

A NEGLECTED RECENT TREND IN LOGIC

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In a recent article (¹), Prof. Rescher gave us an illuminating short synopsis of recent trends and developments in logic, together with a useful multiple classification ("map") of logical topics and a concise bibliography of philosophical logic. I am sure that this synopsis will prove of great value for all those who will plan changes in extant curricula in the teaching of logic at university level.

But just for this reason, it is mandatory to call attention to a curious oversight in Rescher's presentation, an oversight that leads him to a partially wrong evaluation of the situation followed by wrong "inescapable" conclusions as to future developments.

After having correctly pointed out that for more than a century the major developments of logic have had a doubly mathematical character, inasmuch as logic obtained an algebraic (and more recently, a numbertheoretical, "recursive") look while simultaneously serving as the foundational science for mathematics, he indicates that in recent years, logicians have gotten interested in a variety of topics of primarily philosophical interest. He envisages a rift developing between mathematical logic and philosophical logic, which he deplores, but regards as close to inevitable. On the other hand, he is greatly gratified by this development of philosophical logic and regards it as an assurance that the threat of logic cutting itself off from philosophy and setting itself up as an autonomous science in its own right has been successfully thwarted.

It is here, I believe, that Rescher goes astray. At no place, either in his synopsis or in his map, does Rescher show any awareness of the fact that logic might perhaps also have something to do with evaluation of the validity of argumentation in natural languages (and whatever other topics are connected with this one).

(¹) Nicholas RESCHER, Recent developments and trends in logic, *Logique et Analyse*, vol. 9, n^{os} 35-36 (December 1966), pp. 269-279.

His item B3a (logical analysis of "ordinary usage", falling into Logical Pragmatics which is part of Metalogic) may have something to do with what I have in mind, though it more likely refers to certain (Wittgensteinian?) philosophical views. I would have thought that the development of methods of evaluating arguments in natural languages should have been the prime topic of logic, of which all the others should have been regarded at most as secondary, and sometimes even "stray", developments. And though I would not want to insist on this extreme view too strongly, the total neglect shown by Rescher (and, let it be said in all fairness, by the large majority of both mathematical and philosophical logicians) is an indication of an interesting and, in my view, definitely pathological development among professional mathematicians and philosophers in this respect.

Rescher could, of course, counter by claiming that argumentation in natural languages is a topic for whose treatment linguists rather than logicians should be responsible and be held responsible. I don't want to be very dogmatic about this claim which turns on a problem of division of labor. The sad fact, doubtless well known to Rescher, is, however, that linguists have not shown any enthusiasm in taking upon themselves this burden. If possible, they have dealt with argumentation in natural languages even less than the logicians. (Rhetoricians — when this profession was still flourishing — did deal with it, but more from the angle of pragmatic persuasiveness than of logical — or analytic — validity⁽²⁾).

Since I have dealt with this *Streit der Fakultäten* in reverse elsewhere⁽³⁾, let me not go into any further historical details here. Somebody, some profession, will have to take up this vital and so deplorably neglected field of human activity, and I don't care whether those who do so belong to the Linguistics or Philosophy

⁽²⁾ Nor has the New Rhetoric of Prof. Ch. Perelman and his associates changed the picture decisively. It is still amazing that this school should not even be mentioned by Rescher in his "map" — the closest is B3b: rhetorical analysis (Aristotelian "topics") — and this in a paper published in a journal appearing under the auspices of the Belgian school of logic.

⁽³⁾ In a review of J. A. Fodor and J. J. Katz (eds.), *The Structure of Language*, 1964, to appear in *Language*, and in a Linguistic Forum Lecture, delivered before the Linguistic Summer Institute, Los Angeles, 1966, to be published shortly in the *Proceedings*.

departments, or even — in view of the enormous importance of the subject — to an independent Logic department, which will be exactly the kind of development which Rescher believes has been avoided in the last minute through the turn of logicians to topics of philosophical interest.

And this is not pure speculation. I would not be surprised to learn that the number of people presently engaged in the “logic of natural languages” (not the “logical analysis of ordinary usage”) is not much smaller than the number of people working in philosophical logic. True enough, they usually do not belong to well-established departments in institutions of higher education; more likely, they will be found in industrial research laboratories connected in some way or other with *computers*. These are people who worry about how computers could “process” data fed to them in natural languages, how they could answer questions posed to them in natural languages (or something close to them), how computers could determine whether a certain legal statute formulated in some natural (without quotes !) language is relevant to a lawsuit, with the case presented in the same natural language, etc.

It is close to tragic that these people can get no, or at most only very little help from either logicians or linguists (and they might not even have heard of rhetoricians). Many of them become amateur linguists and logicians themselves, sometimes doing commendable work, more often, though, wasting their time and that of the computers put at their disposal through the generosity, and vital interest, of their sponsors. “Logic of natural languages” is one of the most cherished and discussed topics at Computer Conferences, but the discussants will seldom learn something useful from attending Philosophy or Linguistics Congresses, not even from talks given there about “Logic and Language”.

The plight of these people is finally beginning to make an impression, perhaps because there is money behind them. But be the driving force whatever it is, I suggest that professional logicians and linguists pay heed to the demands. Validity of arguments in natural languages is far too important a topic to be left to amateurs. If the price to be paid for the professionalization of the treatment will be setting up Logic as an autonomous department, I would not mind. I do not think that this will particularly jeopard-

dize those people who would like to apply Logic to Mathematics or to Philosophy. Let us by all means have Natural (Language) Logicians and Computer (Language) Logicians in addition to Mathematical Logicians and Philosophical Logicians. Only thereby will a serious misdevelopment in the history of science be corrected.

It is only fair to say that it is not only computer people who have recently realized the need for a serious logic of natural languages. And it should not be difficult to supplement Rescher's concise bibliography with a few items in this direction. Let me mention just three:

- 1) J. LYONS, *Structural Semantics*, Oxford, Basil Blackwell, 1963.
- 2) N. CHOMSKY, *Aspects of the Theory of Syntax*, Cambridge: M.I.T. Press, 1965.
- 3) J.J. KATZ, *The Philosophy of Language*, New York: Harper & Row, 1966.

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