

Logic and its Pragmatic Aspects

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Summary

A pragmatist conception of logic rejects any kind of logical constructionism, based on the appeal to privileged ontological and epistemological items and to a perfect language supposedly provided by mathematical logic. Even in logic, “pluralism” must be the key-word if one does not want to be locked in the cage of conceptions that become rapidly outdated. Dealing with the dichotomy Absolutism/Relativism in logic, it may be observed that the enterprise of logic can be considered in several - and substantially different - perspectives, among which we find (1) the psychologistic, (2) the Platonistic, and (3) the instrumentalistic viewpoints. According to (1) logic is viewed as fundamentally descriptive, and its task is taken to be that of outlining a “theory of reasoning,” i.e. a systematic account of how we humans proceed when reasoning successfully. According to (3), instead, logic’s task is that of constructing rigorous systems codifying not only actual, but also *possible* instrumentalities for conducting valid inferences, and these would be available (should someone want to avail himself to them) for adoption as an organon of reasoning, but no empirical claims are made that anyone has (or will) avail himself of this opportunity. The logician devises a tool or instrument for correct reasoning, but does not concern himself about the uses of this instrument. Philosophy and logic cannot be linked so closely, and today the idea that the analytic style of philosophizing is just one style among many others, and not the only possible one, is gaining increasing acceptance.

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What differentiates a pragmatist approach to logic from the stance commonly shared within the analytic tradition is the refusal of the program of so-called “logical constructionism.” Such program is based on two basic commitments: (a) the appeal to “privileged” ontological and epistemological items like Platonic ideas, logical and physical atoms, physical objects, sense data, protocols, etc.,¹ to which everything else can be reduced. Secondly, it is commonly thought that the process of reduction of the secondary items to the basic ones can be carried out only by using the coherent and “perfect” language provided by contemporary formal logic. Starting from these premises mathematical logic becomes a sort of *condicio sine qua non* for carrying on any philosophical project that purports to be meaningful. Many misunderstandings occurred because of this tight requirement. For instance, the theses of prominent

¹ Note that Richard Rorty, too, criticizes this foundationalism in many of his works. See for instance his article in R. Rorty (1993).

representatives of other philosophical traditions have often been charged with being “non-sensical” because they saw no need to formulate their ideas in the rigorously formal language of standard logic, and only recently some thinkers trained in the analytic tradition have come to realize that those charges are indeed narrow-minded. Philosophy and logic cannot be linked that closely, and today the idea that the analytic style of philosophizing is just one style among many others, and not the only good one, is gaining increasing acceptance.

It might be objected to these remarks that Rudolf Carnap, one of the best representatives of logical reconstructionism, put forward in this regard his famous “principle of tolerance.” But my argument remains untouched because, after all, he maintained his commitment to distinguish the so-called pseudo-questions from the scientific ones, and the only way he envisioned to accomplish this task was by having recourse to the rigorous language of logic. The logic used by analytic philosophers is not as neutral and objective as they claim it to be. In particular, it is strictly dependent upon the doctrine of “logical atomism.”² Instead of neutrality, we find here the endorsement of a very strong principle (shared by many representatives of the linguistic turn), viz. that there is a correspondence between the ideal language of formal logic on the one side, and the structure of the world on the other.

The basic distinction between molecular propositions, whose truth or falsity depends uniquely on that of the atomic propositions that compose them, and the related concept of “truth function” are too well-known to be treated here. My only purpose is to remark that, more often than not, students are taught that the fundamentals of logic are absolutely neutral and objective, while, at a closer analysis, they are tied to a particular metaphysical view of reality (which, as such, has no title to be proclaimed neutral and objective). But this also sheds a new light on the Carnapian program of eliminating metaphysics through the logical analysis of language, which has been so successful for many decades (and still is in some sectors of analytic philosophy).

The preceding considerations are crucial for understanding a pragmatist conception of logic. Nicholas Rescher, for example, rejects the picture sketched above; he also detaches himself from the second phase of the program of logical constructionism, when Carnap (and others) began to realize that their eagerness to find perfect languages could not deal with a continuously *evolving* scientific practice. Still, the way out was thought to be a typically empiricist reconstruction of scientific knowledge starting from the so-called data of immediate experience.

Rescher’s position holds that, even in logic, *pluralism* must be the key-word if one does not want to be locked in the cage of conceptions that become rapidly outdated.

² See B. Russell (1959).

Dealing with the dichotomy Absolutism/Relativism,³ he observes that the enterprise of logic may be considered in several - and substantially different - perspectives, among which we find (1) the psychologistic, (2) the Platonistic, and (3) the instrumentalistic viewpoints. According to (1) logic is viewed as fundamentally descriptive, and its task is taken to be that of outlining a "theory of reasoning," i.e. a systematic account of how we humans proceed when reasoning successfully. According to (3), instead, logic's task is that of constructing rigorous systems codifying not only actual, but also *possible* instrumentalities for conducting valid inferences, and "these would be *available* (should someone want to avail himself to them) for adoption as an organon of reasoning, but no empirical claims are made that anyone has (or will) avail himself of this opportunity. The logician devises a tool or instrument for correct reasoning, but does not concern himself about the uses of this instrument. As for (2), the Platonistic position is well known even to beginners in philosophy. Here too logic is taken to be descriptive. What it describes, however, are not *human* endeavors, but rather an extra-human realm of abstract entities that are located in a different world and give rise to a different ontology, so that logical truths are in no way dependent upon our way of thinking or speaking of them.

It is interesting to note that, in dealing with the instrumentalistic point of view, Rescher traces a distinction between two poles that are both present within it:

At the *formalist* pole the construction of logical systems is regarded as a free exercise in creative ingenuity. We have to do with the unfettered construction of abstract procedures systematizing possible inferential practices. At the *pragmatist* pole, however, there is a strong injection of normative considerations, and great emphasis is placed on the convenient and efficient usability of some of these instruments as opposed to others. The case for pragmatism was clearly argued by C.I. Lewis [...] On this instrumentalistic approach, there is no danger of irrationalism, because one postulates at the meta-logical level a clear, non relative criterion of *validity* of inference principles in an acceptable logic [...] the choice between alternative systems is purely arbitrary for the formalist, but is for the pragmatist heavily hedged about by considerations of a functionalistic sort. With either mode of instrumentalism logic is conceived as something in the direction⁴ of the manufacture of intellectual tools.⁴

Rescher is clearly committed to the pragmatist field, although he does nothing to hide the interesting features of the other perspectives. In noting that psychologism and Platonism are both absolutistic and monistic, he recognizes the pluralist choice of the formalistic kind of instrumentalism but, on the other hand, he remarks that a more restrictive (or conservative, if you wish) way of looking at logical matters is needed. Our author, in fact, does not deem correct the basic thesis of the formalists, who take the choice among different logics to be purely arbitrary and conventional. To admit

³ N. Rescher (1969), pp. 220-235.

⁴ *Ibid.*, pp. 220-221.

pluralism in logic is indeed necessary, but the pragmatist's choice is restricted by many considerations that can be functional or purpose-relative (or both), and they obviously relate to effectiveness, economy and efficiency given the objectives that each logical system is supposed to reach.

It follows that, in logic, we are not allowed to rely on some kind of metaphysical superiority, but only upon the *instrumental* one. To the traditional question: "Which is *the* correct logic?" we should always answer: "Your query makes sense only if you specify what concrete objectives each logical system is supposed to achieve." The difference between Rescher's position and Quine's is thus clear, as the following remarks show well enough:

To turn to a popular extravaganza, what if someone were to reject the law of non-contradiction and so accept an occasional sentence and its negation both as true? An answer one hears is that this would vitiate all science. Any conjunction of the form '*p* and *not-p*' logically implies every sentence whatever; therefore acceptance of one sentence and its negation as true would commit us to accepting every sentence as true, and thus forfeiting all distinction between true and false. In answer to this answer it is suggested, we can so rig our new logic that it will isolate its contradictions and contain them. My view is that they think they are talking about negation, 'not'; but surely the notation ceased to be recognizable as negation when they took to regarding some conjunctions of the form '*p* and *not-p*' as true, and stopped regarding such sentences as implying all others. Here, evidently, is the deviant logician's predicament: when he tries to deny the doctrine he only changes the subject.⁵

These famous sentences denote a certain fixity of mind, and fully justify the view that Quine at a point somehow abandoned his pragmatist insights of the 1950's and turned into an orthodox analytic thinker. The history of Western thought, however, shows that philosophers have been far less unanimous on the theme of inconsistency than the Anglo-American analytic tradition, typified in this case by Bertrand Russell, takes them to be. Rescher mentions in this regard the "phobia of inconsistency"⁶ that most logically concerned thinkers belonging in the mainstream of the Western tradition have endorsed. But how should we judge, then, Heraclitus, Hegel, and Marx, to mention only three examples out of many? If one takes Russell's history of philosophy,⁷ a ready answer may be found in the parodistic interpretation that he provides of the Hegelian thought (and it is worth mentioning that Russell adopts the same strategy when dealing with Dewey's philosophical system). It should be stated that one need not agree with Bertrand Russell's assertions, because he so obviously gives, in most cases, a highly partisan and one-sided interpretation of what the philosophers he disliked really said.

⁵ W.V.O. Quine (1986), p. 81.

⁶ N. Rescher, R. Brandom (1979), p. 1.

⁷ B. Russell (1945).

Even the Aristotelian law of non-contradiction may in some cases be challenged and, after all, the modern historians of logic have shown that Aristotle himself was less categorical on this issue than he was for a long time supposed to be. So, Rescher argues, when we are told that the consequences of the rejection of the law of non-contradiction are too horrendous to contemplate, we should, instead, contemplate them anyhow, so that "it just is not an indispensable requisite of rationality to follow those - from Plato to Bradley - who consign whatever has an admixture of inconsistency to the realm of mere Appearance and rigidly exclude it from the sphere of Reality."⁸ The choice between more or less alternative logical systems, in the long run, cannot be based on merely theoretical (i.e. purely abstract) considerations, but on *practical* ones.

The real alternative at stake here is accordingly the following: logic as "doctrine" vs. logic as "instrument." Rescher does not deny that logic has, in this particular regard, a *dual* nature. From the doctrinal point of view it is clearly a body of theses or, even better, a systematic codification of those special propositions defined as "logical truths." At the methodological level, instead, it must be seen as an operational code for conducting sound reasoning. Having once again recourse to historical considerations, our author observes that "the distinction at issue carries back to the old dispute - carried on throughout late antiquity and the Middle Ages - as to whether logic is to be considered as a part of knowledge or as an *instrument* for its development. The best minds of the day insisted that the proper answer is simply that logic is *both* of these - at once a *theory* with a body of theses of its own and a *tool* for testing arguments to determine whether they are good or bad."⁹

A pragmatic conception of logic, however, leads us to view its instrumental-methodological character as primary with respect to the doctrinal features. All this follows quite naturally from what I said above, because for a pragmatically oriented thinker logic's task lies, first of all, in systematizing and rationalizing the *practice* of reasoning in all the contexts (theoretical included) where human beings usually draw inferences. Logical rules, in turn, are not supposed to have an abstract and formalistic character, because in that case they cannot be attuned to human practices (be they theoretical or instrumental). It is interesting to note that this approach is not distant from some insights contained in the works of the second Wittgenstein, where language is no longer taken to be an ideal entity endowed with some sort of "essence," but rather a set of social practices that are *used* in order to satisfy men's concrete needs. Our models of inference thus become the products of social practices, while the social dimension pertains to language in each of its many characteristics and features. In other words, our rules for drawing inferences are

⁸ N. Rescher, R. Brandom (1979), p. 2.

⁹ N. Rescher (1977), p. 250.

essentially practical - and not formal; they are rules that allow (or do not allow) us to perform a certain kind of action.

What distinguishes such a stance from that of those who follow in the footsteps of the later Wittgenstein, is the refusal to “dissolve” logic (and philosophy at large) into the social dimension. However, when Rescher claims that “logical theses must consequently be grounded in practice, for such *theses* effectively formulate the import of the inferential *rules* that characterize the practice of reasoning,”¹⁰ his proximity to the later Wittgenstein is hardly deniable. And we could even ask, as Hilary Putnam did,¹¹ “Was the second Wittgenstein a pragmatist?.” But such a question, interesting as it may be from an historical viewpoint, would lead away from the main aims of my work.

As concerns the problem of “alternative” systems of logic, we may also note that while the standard question: “*Which* is in fact correct?” makes sense at the doctrinal level, but it does not from an instrumental point of view. In the latter case, in fact, we must reformulate the question as follows: *Which* is optimally effective for the specific purposes one has in mind? And this happens because we gave priority to logic conceived of as inferential practice, viewing in turn logical theses as attempts aimed at translating the practical functioning of such a practice in articulated propositions. In other words:

The systematization of logic does not proceed *in vacuo*, free from implicit restraints inherent in the teleology of the subject. For in the case of the formalization or codification of logic, one must satisfy the demands imposed by the prior existence of a relatively well-defined presystematic practice with rules and requirements of its own. The present approach to logic sees this teleological and purposive nature of the enterprise as central. To be what a logic *is* is to do as a logic *does* [...] The existence of a basic practice is crucial, for its nature exercises a significant determinative influence throughout the entire process of systematization.¹²

It should be clearly understood from what I said thus far that, for Rescher, relativism in logic (and in all the other sectors of philosophical inquiry as well) is never absolute. Carnap’s “principle of tolerance,” although valid to a certain extent, is mitigated in his system by the specific constraints that the considerations of purposive efficiency and effectiveness put upon it. Instrumentalism, for sure, does endorse a relativistic position as long as the justificatory rationale of logic is at work. On the other hand, however, we can expect “a relatively definite resolution of the underdeterminism of the theoretical situation by an instrumentalistic and functionally teleological narrowing of the range of alternative choices.”¹³

¹⁰ N. Rescher (1977), pp. 250-251.

¹¹ See H. Putnam (1995), chapter 2, pp. 27-56.

¹² N. Rescher (1977), p. 259.

¹³ *Ibid.*, p. 271.

If this is true, logic does not - and cannot - stand on its own feet, because the basic idea is that practical life is the ultimate arbiter of cognitive adequacy. But in my view there is even more to say in this respect, because Rescher, ever since the late 1960's, put at the center of his theoretical speculation a concept of language quite different from the analytic one. We know that, today, the development of the so-called cognitive sciences led to a radically new approach in the study of meaning. The anti-psychologistic mood which dominated the analytic tradition from Frege on, and still endorsed by prominent authors like Michael Dummett, has been openly questioned. In particular, many contemporary philosophers began to ask *why* should the philosophy of language taken to be a sort of "*prima philosophia*" which is entitled to provide foundations for everything else. To question this assumption is in effect to deny any *a priori* foundation for philosophy itself.

So, the symbolic-linguistic perspective endorsed by analytic philosophy began to be considered as an historically determined perspective, rather than *the* correct way for dealing with meaning and the functioning of our reasoning. It was noted that the absolutistic emphasis put on the linguistic aspects of cognitive phenomena could not explain the behavior of such "intelligent systems" as, say, animals and infants, who have no or little recourse to linguistic communication. In other words, knowledge as such is not reducible to its logical-linguistic form. Once again, the abstract and aprioristic mode of dealing with these issues must be substituted by a more pragmatic approach, centering on the biological and cultural evolution of humankind. By adopting such a strategy, it is possible to understand that both language and the capacity to use linguistic-symbolic representations of the world evolved rather late. A pragmatic naturalism takes into due account not only a Darwinian type of evolution, but also its cultural-social side, can indeed overcome the strictures placed upon the theory of knowledge by the analytic stance prevailing until a few decades ago.

Apriorism must thus be abandoned, and "the rational selection of methods and procedures is a complex process that transpires not in a 'population' but in a *culture*. It pivots on the tendency of a community of rational agents to adopt and perpetuate, through example and teaching, practices and modes of operation that are relatively more effective than their available alternatives for the attainment of given ends."¹⁴ If we keep this in mind, the foundations of language and logic must be linked to domains quite different from those envisioned by the analytic tradition and, *pace* Dummett, Frege turns out to be one of the many classical authors whose contributions must be historicized.

¹⁴ N. Rescher (1989), pp. 40-41.

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