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Gabriella Crocco

► **To cite this version:**

Gabriella Crocco. Alan W. Richardson's Carnap's Construction of the World. *Erkenntnis*, 2000, 52, p. 127-131. halshs-00333869

HAL Id: halshs-00333869

<https://shs.hal.science/halshs-00333869>

Submitted on 24 Oct 2008

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"Alan W. Richardson's Carnap's Construction of the World"
Erkenntnis (Book Review)

BOOK REVIEW

Alan W. Richardson, *Camap's Construction of the World. The Logical Aufbau and the Emergence of Logical Empiricism*, Cambridge University Press, Cambridge, UK, 1998, 242 pp., GBP35.00 (cloth).

Even for those who consider the opposition of analytic vs. continental philosophy uninteresting or catastrophic for philosophy itself, works such as that of Alan Richardson on the history of analytic philosophy can only be welcomed. In this period of great methodological confusion (as Richardson says), such works recast the fundamental debate on the philosophical and epistemological perspectives on science, questioning the "received views" of the philosophical schools.

An analysis of the historical emergence of logical empiricism is, as the title reminds us, the principal aim of this book. Richardson starts with a methodological premise: it is impossible to understand and correctly evaluate logical empiricism without an attentive historical reconstruction of the epistemological problems to which logical empiricism was supposed to be a solution.

The historical reconstruction is guided, in Richardson's work, by a main thesis: the epistemological project, from which logical empiricism emerged, has to be disconnected from Russell's empiricist and reductionist project. Camap's logical empiricism has to be situated in the field of the Austro-German neo-Kantian epistemological tradition as the centrality of the notion of structure and the pre-eminence of the subjective/objective problematic in the Aufbau show.

The proof of this thesis is organized in three steps.

The first step consists of pointing out a fundamental tension in the Aufbau concerning the notion of structure. This last notion is at the same time used as the result of a purely definite and explicit description of the relations between the objects of science, and as the main way of objectifying the subjective through the characterization of the formal features of subjective experience (chaps. 2 and 3). The second step explains this tension in the light of the neo-Kantian epistemological debate and shows how the main themes of this debate were central to Camap's works before the Aufbau (chaps. 4 to 7).

The third step shows how logical empiricism is the way out of the Aufbau tension. Richardson explains that the epistemological project of the Aufbau was unstable in considering epistemology itself as a formal or empirical science. Camap's works after the Aufbau show how he turned more and more clearly towards the first option. The analysis of what was published by Camap after the Aufbau and before the semantical turn shows how the task of epistemology is indicated to be essentially logical.

According to Richardson, one philosopher is mainly responsible for erroneously connecting Camap's work to the British empiricist tradition, to which Russell belongs. This is Quine, the most famous 'disciple' of Camap. Quine is the main culprit for the false received view on logical empiricism that analytic philosophy has endorsed, the view according to which Camap was a dogmatic empiricist dressed in the clothes of a logician.

This point introduces us to the conclusion that Richardson forms from his own analysis. The main concern of the book is not merely a restoration of the "truth" about what Carnap said.

Actually, Richardson wants to leave in doubt the claim that the naturalization of

epistemology (consequence of the refusal of the analytic/synthetic distinction) is the only direction that analytic philosophy can take. Quine's arguments for the refusal of the analytic/synthetic distinction are not compelling, mainly because they come from a deep misunderstanding of Camap's own project. After having restored this project in a new light, Richardson's conclusion is that Camap's conception of the task of epistemology is more modern and more instructive for us than Quine's naturalized epistemology.

The premise and the conclusion of Richardson's argument are interesting and stimulating. The main thesis, the neo-Kantian thesis, guiding the whole argument, seems to us more problematic. There are certainly neo-Kantian, and indeed Cassirerian, influences on Camap's work and Richardson gives an attentive reconstruction of those themes in the pre-Aufbau period. What is less convincing is the place that Richardson gives to those themes within the very project of the Aufbau. There is something lacking in his rational reconstruction of Camap's work before 1939: the German logical tradition of Frege and Hilbert which Russell was evidently confronted with. The themes of this tradition appear and disappear here and there in Richardson's book, but the real weight of its epistemological consequences on the nature of logic and mathematics seems misplaced.

There are three themes for which this lack is most evident.

First, the Fregean discussion of the notion of intuition. Frege in *Die Grundlagen der Arithmetik* (1884) discussed the notion of Kantian intuition (see for example §12, 13, 87, 88, 89). Concerning geometry he thought that there was no doubt that geometrical objects were constructed in intuition. On the contrary, mathematical objects (that is numbers) are logical objects and they are given to us through concepts but without the help of intuition. So, even if wrong about arithmetic, Kant has recognised, according to Frege, the real nature of geometrical judgements they are synthetic a priori judgements. The young Camap was certainly influenced by he who he considered to be his most influential professor.

Second, the question of explicit and implicit definitions dealt with by Camap in *Eigentliche und uneigentliche Begriffe* (1927) and mentioned in §15 of the Aufbau. Richardson mentions the logicist tradition and the *Principia Mathematica* in a general way. There is a most direct influence of Frege on that question and Camap's arguments are in many respects identical to Fregean arguments against Hilbert's implicit definitions.

Third, the status of the notions of object and concept in the Aufbau, very briefly discussed by Richardson in note 4 of Chapter 1. Concerning logic (and then mathematics) Frege had substituted for the Kantian triplets concept/intuition/object, the categorial opposition object/function.

The opposition concept/object was a special case of the latter. Using Russell's work on definite descriptions and the consequent no-class theory, Camap rejects the opposition, reducing it to a simple functional one, but in so doing he goes further than Russell. For Russell there are fundamental objects, namely sense data. For Camap there are no objects at all, at least in the sense that the distinction object/concept is just a matter of pragmatic choice. That clearly means that when we talk of experience we are not talking of phenomenalist objects nor of physicalist ones, but rather of something which has no proper internal structure. Only language (and so logic which is nothing but language) can structure experience. The possibility of translation from a constitution having a phenomenalist base to a constitution having a physicalist one, is just the main proof of the unstructured nature of experience. How far that is from the neo-Kantian idea, that we determine objects as objects of

knowledge through the ideal (and not just symbolic) relations that each object has with all the others in a structure, seems evident. It is certainly tempting to consider the idea of the possibility of translation inspired by the neo-Kantian idea of invariance through changes of structure. Nevertheless what we get from translation in Carnap is an unstructured empirical content and what structures it are not categories of knowledge but only categories of language. '-

All this would be just a list of bumptious remarks, if these considerations had no influence on the interpretation of the key point in Richardson's argument: the interpretation of the tension, in the Aufbau, between the guiding methodology of the first section (the one dealing with the construction of qualities) and the guiding methodology of the second section (the one dealing with the constitution of physical objects).

Richardson characterizes the Aufbau project as the problem of determining how we achieve objective knowledge in science despite the subjective origin of empirical knowledge in private sensation. The crux of Carnap's answer to this question is, according to Richardson that all streams of experience have a common logical form. This is what Richardson calls the structural account of objectivity. He then indicates two distinct methodological attempts to produce this account. He calls the first the project of purely definite descriptions and the second the intersubjectivistic project.

In the first project a logical notion of structure is at work with the whole apparatus of the Principia Mathematica and with the official logicist engagement to give only explicit definitions. These are the methodological principles to which the first part of the constitution, that concerning qualities, conforms. In the second project a scientific notion of structure is at work. The methodological principles here are not to be taken from logic but from the mathematized sciences such as physics. The second part of the constitution, that concerning physical objects, conforms to these principles. Richardson is certainly right in pointing out that the second project is strictly related to Poincaré and Duhem's conceptions of the conventional nature of axioms and theorems of physics, as opposed to the qualitative nature of experience. He is certainly also right in stressing that Carnap was so unworried about mixing the two different projects (the project of purely definite descriptions and the intersubjectivistic project) into the same constitutional enterprise since he was hiding all problems behind the ambiguous notion of convention. In spite of Carnap's unconcern, the ambiguity is clear : in the first project conventions are meant to be void of content, just specifications of the meaning of the signs of the constitution, in the second, metrical conventions, which allow qualities to be fixed at specific space-temporal coordinates, add the necessary structure able to give out objects of physics from qualities. Adding this structure, metrical conventions cannot be qualified as void of content.

What is less convincing is the starting point of Richardson's argument. Is the central question of the Aufbau the structural account of objectivity? Is Carnap really concerned by the Kantian problem of determining the conditions of possibility of objective knowledge from a subjective starting point?

Another line of interpretation is open. The Aufbau was the attempt to form an anti-metaphysical account of the unity of science through formal arguments. What this project of constitution needed was simply just the pragmatic choice of the form of the point of entrance of experience in the constitution, and then only symbols and relations between them (relations that are themselves, in Carnap's account, nothing but symbols). This bold project presupposed the reconciliation between the formalist

Hilbertian conception of logic and of axiomatic systems, and the Fregean conception, with its interdiction of implicit definitions, and its absolute conception of the truth of axioms. In spite of Carnap's attempt the reconciliation is impossible.

As we have mentioned, Richardson's ultimate aim is to leave in doubt the 'dogma' of Quinean naturalized epistemology. Carnap's very notion of epistemology as a formal science and the analytic-synthetic distinction which is one of its central features have been misunderstood by Quine. Richardson analysis is convincing. As is the fact that the Russellian project of reducing science to acquainted primitives is not Carnap's project. However Carnap's notion of logic, which underlies the notion of epistemology as logic of science, is untenable, and Quine saw that clearly.

Université de Provence
Aix-en-Provence
France

GABRIELLA CROCCO