

## PREDICATION: OLD AND NEW

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Recently I. Angelelli has rightly pointed out that the time has come to look for the discrepancies rather than coincidences between mediaeval and modern logics.<sup>1</sup> And large, important discrepancies there certainly are! Indeed, a key difference involves the issue Angelelli addresses—predication. Unfortunately his account of the traditional theory does it little justice (and thus it is not surprising that he concludes on the side of Frege).

There is of course one huge, all-pervasive difference between prefregean and postfregean logics. Each is grounded on a radically different theory of logical syntax. The traditionalists (Aristotle, Aquinas, Leibniz) took all asserted sentences to consist, logically, of a subject and a predicate—no more, no less. Moreover, a subject is a syntactical complex, consisting of a quantifier and a term. A predicate is likewise complex, consisting of a qualifier and a term. Notice that on this view every such sentence is syntactically complex—there are no “atomic” sentences. In contrast to this Frege abandoned the subject/predicate analysis, replacing it with the mathematician’s function/argument analysis.<sup>2</sup> Since sentences themselves can sometimes be the arguments of certain functions there must ultimately be some sentences which are atomic, syntactically simple, consisting of just a single function plus one or more syntactically simple argu-

<sup>1</sup> I. Angelelli, “Traditional vs. Modern Logic: Predication Theory”, *Critica*, 7 (1980), pp. 103-106.

<sup>2</sup> See *Translations from the Philosophical Writings of Gottlob Frege*, ed. P. Geach and M. Black, Oxford, 1970, p. 2.

ments.<sup>3</sup> There are other important differences between the old and new theories of logical syntax which I shall only mention. Traditional theories were meant to reflect the syntax of natural language. Frege and his followers have, by contrast, incessantly denegated the logical powers of natural language and have instead constructed a theory of logical syntax for a nonnatural language.<sup>4</sup> The modern logician, unlike the traditional one, makes much of the semantic singular/general distinction in building his syntactic theory. For he requires that the arguments of atomic sentences be singular terms.<sup>5</sup>

Angelelli credits Frege with being the first to reject the "awkward" traditional theory of predication. And, admittedly, if that theory is the one described then Frege does deserve that credit. But Angelelli has distorted the old theory in an important way. Traditionalists, as Angelelli shows, countenanced two alternative notions of predication. Consider

1) *Socrate est animal*

On one reading this predicates the term 'animal' of the object Socrates. On the other reading it predicates the property of being an animal of Socrates. As long as the subject is singular, as in our example, Angelelli sees no problem (as we saw, moderns feel most comfortable with singular subjects). His doubts come with sentences like

<sup>3</sup> For a deeper discussion of these differences see G. Englebretsen, "On Propositional Form", *Notre Dame Journal of Formal Logic*, 21 (1980), pp. 101-110; G. Englebretsen, "Aristotle and Quine on the 'Basic Combination'", *The New Scholasticism*, forthcoming; and F. Sommers, "Frege or Leibniz?" *Studies on Frege III*, ed. M. Schirn, Stuttgart, 1976, pp. 11-34.

<sup>4</sup> See, for example, G. Frege, "My Basic Logical Insights," *Posthumous Writings*, Chicago, 1979, p. 252; and B. Russell, "Reply to My Critics", *The Philosophy of Bertrand Russell*, ed. P. A. Schilpp, New York, 1944, 3rd edition 1951, pp. 693-694.

<sup>5</sup> See G. Englebretsen, "Aristotle and Quine on the 'Basic Combination'", *loc. cit.*; and F. Sommers, "On a Fregean Dogma", *Problems in the Philosophy of Mathematics*, ed. I. Lakatos, Amsterdam, 1976, pp. 47-62.

## 2) *Homo est animal*

Angelelli sees four possibilities here: (i) 'animal' is predicated of 'homo' (ii) 'animal' is predicated of the "property denoted by" 'homo', (iii) the "property denoted by" 'animal' is predicated of 'homo', and (iv) the "property denoted by" 'animal' is predicated of the "property denoted by" 'homo'. All four are said to be meaningless.

On the traditional theory the subject and the predicate of a sentence each contribute in a different way to its meaning. The subject is to be taken *materially*—the predicate *formally*.<sup>6</sup> The role of the subject is to refer. Reference is determined by the denotation of the subject term along with the logical quantity applied to that term.<sup>7</sup> The subject of 1) refers to Socrates.<sup>8</sup> The subject of 2) refers to (all) men. The predicate characterizes. Characterization is determined by the sense, or connotation, of the predicate term, along with its logical quality. The subject of 1) refers to Socrates, and the predicate ('est animal') characterizes him as being animal. The (logical) subject of 2) ('(omnis) homo') refers to all men, and the predicate ('est animal') characterizes them as being animal.

Above we put Angelelli's "property denoted by" in quotes. For it is there that his picture of the old theory becomes most distorted. While 'property', 'property of being  $\phi$ ', and 'property connoted by " $\phi$ "' all denote properties, ' $\phi$ ' denotes  $\phi$ s. There *are* two traditional senses of predication. In one we say that 'S is P' predicates 'P' of 'S', in another we say that the property (form) connoted by 'P' characterizes the object(s) (matter) referred to by 'S'. In

<sup>6</sup> See Aquinas, *Summa Theologicae*, Ia, q. 13, 12.

<sup>7</sup> For an extensive discussion of the denotation/reference distinction see G. Englebretsen, "Denotation and Reference", *Philosophical Studies* (Ire.), 27 (1980), pp. 229-236.

<sup>8</sup> The scholastics usually took singular sentences to be implicitly universal, but Leibniz took them to be simultaneously both universal and particular. See *Leibniz: Logical Papers*, ed. G.H.R. Parkinson, Oxford, 1966, p. 115; and G. Englebretsen, "Singular Terms and the Syllogistic", *The New Scholasticism*, 54 (1980), pp. 68-74.

other words, the alternatives are: (a) term predicated of term, or (b) property characterizing object(s). Such reserché possibilities as Angelelli sees (e.g. term predicated of property, property predicated of property, property predicated of term) are just not there. All in all, the old theory is a sane and sensible one. Yet Frege chose to abandon the notion of predication altogether. Could he have seen the old theory in the same distorted way as Angelelli has?