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## Empiricist and Neo-Kantian Elements in *Aufbau*

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### *Aufbau: Tutkulu Bir Teşebbüs*

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**Abstract:** According to W. V. O. Quine's received view, Rudolf Carnap's *Der Logische Aufbau der Welt* (henceforth *Aufbau*) is a radical empiricist project that attempts at reducing scientific knowledge to a phenomenistic basis. In Quine's reading, having a phenomenistic basis is an essential part of the thesis of the *Aufbau*. According to Michael Friedman, on the other hand, *Aufbau* is a neo-Kantian project that is primarily concerned with showing the possibility of objective and unified scientific knowledge. Thus, for Friedman, Carnap's choice of phenomenistic language is rather circumstantial. In this paper, I argue that both Quine and Friedman focus on two different aspects of the *Aufbau*, which as I shall suggest were equally significant and essential for Carnap's philosophical outlook at the time he was writing *Aufbau*. Hence, *Aufbau* should be appreciated for its truly ambitious objective that comprises both the radical empiricist and the neo-Kantian goals.

**Keywords:** Carnap, Quine, *Aufbau*, construction system, scientific knowledge.



## Introduction

This paper critically examines two popular readings of Carnap's *Aufbau*. According to Quine's received view, Carnap's *Aufbau* is a radical empiricist project that aims to base all scientific knowledge on immediate sense experience. According to Friedman's revisionist reading, on the other hand, *Aufbau*'s objective is to show the possibility of constructional system in general and to defend the objectivity and unity of science. In other words, while Quine reads the *Aufbau* as a radical empiricist project, Friedman reads it as a neo-Kantian project.

One immediate question, therefore, is "What is the main difference between these two projects?" Peter Hylton describes the difference between empiricist and the neo-Kantian approaches to knowledge as follows:

An empiricist approach to knowledge takes it for granted that certain and unproblematic knowledge is simply given in sensory experience. The question which the empiricist attempts to answer is then: How is that certain and unproblematic character to be transmitted to the rest of our knowledge, which is more remote from experience? According to the new interpretation, Carnap is asking a quite different question in the *Aufbau*. It focuses not on the transmission of knowledge, but rather on the constitution of knowledge. How can knowledge, which is objectively valid and intersubjectively communicable, arise on the basis of experience, which itself appears to be subjective and private? (Hylton, 2013, p. 79)

As Hylton points out, the empiricist and the neo-Kantian projects responds to different questions. The former is interested in the empirical derivation of knowledge from its sensory origins through our sensory organs and cognitive capacities. In that respect, empiricist approach to knowledge provides an empirical explanation and description of the knowledge acquisition process. Following Kant, the neo-Kantians, on the other hand, are not interested in empirical, descriptive and contingent psychological facts about knowledge. Instead they focus on the universally valid and necessary preconditions of knowledge, namely the formal, structural and logical features that make knowledge universally communicable and objective. In this regard, while the empiricist approach to knowledge provides empirical, and thereby, contingent explanations for



knowledge claims, the neo-Kantian approach is interested in justification of (as opposed to explanation for) those objective knowledge claims.

An empiricist, like Bertrand Russell, might think that empirical explanations also provide justification for the objective validity of knowledge claims. That is why Quine, who reads the *Aufbau* as closely connected to Russell's project of the logical construction of the external world, thinks that projects of reductionism and construction of objective knowledge are closely connected. A Kantian, however, would argue that any attempt to derive knowledge from experience would fail to account for universally valid, necessarily true and objective knowledge. That is why the questions of reductionism and objectivity of science can overlap only for an empiricist, but not for a neo-Kantian.

The main question of this paper is: Is the *Aufbau* a radical empiricist project (as Quine claims) or is it a neo-Kantian project (as Friedman claims)? The answer I will give is that "the *Aufbau* is both a radical empiricist and a neo-Kantian project." After pointing out the problems with the aforementioned readings, I will advance an alternative interpretation of the *Aufbau*, which combines Quine's received view and Friedman's revisionist views into a single and textually stronger reading, suggesting that Carnap was really much more ambitious in the *Aufbau* than Quine and Friedman thought. In fact, by assuming that Carnap must have had a single grand objective in the *Aufbau*, both Quine and Friedman underestimate the scope of Carnap's enterprise. Contra these two interpretations, I will argue that *Aufbau* has two different and potentially separable objectives: (1) as Quine suggests the *Aufbau* aims to show that scientific knowledge could be traced back to sense experience, (2) as Friedman argues the *Aufbau* presents us with a new method of constructional system through which he aims to show the unity and objectivity of science.

Although later in his career Carnap abandons his radical empiricist commitments, while writing the *Aufbau*, he believed that he can achieve these two different objectives in one work. By constructing a system with a phenomenalist grounding, he aimed to show that all scientific knowledge is based on experience and by building the method of constructional system, in which all scientific concepts from



different scientific branches are in principle reducible to one single common domain of objects, he wanted to show the unity and objectivity of science.

In what follows, I will first examine Quine's received view and Friedman's revisionist view and show that they focus on different aspects of the text. Then, I will point out the textual evidence, which is incompatible with each reading. Finally, I will argue that neither Quine's nor Friedman's interpretation can provide us with the full picture.

### Quinean (Received) Reading of the *Aufbau*

According to Quine, Carnap's main project in the *Aufbau* is to defend an empiricist epistemology. According to this reading, *Aufbau* tries to trace the justification of all scientific knowledge to immediate sense experience. However, the method Carnap followed to pursue his epistemological agenda was different from the classical empiricist position. Whereas Hume and others undertook the burden of showing that how every piece of human knowledge could be attained through pure sense experience by talking about the mechanics of mind, Carnap saw that all he needed was a successful reduction of the language of science to the language of immediate sense experience.

Radical reductionism conceived now with statements as units, set itself the task of specifying a sense-datum language and showing how to translate the rest of significant discourse, statement by statement, into it. Carnap embarked on this project in the *Aufbau*. [...] He (Carnap) was the first empiricist who, not content with asserting the reducibility of science to terms of immediate experience, took serious steps toward carrying out the reduction. (Quine, 1980 p. 39)

In other words, for Quine, the *Aufbau* undertakes the project of radical reductionism which consists of translating all science to a purely phenomenalist language. It is very important to note that according to Quine, Carnap pursues this reductionist project purely as a defense of empiricism. Carnap's reductionism would provide a case for empiricism because if all science could be translated into a language of experience, then we could ground all scientific knowledge on experience. If one reduces all science to a language of experience, then one could reasonably deny that there is any need to appeal to



extra-experiential sources of justification for grounding scientific knowledge. According to this reading, *Aufbau* is significant for being the first rigorous use of reductionism as a defense of empiricism. According to Quine, Carnap wanted to show also that every statement is translatable into a statement about immediate experience and he calls this view “radical empiricism” (Quine 1980, p. 38).

Seen as a text that defends radical empiricist project, *Aufbau*, attempts to solve the traditional empiricist problem of the external world. The problem can be formulated as following: given that we have immediate epistemic access to only our private and subjective sense experience, what justifies our beliefs regarding the existence the external world. According to Quine, the solution suggested in the *Aufbau* consists of defining external world as logical construction from immediate sense experiences as opposed to something beyond sense experience and therefore independent from us. As Quine puts it,

To account for the external world as a logical construct of sense data – such in Russell’s terms was the program. It was Carnap, in his *Der logische Aufbau der Welt* of 1928, who came nearest to executing it. (Quine 1969, p.74)

[...] Russell reflected in 1914 on realizing the dream of empiricists: the explicit construction of the external world, or a reasonable facsimile, from sense impressions, hence from simple ideas. He adumbrated it in *Our Knowledge of External World*, and a dozen years later Rudolf Carnap was undertaking to carry it out. Carnap’s effort found expression in *Der logische Aufbau der Welt* (1928). (Quine 1995, p. 10)

In other words, according to Quine, *Aufbau* attempts to solve the problem of the external world and it follows the solution suggested by Russell’s book *Our Knowledge of the External World*. Following Russell’s construction of the external world from sense-data, in the *Aufbau* Carnap attempts to construct objective world from the subjective origin of knowledge. In order to construct the external world, Carnap uses the epistemological method of what he calls “constructional system” (§2). By *constructional system*, Carnap means the ordering of objects based on their structural properties in such a way that objects of



the higher level can be constructed by the objects of the lower level' (§2). The aim of the construction system is to construct all scientific objects based on few fundamental objects that constitute the basis of the system (§1).

In the constructional system defined in the *Aufbau*, the basis of the construction system is constituted by autopsychological objects i.e., subjective sense experience<sup>2</sup>. In other words, all scientific concepts are reduced to the 'given' (§3). For Quine, choosing autopsychological (or phenomenological) basis for the construction system is indispensable for the *Aufbau*. Since Quine considers the construction system as an empiricist method of justification for the knowledge of the world, i.e. scientific knowledge he sees Carnap's choice of phenomenological basis for the constructional system as essential for the empiricist program of the *Aufbau*.

The received reading of the *Aufbau* is supported by textual evidence. In the Preface of the *Aufbau* where Carnap explains his agenda argues that with the new fruitful method of the *Aufbau*, i.e., constructional system he hopes to eliminate pseudoproblems (xvi). He argues further that by appealing to the requirement of purely empirical-rational justification and conclusive foundation Carnap hopes to free philosophy from the speculative and poetic work (xvii). Hence, Carnap considers the constructional system as a method of rational-empirical justification.<sup>3</sup> Although Carnap's emphasis on the epistemological issues in

<sup>1</sup> Carnap uses the terms 'object' and 'concept' interchangeably to mean anything about which a statement can be made (§1). He argues that there are basically three types of objects, namely psychological, physical and cultural objects (§6).

<sup>2</sup> Carnap also calls these objects "autopsychological objects (§7- 8).

<sup>3</sup> In his paper "Justification of Concepts in Carnap's *Aufbau*" Jonathan Y. Tsou examines the rational and empirical aspects of the constructional system and argues that the constructional system serves as an empiricist method of justification. Tsou argues that construction system rationally justifies concepts insofar these concepts are empirically verifiable. Although Tsou's arguments regarding the empiricist nature of the constructional system as a method of justification shows the underlying empiricist motivations, it does not support Quine's reading of the *Aufbau*. As Tsou admits empiricist requirement of verifiability or answerability is applicable to all constructional systems equally. In other words, construction system with physical basis and construction with phenomenological basis are equally verifiable. Hence, his arguments do not support Quinean claim that phenomenological constructional system is essential for the empiricist project of the *Aufbau*. See Jonathan Y. Tsou (2003), "The justification of Concepts in Carnap's *Aufbau*", *Philosophy of Science*, Vol.70, No. 4, pp. 671-689.



the Preface supports Quine's point regarding the empiricist influence on Carnap's construction system, we need more direct textual evidence that single outs phenomenalistic basis of construction and suggests its indispensability for Carnap's project in the *Aufbau*. Fortunately, Carnap provides us with numerous references to Russell's project of the construction of the external world both in the *Aufbau* and in his Intellectual Autobiography admitting that Russell has influenced his phenomenalistic project to a significant extend.<sup>4</sup>

Although it is quite convincing and textually strong, Quine's reading of the *Aufbau* disregards another significant aspect of the text, namely its being a form a constructional system of concepts which is in principle separable from the specific form in takes in the *Aufbau*. Having noticed this weakness of Quine's empiricist reading, Friedman offers a revisionist reading of the text which focuses on the more general aspect of the *Aufbau*, i.e., its method of *constructional system*.

### Friedman Revisionist Reading

According to Friedman, Carnap vindicates neither traditional empiricist epistemology nor phenomenalistic project in which the basis of construction is essentially autopsychological (Friedman 1999, p. 124). Contrary to what is suggested by the received view, Friedman argues that in the *Aufbau* Carnap does not devote much effort to the traditional empiricist problem of the external world. Instead, Friedman argues, Carnap mostly focuses on the technical evaluation of the constructional system (Friedman 1999, p. 118). In order to support his critique of the received view Friedman points out lack of empiricist terminology in the text.

[...] Carnap nowhere employs the traditional epistemological vocabulary of "certainty," "justification," "doubt," and so on in the *Aufbau*. He nowhere says that knowledge of autopsychological objects is more certain or more secure than knowledge of physical objects, and the distinction between "hard data" and "soft data" central to Russell's motivation for his construction of the external world is entirely foreign to the *Aufbau*. (Friedman 1999, p. 119)

<sup>4</sup> For some of the references in the *Aufbau* see, for example, §3, §12-13, §16 and §64-65.



Yet, this point about the employment of an epistemologically neutral language is hardly sufficient to undermine the received view. For it is possible to undertake a traditional empiricist project by using different idioms and expressions. Nonetheless, Friedman's more substantial arguments raise some important questions regarding the completeness of Quinean interpretation. Here, I will consider only two of - what I take to be the strongest - counter arguments Friedman presents. His first argument goes as follows: if as Quine suggest Carnap's main objective in the *Aufbau* were to undertake radical empiricist project then his efforts to define sense perceptions in terms of "quality classes" (§81) and "sense classes" (§85) with distinctive dimensions (§86) and their relative places in three dimensional space are redundant (Friedman 1999, p. 91-2). In other words, if Carnap's real motivation was to reduce all reality to phenomenistic basis, he could very well take sense perceptions as basic and construct the physical world out of these primitive sensations. Friedman's first argument points out the fact that most of the construction takes place in the real of private sense experience which is at odds with the radical empiricist idea of constructing objective reality from subjective sense experience. According to Friedman, this suggests that Carnap is more concerned with the way construction system works as opposed to construction of the external world.

Friedman's other argument is designed to undermine the significance of Carnap's choice of phenomenistic language in the constructional system. If Quinean reading that views the *Aufbau* as an attempt at phenomenistic reduction were right, then choosing a phenomenistic basis for the constructional system would be essential for Carnap's project. However, for Friedman, phenomenistic basis is not essential for Carnap's project in the *Aufbau*. In order to prove this point, Friedman focuses on Carnap's insistence on the possibility of other constructional systems with different bases such as physical basis and heteropsychological basis and argues they are equally legitimate. (Friedman 1987, p. 523-24) In the *Aufbau*, Carnap considers the phenomenistic system merely as one of the other possible construc-





tional systems (§57-§63, §122). Carnap repeats this point in his Intellectual Autobiography as well and argues that his choice of phenomenalist language had no special status over other kinds of language:

When I developed the system of the *Aufbau*, it actually did not matter to me which of the various forms of philosophical language I used, because to me they were merely modes of speech, and not formulations of positions. The main motivation for my choice of a phenomenalist basis was the intention to represent not only the logical relations among the concepts but also the equally important epistemological relations [...] The ontological theses of the traditional doctrines of either phenomenism or materialism remained for me entirely out of consideration. (Carnap 1963, p. 18)

Friedman emphasizes the neutral foundation of the constructional system and stresses that, for Carnap, “[T]he so-called epistemological schools of realism, idealism, and phenomenism agree within the field of epistemology. Construction theory represents the neutral foundation which they have in common (§178).” In other words, for Friedman, in the *Aufbau* Carnap is metaphysically neutral towards different philosophical positions including phenomenism. Note that, unlike Quinean reading that focuses on the basis of the constructional system presented in the *Aufbau*, Friedman’s reading focuses on the general features of the *constructional system* independently of the specific form it takes in the text. For Friedman, Carnap’s choice of phenomenalist basis is circumstantial not essential for the real objective of the *Aufbau*. But, what is the most significant aspect of the *Aufbau* if not its defense of phenomenalist conceptions of epistemology?

According to Friedman’s revisionist reading, *Aufbau* is significant for showing the “possibility, in general, of a constructional system” and “the possibility, in principle of translating all scientific statements into statements within a constructional system (§122)” (Friedman 1987, p. 524). In this regard, for Friedman, the main thesis of the *Aufbau* is to show the possibility of a system that has the same **form** of the constructional system outlined in the *Aufbau*. Thus, the determination of the **content** of the constructions is not part of the project.

Friedman argues that the logical **form** or the structure of the



constructional system is important because it gives rise to a new conception of objectivity and shows the possibility of a unified science. Accordingly, by showing the possibility of replacing all objects by a structural definite description that is defined merely through formal-logical properties, Carnap aims at transforming all scientific statements including the purely subjective statements into intersubjective structural statements (§16). Hence, the constructional system shows the possibility of intersubjective or objective knowledge. In other words, the problem constructional system deals with is the problem of achieving objectivity. Similarly, by transforming all scientific statements into structural statements Carnap can account for the unity of science (§4, §6). As Friedman argues,

The primary problem does not involve justification of our beliefs, the refutation of philosophical skepticism, or the relative degrees of certainty and epistemic value of beliefs in various different categories. Instead, [...] the prior problem of how “objective judgments” are possible in the first place: what makes such things as judgments -which are essentially capable of either truth or falsity, justification or disconfirmation- possible?

The problem, then, is to construct a new conception of “objectivity” that shows how we can proceed from private, subjective sense impressions to truly objective judgments without positing transcendent objects existing behind our sensory data, that is, without positing *Dinge an sich*. In this way, the “problem of cognition” is intimately connected for the neo-Kantians, with the “problem of reality” (Friedman 1999, p. 126).

According to Friedman’s revisionist reading, in the *Aufbau* Carnap is concerned with the more general problem of how objective knowledge is first possible.<sup>5</sup> In the revisionist reading, *Aufbau* is significant for its more general objective of illustrating a rational construction that shows the possibility of objective knowledge and a unified science.<sup>6</sup>

<sup>5</sup> Friedman also argues that Carnap’s conceptions of knowledge and meaning are holistic and Kantian as opposed to atomistic empiricist conceptions (Friedman 1999, p. 99).

<sup>6</sup> Alan Richardson offers similar arguments that support Friedman’s revisionist reading. As Friedman, he argues that neo-Kantian aspects of the *Aufbau* are more interesting and more fundamental to Carnap’s project. According to Richardson, Quine is wrong to see Carnap as undertaking the phenomenalist project once started by Russell. By underlying the differences between Carnap’s and Quine’s methods and strategies Richardson aims to



### Problems with the Revisionist Reading

Although, Friedman is right to point out that in the *Aufbau* Carnap aimed at showing the possibility of a *constructional system* and how this method of construction can give rise to objective knowledge he is wrong to consider the phenomenalist basis of the construction system as of secondary importance because (i) the problem of achieving objectivity only arise if the constructional system has a phenomenalist basis and (ii) the textual evidence shows that Carnap had strong philosophical commitments that led him to choose phenomenalist basis as opposed to physical basis.

As Friedman argues, Carnap stresses that the construction system will show the possibility of intersubjective, objective knowledge (§2). However, Friedman fails to observe that achieving objectivity makes sense only if the construction system has a subjective basis (§2).<sup>7</sup> The following introductory paragraph from the *Aufbau* suggests that the problem of objectivity arise only if one starts the constructional system from subjective, phenomenal basis:

Even though the subjective origin of the all knowledge lies in the contents of experiences and their connections, it is still possible, as the constructional system will show, to advance and intersubjective, objective world, which can be conceptually comprehended and which is identical for all observers (§2).

It is more explicit later in section (§66) where Carnap discusses that the problem of objectivity in the context of a constructional system with phenomenal basis. He argues that since the subjective experience is essentially divergent among different subjects and acquiring knowledge requires objective, intersubjective validity of our claims, we need to account for the objectivity of our knowledge.

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emphasize the more general aspect of Carnap's method of rational construction. Hence, for Richardson, "the principal lesson of the *Aufbau* to be an illustration by way of example of the nature and methodology of *construction theory*." (Richardson, p, 9) Like Friedman, Richardson argues that Carnap's claim that different bases (such as physical and heteropsychological bases) for the constructional system are equally legitimate shows that phenomenalist basis of the system is of secondary importance. See Alan Richardson, "How not to Russell Carnap's *Aufbau*", PSA, Vol. 1990, Volume One: Contributed Papers (1990), pp. 3-14.

<sup>7</sup> I would like to thank Peter Hylton for pointing this out.



The series of experience is different for each subject. If we want to achieve, in spite of this, agreement in the names for the entities which are constructed [...] then this cannot be done by reference to the completely divergent content, but only through the formal description of the structure of these entities. (§16).

Here it is clear that we need to achieve objective meaning of concepts by excluding the subjective and non-structural relations of the concepts and describing all concepts through their merely formal properties and their relative position in the system. In other words, constructional system offers a solution to the problem of how we can achieve objectivity of knowledge *given that the basis of constructional system is phenomenalist*. If we already start with objective basis such as physical objects, then objectivity of meaning of the concepts is not a problem that should be solved. In other words, if Carnap's main purpose in the *Aufbau* was the attainment of intersubjectivity in scientific knowledge he should have chosen a physicalistic basis for the constructional system as opposed to phenomenalist basis where the problem of objectivity never arise. This suggests that Carnap had another objective in mind other than showing the possibility of constructional system through which he aims to achieve unified and objective science. Although Friedman rightly argues that Carnap refrained from taking sides on the ontological theses of phenomenism and physicalism he had pragmatic concerns that led him to choose phenomenalist language over physicalist language. In other words, Carnap was not completely indifferent towards different language forms. He had both methodological and philosophical concerns for choosing the most suitable basis that enable him to achieve his philosophical objectives. Since all matters for Carnap is these pragmatic considerations it is reasonable to infer that choosing the most efficient and philosophically relevant language that serves the objectives best is *essential* for Carnap's project in the *Aufbau*.

Having argued that choosing a physical basis is more favorable if Carnap's main goal in the *Aufbau* was to demonstrate the possibility of objective and unified of science, it is clear that he had some other aspiration that led him to choose phenomenalist basis. In the *Auf-*



*bau*, Carnap argues that the most important reason for choosing phenomenalist basis as opposed to physicalistic basis lies in his desire to reflect the epistemic order of concepts (§64, §67). Although in the *Aufbau* he is not explicit why reflecting the epistemic order of the concepts is important, in his *Intellectual Autobiography* Carnap explains his underlying motivations:

The main motivation for my choice of phenomenalist basis was the intention to represent not only the logical relations among the concepts but also the equally important epistemological relations. The system was intended to give [...] **a rational reconstruction of the actual process** of the formation of concepts. The choice of phenomenalist basis was influenced by some radical empiricists [...]. (Carnap 1963, p. 18)

In this passage Carnap explicitly refers to the radical empiricist influence in his choice of phenomenalist basis. This is in clear contradiction with Friedman's revisionist reading that divorce the project of *Aufbau* from the traditional empiricists problem regarding the justification of the knowledge of the external world. Moreover, even though -as Friedman points out- Carnap does not employ any of the traditional empiricist epistemology vocabulary of "certainty", "justification" and "doubt" in the *Aufbau*, this does not entail that Carnap was not concerned with Russell's motivation for the construction of the external world. For in his *Intellectual Autobiography* Carnap describes his project in the *Aufbau* in exactly those radical empiricist terms and reveals his radical empiricist motivations. As he explains:

Under the influence of some philosophers, especially Mach and Russell, I regarded in the *Logischer Aufbau* a phenomenalist language as the best for a philosophical analysis of knowledge. I believed that the task of philosophy consists in reducing all knowledge to a basis in *certainty*. Since the most certain knowledge is that of immediately given, whereas the knowledge of material things is derivative and less certain, it seemed that the philosopher must employ a language, which uses sense-data as a basis. (Carnap 1963, p. 50)

According to the original conception, the system of knowledge, although growing constantly more comprehensive, was regarded as a closed system in the following sense. We assumed that there was a certain rock bottom



of knowledge, the knowledge of the immediately given, which was indubitable. Every other kind of knowledge was supposed to be firmly supported by this basis and therefore likewise decidable with *certainty*. This was the picture of which I had given in the *Logischer Aufbau*; it was supported by the influence of Mach's doctrine of the sensations as the elements of all knowledge, by *Russell's logical atomism*, and finally by Wittgenstein's thesis that all propositions are truth functions of the elementary propositions. (Carnap 1963 p. 57)

It is clear that although in the *Aufbau* Carnap distances his method of *constructional system* from various philosophical positions including radical empiricist tradition, it does not follow that his choice of phenomenistic language is inessential for his objective in the *Aufbau*. By stressing the more general aspect of the text, Friedman fails to see that particular aspects are equally significant for Carnap. In the introduction Carnap makes it clear that *Aufbau* is an attempt to show possibility of constructional system with the phenomenistic basis.

The present study is an attempt to apply the theory of relations to the task of analyzing reality. This is done in order to formulate the logical requirements which must be fulfilled by a constructional system of concepts, to bring into clear focus **the basis of the system** and to demonstrate by actually producing such a system that it can be constructed **on the indicated basis** and within the indicated logical framework (§3).

Even though the method of constructional system is metaphysically neutral towards radical empiricist thesis, Carnap's goal in the *Aufbau* cannot not be identified by focusing on its method alone. As Carnap acknowledges in various places, he considers the radical empiricist task of reducing all science to the 'given' as an important task and wants to accomplish this task by using this metaphysically neutral method of constructional system that is significant for its own virtue.

Hence it is clear that neither the received view nor the revisionist view had provided us with the complete picture of the project of the *Aufbau*. Carnap had more than one goal in the *Aufbau*. By using the method of construction system Carnap aimed at showing the possibility of objective and unified science and by choosing a phenomenalis-



tic basis for the construction system he wanted to carry out the radical empiricist project that has been attempted by many philosopher before him. Although, these two objectives are in principle separable from each other, in the *Aufbau* he tries to accomplish both at the same time. Thus, his conception of scientific knowledge and meaning was influenced by the verifiability criterion of meaning and the general empiricist viewpoint (§325). Although realization that empirical conception of knowledge is not compatible with the methodology of science led Carnap to the “abandonment of the rigid frame” in his theory of knowledge his more liberal criterion of meaning and justification for knowledge is attained long after the publication of the *Aufbau* (Carnap, 1963 p. 57).<sup>8</sup> In other words, with the abandonment of the verifiability criterion of meaning Carnap also abandons the radical empiricist project of reducing all scientific concepts to immediate experience and writes that with the development of a more liberal criterion of meaning and justification “we did no longer believe in a rock bottom basis of all knowledge” (Carnap, 1963 p. 38). Although Carnap later renounces his radical empiricist motivations he does not give up his aspiration for unified science. He writes,

[S]ome years later a physicalistic basis appeared to me more suitable for a system of all scientific concepts than a phenomenalist one; therefore the specific problems of the system of the *Aufbau* lost their interest for me. (Carnap, 1963 p. 18)

In the Vienna discussions my attitude changed gradually toward a preference for the physicalistic language. Against the conception that this language may serve as a total language for all knowledge, sometimes the objection was raised that on a physicalistic basis it is impossible to reach the concepts of psychology. But I did not find this argument convincing. (Carnap, 1963a p. 50-1)

These passages reveal that, in the *Aufbau*, Carnap held that phenomenalist basis was not only the best choice for undertaking the radical reduction but also for achieving unified science. This shows that contrary to what is claimed by the revisionist reading Carnap’s

<sup>8</sup> As Duhem and Poincare points out laws of physics cannot be verified completely merely based on experiential evidence.



choice of phenomenalist basis is not circumstantial. On the other hand, Carnap's emphasis on the attainment of unified science also shows that unlike what is argued in the received view Carnap is not interested merely in the radical reductionist project. Even after he realizes that radical reductionism is not a viable project, Carnap remains committed to his method of constructional system.

### Conclusion

In the received view, the *Aufbau* is significant for being an attempt at reducing the justification of knowledge to a phenomenalist basis. Hence, according to this interpretation the only difference between Carnap's *Aufbau* and Russell's *Our Knowledge of External World* is that the *Aufbau* is more detailed and exhaustive than Russell's phenomenalist program. On this reading defended by Quine, having a phenomenalist basis is essential for the Carnap's project in the *Aufbau*. For Friedman, on the other hand, Carnap's project is a neo-Kantian project that is concerned with the possibility of objective and unified scientific knowledge. Thus, for Friedman, by focusing Carnap's use of the phenomenalist language and relating it to a radical empiricist program, Quine misrepresents the underlying philosophical reasons and the context of the *Aufbau*. Carnap's objective in the *Aufbau*, Friedman argues, is to answer the epistemic question of "how is it possible that our subjective experiences give rise to objective knowledge of the world, i.e. objective science?" Having presented these two readings of the text, I argued that we do not have to choose between them. The alternative reading I advanced shows that the *Aufbau* can be read as an ambitious project with two distinct objectives that are in principle separable from each other. According to my alternative interpretation, the *Aufbau* should be appreciated for its ambitious objective of solving both traditional empiricist worries regarding the justification and certainty of scientific knowledge and undertaking the neo-Kantian project of showing the possibility of objective and unified science.





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**Öz:** W. V. O. Quine'a göre, Rudolf Carnap'ın *Der Logische Aufbau der Welt* (bundan böyle *Aufbau*) eseri bilimsel bilgiyi fenomenalistik bir temele indirgemeye çalışan radikal empirisist bir projedir. Quine'nin okumasında, fenomenalistik bir temele sahip olmak, Aufbau'nun temel gayesinin önemli bir parçasıdır. Michael Friedman'a göre ise *Aufbau*, öncelikle nesnel ve bütünlüklü bilimsel bilgi olasılığını göstermekle ilgilenen neo-Kantçı bir projedir. Bu nedenle, Friedman için, Carnap'ın fenomenalistik dil seçimi daha ziyade tesadüfidir. Bu yazıda hem Quine'in hem de Friedman'ın *Aufbau*'nun iki farklı yönüne odaklandığını iddia ediyorum. Nitekim Carnap'ın *Aufbau*'yu yazdığı sırada bu iki yön Carnap'ın felsefesi için eşit derecede önemlidir. Bu nedenle, Carnap'ın *Aufbau* adlı kitabı hem radikal empirisist hem de neo-Kantçı amaçları içeren oldukça iddialı bir eser olarak değerlendirilmelidir.

**Anahtar Kelimeler:** Carnap, Quine, *Aufbau*, inşa sistemi, bilimsel bilgi.

