortals is more interesting. But the section ends with an attempt to explain "the rationale of the 'same what' question" in terms of a truth-condition Wiggins advances for the identity of material objects. Interesting as some of the things said in connection with this attempt are, it illustrates the reasons for the unsatisfactoriness of Wiggins's attempt to explain sortals: (1) The problem of the role of sortal terms is not a problem for just material object sortals. Such general terms as "color," "shape," "number," etc. also combine with "same" to express relative identities of the kind under investigation. Thus an explanation of the role of these terms cannot be tied to the requirements of a special category. (2) Sortals play their role in many kinds of statements, not just identity statements; indeed, we begin to get clear about their role when we see that (say) "river" plays the same role in "This river is the same as the river I bathed in Saturday" and "This is the same river I bathed in Saturday." The role of the sortal is not to identify the kind of identity asserted, but to help identify the objects referred to; they play this role not just in identity statements, but in all statements.

An analysis of the role of sortals is suggested by Frege's remarks on identity in *Die Grundlagen der Arithmetik* (495) and by Quine in *Identity, ostension, and hypostasis* (XIX 134). The sortal helps identify the referents of a statement by giving the relation that holds between occurrences (parts, instances, stages, phases, etc.) of the appropriate sort when they are occurrences of a single object of the indicated kind; specifying this relation, and designating an occurrence, identifies the referent. When an occurrence is identified, but no sortal provided, indefiniteness occurs because an occurrence can be an occurrence of different objects of different kinds. Wiggins's work would be helpful and interesting to someone constructing an account of sortals and identity based on these ideas, but it does not represent a first full step towards that goal.

There are many interesting comments in the book on the philosophy of mind and other topics outside the scope of this review.   JOHN PERRY

G. B. KEENE. *The relational syllogism. A systematic approach to relational logic.* University of Exeter, Exeter 1969, iv + 35 pp.

This slim monograph purports to do for the teaching of general quantification theory what the author claims that "Aristotle's syllogistic" has done for the teaching of traditional logic, viz. to provide a concise system (the system RS of relational syllogisms) which illustrates all the essential concepts and techniques of proofs of validity and non-validity.

One obtains RS by importing dyadic predicate letters into traditional syllogistic (hereafter TS). In sections 1–5, RS is generated and developed in deliberate imitation of TS. Corresponding to the four categorical statement forms of TS are these sixteen *general relational* (GR) statement forms: A, 'Every F bears R to every G'; E, 'No F bears R to every G'; I, 'Some F bears R to every G'; O, 'Some F does not bear R to every G'; A_r, 'Every F bears R to some G or