

Carnap, Quine and Kripke  
-  
the rout of positivism

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# Preface

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# **Chapter 1**

## **Introduction**

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## Chapter 2

# Carnap's Mission

Rudolf Carnap was a man with a mission.

The second half of the nineteenth century saw increasing interest on the part of mathematicians in *logic*, a subject previously of interest primarily to philosophers in which the logic of Aristotle had prevailed for over 2000 years. The resulting advances, were rapid and substantial, completely transforming the character of the subject and realising logical systems for the first time which were sufficiently powerful for the derivation of the theorems of pure mathematics and other *a priori* disciplines.

In his book *Our Knowledge of the External World as a Field For Scientific Method in Philosophy* [23] Bertrand Russell describes the revolutionary impact which he hoped these developments might have on the character and conduct of philosophy.

“The study of logic becomes the central study in philosophy: it gives the method of research in philosophy, just as mathematics gives the method in physics.... All this supposed knowledge in the traditional systems must be swept away, and a new beginning must be made. . . .”

Carnap attended lectures by Gottlob Frege as an undergraduate, studied his work in greater depth as a postgraduate student and was already an enthusiast for the adoption of the new logical methods in philosophy when he read Russell's book. He was inspired and later wrote in his *Intellectual Autobiography* [8]:

"I felt as if this appeal had been directed to me personally. To work in this spirit would be my task from now on! And indeed henceforth the application of the new logical instrument for the purposes of analyzing scientific concepts and of clarifying philosophical problems has been the essential aim of my philosophical activity."

In this chapter I describe the context in which the dialogue between Carnap and Quine began.

My account of the dialogue between Carnap and Quine will begin with Carnap's *Logical Syntax of Language* [1, 3], so I will provide in this chapter the context needed for that account, which will fall into two parts. The first of these will be an account of *positivism*, primarily as this first appears in the philosophy of David Hume, of the reaction against Hume's view of mathematics by Kant and of the purported refutation of that reaction in the thesis of *logicism* by Frege and Russell. The second will sketch the development of Carnap's philosophy prior to the turning point inspired by Gödel which led to *Logical Syntax*.

## 2.1 Humean Positivism

David Hume published his philosophical *magnum opus*, *A Treatise of Human Nature* [11] as a young man. He had penetrating insight into the nature of philosophy, found traditional metaphysicians to be lacking, and conceived of a new way of doing

philosophy modelled on the scientific method whose exponent Isaac Newton had inspired through his scientific achievements.

In *The Treatise* Hume applied the new method extensively, but his work was received with indifference or hostility.

It is not infrequently the case that a philosopher may fail to recognise his most important ideas. These may be fundamental, and easily described in few words, but too simple to provide a basis for a substantial work of philosophy.

In the face of indifference to his great accomplishment Hume decided that an improved presentation of the most important elements of his philosophy might be more successful in bringing the ideas to the attention of the public, and to that end he wrote *An Enquiry Concerning Human Understanding* [12].

Hume's ideas were a prototype for much that is found in Carnap's *Logical Positivism* and a brief account of them will help in explaining the distinctive contribution that Carnap made to the positivist tradition. Carnap himself, though adopting the term *logical positivist* during his time as a member of the Vienna Circle, was later uncertain about calling himself a positivist, considering whether the term *logical empiricist* might be more appropriate.

We will see good reason for such reticence, in important ways Carnap had diverged from the positivist tradition. I believe that Carnap should be regarded as having moved forward positivism onto new more solid ground, and will present Carnap's innovations as fully within the spirit of positivism.

Hume begins his enquiry by deprecating the *metaphysicians*

**2.2 Kant's Awakening****2.3 Logicism****2.4 Conventionalism****2.5 Carnap before 'Syntax'**

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## Chapter 3

# Quine on Carnap

The central startling feature of Quine's relationship with Carnap is his rejection the analytic/synthetic distinction. This chapter is devoted to an analysis of the debate around that issue. The issue is sufficiently fundamental that it could not fail to be connected with other important problems. It was so fundamental a difficulty for Carnap that we can see its effects upon his philosophy from the time that Quine first entered professional philosophy to the end of Carnap's life.

The following analysis will track the trajectory of Carnap's philosophy under this influence, the major features of which are first sketched here, and later examined in greater detail.

Quine's first engagement with Carnap followed the publication of Carnap's *The Logical Syntax of Language*[3], which he had the privilege of reading as it was typed up by Ina Carnap.

When Quine returned to Harvard he was invited to give three lectures on Carnap's philosophy. At this stage in Quine's career it is generally held that he was an uncritical enthusiast for Carnap's philosophy, Quine himself was later to describe these lectures as "sequacious". However, the first of these lectures, in which Quine is explicitly not giving an account of Carnap's work, but rather providing some background on "the

analytic character of the a priori", there are many points at which Quine's presentation diverges significantly from what we might have expected from Carnap. This first lecture is quickly expanded by Quine into the paper *Truth by Convention*[13], suggesting that Quine felt there to be some new ideas here, and indeed the paper is billed by Quine as questioning received opinion.

The principal thrust of *Logical Syntax* is then abandoned by Carnap as he embraces formal semantics, though this is not so much a change of purpose or mission as a revised approach to realising that purpose, scientific philosophy and positive science (in Carnap's revised account of that Comtean conception). The principal influence which Carnap later acknowledges in this transition (from logical syntax to formal semantics) is the semantic work of Tarski, but the move to semantics can also be seen as responding to a misunderstanding or misrepresentation (or misrepresentation) of Carnap's position implicit in Quine's first lecture and Quine's *Truth by Convention* [13] which followed hard on its heels.

Though Carnap might have hoped that his embracing of semantics would render his account of analyticity more transparent and less objectionable to Quine, there ensues, principally in the year 1943 an extended correspondence between Carnap and Quine [22] which fails to secure a rapprochement.

At the same time, Quine is publishing doubts about modal logics. For Carnap the concepts of analyticity and of logical necessity are intimately connected, indeed mutually interdefinable, so it is not surprising that Carnap's next major work addressed these issues.

## **3.1 The Structure of the Analysis**

### **3.1.1 The Issues at Stake**

I begin by describing the issues at stake between Carnap and Quine, first the central thrust of Carnap's philosophical mission contrasted with such as can be said about that of Quine at this stage in his development, then in a little more detail under the four headings:

- Logical truth
- The analytic/synthetic dichotomy
- Necessity and modal logic
- Ontology and metaphysics

The intention is to sketch before entering in to the detail of the dialogue the significance of the topics for Carnap's philosophical agenda, and to give a rationale for the areas in which the analysis of the dialogue will be focussed.

### **3.1.2 Seven Stages in the Dialogue**

The dialogue is then entered into in detail. This is done in eight stages, mainly corresponding to books by Carnap and papers or correspondence from Quine critical of elements of one book and influencing the character of the next.

The books are:

- I The Logical Syntax of Language [1, 3] (see also [2])
- III Introduction to Semantics [4]
- V Meaning and Necessity [5], Empiricism, Semantics and Ontology [6]
- VII The Philosophy of Rudolf Carnap [8]

The critiques from Quine which lead us in our dialogue from one book to the next include:

- II Truth by convention [13]
- IV The 1943 correspondence on analyticity [22] and reservations about modal logic [14, 15]
- VI "On What There is" [16] and "Two Dogmas of Empiricism" [17]

Of course, this presentation of the structure of the dialogue somewhat oversimplifies the intricacies, as will be seen when we get into the detail, but it serves as a structure for the exposition.

### 3.1.3 Purposes and Methods, Large and Small

Having examined the dialogue in detail, I then pull back to consider its characteristics, particularly the strength of the arguments, and the force of the rhetoric.

Carnap sought to facilitate the transformation of philosophy into a "scientific discipline", intending by this an *a priori* discipline. As an *a priori* science philosophy might hope to emulate the rigour traditionally associated with mathematics and achieve a similar progressive establishment of durable knowledge instead of an ever changing melee of conflicting opinion.

The criticism of Quine was not addressed to this overarching purpose, but systematically undermined the most fundamental principles upon which Carnap sought to progress that purpose.

In the analysis of the debate around these issues I will be considering these discussion not just at face value, but as exemplars of philosophic method. At each stage in the analysis we will be considering what each author is seeking to achieve and by what methods he pursues his objectives, so that at the

end we can come to an assessment of the character of the dialogue, including the extent to which this meets the standards which Carnap promoted.

### **3.2 Act I: Carnap's Logical Syntax**

### **3.3 Act II: Quine on Syntax and Truth by Convention**

### **3.4 Act III: Carnap on Semantics**

### **3.5 Act IV: Correspondence on Analyticity**

### **3.6 Act V: Meaning and Necessity**

### **3.7 Act VI: Ontology and Dogmas**

### **3.8 Act VII: Epilogue**

### **3.9 Presumptions, Claims, Arguments, Rhetoric**



## Chapter 4

# Kripke's Metaphysics

Kripke's philosophy came too late for there to be significant dialogue between him and Carnap, and Kripke did not explicitly address the philosophy of Carnap.

However, an important early aspect of Kripke's philosophy is the rejection of the intimate connection between analyticity, necessity and the *a priori* which was central to Carnap's philosophy (though the former two were technical terms of Carnap gave formal definitions while "a priori" was not, the terms, "empirical", "verifiable" or "confirmable" being preferred). An upshot Kripke's more complex view of the relationship between these concepts was the re-affirmation of the synthetic-*a priori* and the re-appearance of metaphysics.

His work may therefore be seen, even by philosophers not wholly convinced by Quine's rejection of the analytic/synthetic dichotomy as a final nail in the coffin of logical positivism and the philosophy of Rudolf Carnap.

A reader who has come this far into the book will not be surprised to find me rejecting that point of view. I will be going in some detail into this new kind of metaphysics, but there are very simple reasons for doubting that Kripke's fundamental insights have the supposed impact on Carnap's philoso-

phy, which I will sketch lightly before considering the matters in greater depth.

My discussion of Kripke will be one primarily of his lectures *Naming and Necessity* [24], given in 1970, and is focussed on the relationship of this work with the philosophical views of Carnap, on the impact that the ideas have for the tenability of Carnap's ideas and on the status which Kripke's ideas and the kinds of metaphysics which they encourage might be expected to have from Carnap's point of view.

The short story on why Carnap need not have been concerned is as follows.

First of all we should note that Kripke's concern is with the English language, though we might expect much of his discussion to be equally applicable to other natural languages (and the discussion does involve the views of philosophers who wrote in other languages), there is no apparent intent to generalise across all possible languages. Many of the difficulties which he discusses are features of natural languages which are not replicated in most formal languages.

Second, Kripke, does not appear to be using these technical terms with the same meanings which Carnap attaches to them, so the conclusions he draws about the relationships between the concepts are not conclusions about the concepts as used by Carnap. Kripke does not consider it necessary to give a precise account of the meanings of the terms. Whatever the merits of this approach may be, it is clear that there are crucial differences between Kripke's usage and that of Carnap, the most crucial on being that the concepts of necessity and analyticity are for Carnap interdefinable.<sup>1</sup>

This might be regarded as a sleight-of-hand, but this is a carefully considered position on Carnap's part, the merits of which by comparison with the alternatives which we might infer from Kripke's discussion are not our present concern but will be discussed later. For the present preamble I am con-

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<sup>1</sup>In *Meaning and Necessity* [5] 39-1 p 174, Carnap defines necessity in terms of analyticity.

cerned with whether Kripke can be held to have shown that Carnap was mistaken in identifying the three dichotomies, which he cannot be unless he actually addresses the dichotomies about which Carnap spoke.

Greater disparities can be seen between the concept *a priori* as used by Kripke and as used by many other philosophers. Several difficulties arise here.

At first Kripke raises difficulties with modal characterisations of the *a priori* (along the lines "can be known without appeal to experience") and proposes to dispense with the locution "a priori truth" in favour of examining particular instances of knowing or believing *a priori*. So he demurs from clarifying his usage of the term *a priori* in this way, but then promptly abandons his resolution and continues to use the term not only for these particular instances, but also as a property of sentences which he distinguishes from necessity.

What Kripke is doing here, with this technical term from philosophy, is judging particular instances as if it was a term of ordinary language in the use of which we can all be regarded as competent without being furnished with a definition.

However, the particular examples he addresses make clear that his usage diverges from what many philosophers would expect, in the following two respects.

The first is that the *a priori* status of a proposition is generally held to be determined by the kind of justification which would be expected of anyone purporting to establish the proposition, and is not determined by the manner in which any particular individual might have come to know the proposition.

The second is that in assessing whether empirical evidence is required to justify some proposition, empirical evidence which is required to establish that some sentence under consideration does indeed express that proposition must be disregarded. Given that all (or at least, some) of our knowledge of even our native tongue is acquired through the senses, and that the association between sentences of that language and their

meaning is contingent, and justification of such a sentence will depend, if only implicitly, empirical evidence in establishing its meaning before its truth can be established. Hence, if this were to be taken into account, all claims in natural languages would be *a priori*. Alternatively we may say that *a priori* is a property or attribute of propositions not of sentences, and it is only after establishing, howsoever it might be done, the proposition expressed by a sentence that its status can be addressed and should be addressed independently of the way in which the proposition was established.

A third consideration in relation to the *a priori/a posteriori* distinction is that, since it concerns the manner of *justification*, we may consider that we have some discretion in choosing what we are to accept in justification of a proposition. It seems natural to expect that a proposition which is contingent, i.e. does not have the same truth value in every possible world (situation or circumstance) can only be shown to be true by furnishing some evidence that we are in a world which meets its truth conditions, and will by that token be considered *a posteriori*. Similarly, if we can establish a proposition *a priori* the that justification must hold good for every possible circumstance, and the proposition must be necessary. These two are contrapositives, reinforcing one side of a possible connection between the *a priori* and necessity. The other half is less clear. There is no apparent reason why we might not accept an *a posteriori* justification for a necessary proposition, but such a justification would establish only its truth, not its necessity, and would fall short of the standard of justification which one might expect for a necessary proposition.

Similar arguments to these can probably be found all the way back to Aristotle, so why should we expect these to prevail against the modern arguments devised in full knowledge of this context which appear to overturn them.

The main point I make here is that standards of justification are discretionary, and when an objective result is purportedly obtained which not only is not grounded in a standard

of justification for which a case has been made, then the discussion needs to be recast, introducing criteria of justification (going beyond consideration of *the meaning* of the term *a priori* into the pragmatics of such criteria.

We will look in vain for such considerations in Kripke, and may therefore remain unmoved from any initial disposition to adopt that most straightforward criterion which results in a pragmatic identification of the *a priori* with necessity.

It is my aim in what follows to work through Kripke's three lectures testing his conclusions against these conservative considerations, bearing in mind the specific interpretations of these terms which we associate with Carnap and comparing the way in which the examples would be spoken of by Carnap with the Kripke's conclusions. In this way we may discover whether there is anything in Kripke's arguments which crosses the divergence in terminology. If the apparent divergence in doctrine comes entirely down to divergent terminology we must then consider the relative merits of the two ways of speaking about these fundamental concepts.

The breaking apart of these dichotomies is a liberating prelude to the development of Kripke's metaphysics. If Carnap's position remains unscathed, how then does the metaphysics shape up when read from Carnap's perspective?

We call this metaphysics primarily because it concerns necessity *de re*, i.e. necessary propositions which are synthetic. In Carnap's language there is no such thing, and so if we take an argument from Kripke which establishes a conclusion which he reads as metaphysics. Carnap will not necessarily dispute the result, he may find fault in the argument, but if the argument is sound he will then take a different view on its status. I will work through selected materials to expose these different ways of talking about the same phenomena.



## **Chapter 5**

# **Following Carnap**

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## **Chapter 6**

# **Epilogue**

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