MODES OF BEING

A Comparison of the Realism Question in Charles Peirce and Contemporary Analytic Philosophy

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A thesis submitted for the degree of Doctor of Philosophy of the Australian National University

Philosophy Program
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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university; and, to the best of my knowledge and belief, it contains no material previously written by another person, except where due reference is made in the text.

Catherine Legg
This thesis is dedicated to Charley, Dave and Bruce.
Acknowledgements

The writing of this thesis has been a journey through which I’ve grown enormously. First of all I’d like to thank my supervisors: Frank Jackson, Huw Price, Peter Menzies, Philip Pettit and Michael Smith. I’m indebted to the following fellow students for support and/or challenging intellectual interaction: Andrew Gleeson, David Ryan, Sarah Bachelard, Josh Parsons, Peter Wylie, James Chase, Jakob Hohwy, Henry Fitzgerald and Daniel Nolan. Particular thanks are due to Karen Van den Broek for help with proofreading, and Rob Sparrow for much-needed music (except the reggae). Winifred Lamb generously shared her philosophical values. Friends at Monash University also deserve thanks — in particular Neil McKinnon for reading the entire document with great care.

Seven months of my PhD candidacy were spent as a Visiting Scholar at MIT, whom I would like to thank for giving me the opportunity to experience such a high-powered intellectual atmosphere — particular thanks are due to Robert Stalmaker, who generously supervised me while I was there (also to the Philosophy Program, RSSS, for some financial support in getting there).

A further 18 months of my PhD candidacy were spent at the University of Sydney and I would like to thank David Armstrong for reading and commenting on heretic views on realism about universals, John Bacon for interesting input re. being and existence, and Sallyann Parker-Ryan for philosophical conversations, friendship and support (also Philippe Chuard for some very helpful comments on my first chapter). From the wider Sydney philosophy environment, I would like to thank Jim Franklin for comments deriving from a profound understanding of medieval philosophy, mathematics and Sydney realism.

Working on Peirce without supervision by any Peirce scholar is an intellectual risk I would not have been able to take without the expanding intellectual frontiers of the Internet. Considerable thanks are therefore due to all the ‘Peirce-L’ community of inquiry, but in particular to Thomas Riese, Peter Skagestad, Howard Callaway, Bill Everdell, Tom Gollier, Dennis Bradley Knepp, Bernard Morand, Joseph Ransdell, Arien Malec, and (the late and sadly missed) Tom Anderson, while Benoit Favreault helped me more than I can say. Other valuable Peircean input was provided in 1997, when Naomi Cumming and I organised a ‘Peirce stream’ at the Annual Australasian Philosophy Conference, and I would like to thank the participants, especially Richard Robin, who came out from the US in order to participate. (Sadly, Naomi passed away in February 1999, which was a great loss to the Peirce community.) In September 1998, Claudine Engel-Tiercelin appeared briefly at the ANU like a good fairy and helped me clarify the title and overall project of the thesis just when I needed it.

Finally I would like to thank some Internet friends: Jeremy Barris for challenging moves (in both chess and philosophy), and Eratosthenes (Peter Alfeld) for helping me to understand the true circumference of the world.
Abstract

This thesis explores Charles Peirce’s “modes of being”, or categories, with particular reference to the way in which commitment to them structures his realism. Peirce’s realism, it is shown, does not constitute a commitment to particular, existent entities so much as a commitment to a posteriori precisification of meanings. In this, it is noted it bears some resemblance to a recent trend within analytic philosophy towards a meaning-externalism which rides on rigid designation, thereby giving birth to “a posteriori necessities” (though it differs insofar as Peirce understands such meaning-clarification as precisification rather than identification).

Peirce’s account of meaning, it is shown, may be distinguished into an explication of the meaning a concept has for us, which consists in the expectations which hypotheses containing that concept would lead us to form, and the meaning it has simpliciter, which consists in the development the concept undergoes over time and across the community of inquiry and which (his realism teaches) often surprises our expectations. Both dimensions of meaning are shown to depend crucially on Peirce’s concept of continuity, which emerges in the categories Peirce called “Thirdness” and “Firstness” (as opposed to the “Secondness”, exclusive commitment to which Peirce saw as constitutive of the nominalism he was very concerned to combat). Interesting parallels are drawn between Peirce’s discussion of Thirdness and Firstness and Wittgenstein’s discussion of rule-following, which has been interpreted as a radical new form of scepticism (wrongly, it is suggested) by Kripke. Peirce’s communitarian explication of meaning, truth and reality is distinguished from Kripke’s “sceptical” solution to the rule-following problem, and various ‘neo-pragmatisms’, including the now-popular “response-dependence”.

In its use of categories, Peirce’s realism is shown to swim against the tide of analytic philosophy, where the commitment to a univocal concept of being, most notably by Quine, has been influential. Such an approach, it is argued, encourages an tendency to reify to solve philosophical problems, which elides certain crucial features of logic. It is argued that, by contrast, Peirce’s three categories make possible a triadic, processual analysis of signification which, unlike the more usual dyadic framework of “word and object”, builds the interpretation (and development) of signs into the understanding of representation and thereby into realism itself, in provocative and fruitful ways.
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Introduction

i) Uniqueness of and Need for the Project

This thesis concerns the relationship between Peirce’s realism and his categories, with a particular view to bringing Peirce’s distinctive approach to realism to discussions of the issue in the analytic tradition. As is well-known, Peirce’s manuscripts languished for several generations after his death, unappreciated except for a few Harvard-based specialists. Once the *Collected Papers* came out in the 1930s, however, Peirce scholars began to emerge, and the ensuing two generations or so have produced a body of Peirce scholarship of the highest quality. This thesis has been written in the belief that Peirce studies are now entering a new stage, where what is most needed is for this scholarship to merge with mainstream philosophy (which in the Anglo-American academy means the analytic tradition, for better or worse), to the enrichment of both. The work has been begun – for instance by Christopher Hookway¹, Cheryl Misak², Peter Skagestad³, Susan Haack, Robert Almeder⁴, and Carl Hausman⁵.

However, despite much scholarly work on Peirce’s concept of continuity, especially from a mathematical perspective⁶, and on Peirce’s scholastic realism, especially its roots in medieval philosophers such as Scotus⁷, no-one has held Peirce’s three distinctive modes of being up against the analytic tradition’s univocal approach to being with an eye specifically to how that affects treatments of the realism question – at least not in a full-length study. It will emerge that much of the difference between the two approaches to realism concerns their respective treatments of *meaning*. A

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⁵ Specifically the last section of his book *Charles S. Peirce's Evolutionary Philosophy* (Cambridge: Cambridge University Press, 1993), which is otherwise a work of Peirce scholarship.
somewhat ambivalent attitude to the issue of meaning can be identified in the analytic tradition. It has swung between a *hostility* to meaning most notable in the work of Quine (which will be discussed in the thesis) which has led to an attempt to make do entirely with the tangible ‘thinginess’ of reference, and an arguable *excessive focus* on meaning through conceptual analysis, a form of detailed *a priori* investigation which reached notorious heights in Oxford around the 1950s, and during the worst excesses of which the reference of the terms analysed seems to have been lost or elided.

By contrast with both these approaches, Peirce may usefully be understood as presenting a *meaning realism*, whereby the *a posteriori* precisification of our concepts is as vital a dimension of scientific discovery as the identification of new entities. There has been a recent trend in analytic philosophy towards a meaning-externalism that rides on rigid designation. I will argue that, in its introduction of a new (post-positivist) fallibilism about meanings, this trend is in fact quite Peircean: a suggestion that has not (as far as I know) so far been made. However it will be argued that Peirce’s triadic analysis of the sign points the way to embracing such a fallibilism in a particularly principled and nuanced manner.

Peirce’s triadic analysis of signification depends crucially on *interpretation* insofar as what he calls “the interpretant” forms an irreducible third term to his analysis of signs’ formal structure, and his explication of true general predication relies on his third category more generally. This, it will be noted, raises the spectre of the rule-following problem which Saul Kripke took from the later Wittgenstein. It will be suggested that Peirce’s third category bears some interesting similarities with Wittgenstein’s notion of a rule. This consonance has been noted\(^8\) but never thoroughly explored, so the thesis will explore it. Along the way, the thesis will compare Peirce’s methodology in deriving his categories with the later Wittgenstein’s distinctive approach to philosophy in the *Philosophical Investigations*, which will make possible a unique critique of Kripke’s reading of Wittgenstein as a (radical and highly original) *sceptic*. Also the way in which the rule-following problem is an issue about the non-finitism of rules (as against the seeming finitude of rule-followers) will be brought to bear on Peirce’s ‘multitudinous’ explication of real generality, with some suggestive results.

By way of this discussion of the rule-following problem, the thesis will bring Peirce’s unique account of realism to contemporary “response-dependence” debates. It has been noted that response-dependence may usefully be viewed as a form of pragmatism, but the relationship between the work of response-dependence theorists such as Philip Pettit and Mark Johnston and the ‘classic’ pragmatism of Peirce has not yet been explored. In this way also, then, this thesis fills a gap in the literature. *Response-dependence* might seem to be a variety of pragmatism rather similar to

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\(^8\) For instance, Hookway, pp. 1-2, 109-110, Misak, pp. 6-7.
Peirce’s insofar as it offers a communitarian analysis of successful predication. However it will be argued that it misses what is distinctive about Peirce’s realism – its hypothetical character (and, consequently, what will be dubbed its ‘future-directed justification’).

Finally, and most ambitiously, this thesis examines Peirce’s hierarchy of the sciences (which, it is noted, effects a separation between questions in mathematics, phenomenology, logic and metaphysics, among others) as itself a form of antinominalism. The issue of the dividing line and proper separation (if any) between logic and metaphysics is enormous and it would take much more space to do justice to it than is available here. Nevertheless, the thesis has some original suggestions to make about the issue from the perspective of Peirce’s philosophy – specifically the way in which his hypothesis of synechism allows him to avoid certain reifications of issues not properly metaphysical which, it will be argued, have dogged discussions of the realism question.

This is a great deal of material for one thesis. Even in 88 000 words, one can do no more than open up some of these issues. However the issues have been found to interrelate and greatly illuminate each other, and for this reason it has been decided to bring them together in the hope that they will, as Peirce put it, “grow”. It will probably be found therefore that the thesis needs to be read more ‘synthetically’ than is the norm. Earlier chapters will be largely concerned with setting up various argumentative threads which will be gradually interwoven, then drawn together at the end in an overall argument for the benefits of Peirce’s approach to the realism question over its rivals. Points made will have value for what they make possible in terms of the argument as a whole, as well as their antecedent justification (an approach which, hopefully, will be found not uncongenial to the ideas explicitly discussed).

ii) Methodological Challenges

It is possible to make a case that being self-conscious about one’s methodology (whether one is doing philosophy or doing any other thing) is an integral part of pragmatism. For pragmatism (at least according to Peirce) is a theory about rational self-control with respect to conduct.

The first major methodological challenge faced by this thesis is that it attempts to build a bridge between the thought of Peirce, who wrote in the late nineteenth century and was exceptionally architectonic in his approach to philosophy, and debates in analytic philosophy which are taking place up to one hundred years later and whose texts are notable for their piecemeal approach to philosophical issues. When one attempts to build bridges across differing philosophical eras or approaches, there is a danger of trying to live up to two sets of criteria for philosophical success which are so different as to leave the set of possible theses which satisfy both sets of criteria empty.
Still, I do not think this particular case warrants such pessimism, as Peirce and the contemporary analytic tradition share many of the same questions, such as explicating the notions of truth, realism, reference, meaning and modality. Questions are also often framed by Peirce in ways which anticipate the analytic tradition in interesting and striking ways, although this is finely mixed with much the analytic tradition finds alien and puzzling. Thus Hookway has written:

Charles Sanders Peirce...can seem one of the most modern or contemporary of philosophers. If many of his views are controversial or implausible, still, on reading his work, we are likely to feel that many of his problems are close to the issues that are philosophically pressing today.9

Peirce and the analytic tradition also share the same over-riding methodological concern for logical rigour, or what Peirce termed “exact thought”, though they conceive that rigour somewhat differently. To give just one example, we will see (as noted in i)) that including an account of interpretation in an explication of reference – which the analytic tradition would for the most part consider most unrigorous – for Peirce is required for a truly scientific understanding of the matter.

The second methodological challenge faced by this thesis is that (as was also noted in i)) its subject matter is very general and broad, rather than narrow and deep, as is the current norm in analytic philosophy. First of all, an attempt has been made to provide plenty of examples of how the views discussed make a difference with respect to particular cases (which is, of course, what one would expect from a pragmatist). On a more critical note, I believe that the narrow and deep investigations in which the analytic tradition has traditionally excelled are most successful when directed by a clear overall vision. Without that, they can dig themselves into a ‘conceptual stony ground’ and lack the capacity to stand back and recognise what has occurred, knowing only how to keep digging. This thesis has been written in the belief that such a point has been reached with respect to the view that there is but a single mode of being.

The third methodological challenge is that Peirce himself had a writing career spanning 50 years: surely one must change one’s mind considerably over such a period of time? Which Peirce should I be discussing? In fact however, Peirce changed his mind remarkably little over his career, writing near the end of his life:

as far as I remember, no definitive conclusion of importance to which I have ever been led has required retraction, such were the advantages of the scientific methods of study. Modification in details and changes (very sparse) of the relative importance of principles are the greatest alterations I have ever been led to make.10

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Therefore I will only note the dates of the Peirce quotes I provide where I think they might be salient.

### iii) Stylistic Notes.
I have chosen to take Peirce quotes from the *Collected Papers*\(^{11}\) where possible, for purposes of consistency. These references (volume followed by paragraph number, as is usual in Peircean literature) will be inserted in brackets at the end of the quote to prevent an unlovely proliferation of footnotes.

A confusing variety of conventions with respect to quotation marks may be found in philosophical texts. I have therefore decided on an explicit policy whereby double quotes will be used for material which is taken from another text (even phrases and single words) and single quotes will be used for emphasis (or what is referred to by the somewhat overwrought phrase ‘shudder quotes’). There is sometimes a grey area between the two, but I believe that it is worth attempting to provide the information. I will also use double quotes for cited statements (both real and hypothetical), and single quotes for terms that are mentioned rather than used.

#### iv) Previously Published Material
Chapter 5 is a slightly modified version of a paper forthcoming in the *Transactions of the Charles S. Peirce Society*, entitled “Extension, Intension and Dormitive Virtue”. Sections 6.5.1, 6.5.2 and 6.5.3 are taken from a paper forthcoming in the “Causation and Laws of Nature” issue of *Australasian Studies in History and Philosophy of Science*, ed. Howard Sankey (Kluwer, 1999), entitled “Real Law in Charles Peirce’s ‘Pragmaticism’”.

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Chapter 1.

MATHEMATICS, PHENOMENOLOGY AND THE CONCEPT OF CONTINUITY

"one's not half two. It's two are halves of one:
which halves reintegrating, shall occur
no death and any quantity; but than
all numerable mosts the actual more"

e.e. cummings.
1.1 Preliminary Remarks

1.1.1 Synechism

This thesis concerns the relationship between Peirce’s realism and his categories. In order to understand Peirce’s realism, however, it is necessary to understand what he called his synechism, or commitment to real continuity, and this concept, in turn illuminates his categories. Peirce believed that too many philosophers had focused on what he identified as his second category to the exclusion of the other two (and, it will be argued in this thesis, this situation continues). He identified such an approach to philosophy with nominalism and the thesis will follow him in seeking to understand nominalism this way. Secondness is the category which gives expression to discontinuity, and so for Peirce studying the true nature of continuity was the key to getting beyond this, though it is important to note that he affirmed the reality of all three categories. Although this thesis will mainly focus on continuity as it finds expression in Peirce’s realism through his third category, interesting resonances will emerge with respect to his first category also.

In 1902, Peirce defined synechism for Baldwin’s *Dictionary of Philosophy and Psychology* as:

...that tendency of philosophical thought which insists upon the idea of continuity as of prime importance in philosophy and, in particular, upon the necessity of hypotheses involving true continuity (6.169).

I will approach Peirce’s notion of continuity through his (1902) definition of a *continuum*:

(C1): A true continuum is something whose possibilities of determination no multitude of individuals can exhaust (6.170).

This formulation is sufficiently clear, powerful and abstract to be usefully traced through Peirce’s philosophy, from mathematics through phenomenology, through logic to metaphysics – though extricating these separate subject matters from each other will be a challenge at times and, as noted, part of the work of this thesis.

Notwithstanding what may be referred to as an (inspiring, maddening) ‘holographic’ quality in Peirce’s philosophical writings, the concept of continuity around which his synechism turns may be described as particularly central to all of Peirce’s thinking. The effects of synechism show up across a wide spectrum of ‘philosophical areas’ currently laid out by the history and conventions of our discipline. Although to those philosophers who are uninitiated in Peirce scholarship and unfamiliar with Peirce’s distinctive terminology, Peirce’s synechism can sound strange, and difficult to put to use in the contemporary context in any obvious way, there is more convergence between Peirce’s synechism and recent discussions in the
analytic tradition than one might at first imagine. In particular, interesting comparisons may be drawn between Peirce’s notion of continuity and Wittgenstein’s discussion of rule-following. For both concern the concept of *generality* in what I will call its ‘logical’ sense (to distinguish it from ‘ontological’ understandings of the general such as the Universals of David Armstrong). Primarily, however, synechism is a thesis about the *methodology of inquiry* – that is, a thesis about how best to learn about the world.

1.1.2 The Methodology of Inquiry and Peirce’s Hierarchy of the Sciences

This phrase, ‘the methodology of inquiry’, is more familiar within the pragmatist than the analytic tradition in philosophy. Its subject matter might seem to fall naturally under *epistemology*, except that the central problematic of epistemology is generally conceived to be the proper definition of *knowledge* and the framing of criteria by which beliefs might be sorted into those which constitute knowledge and those which do not (*albeit* often in some ideal sense).12 This project goes hand in hand with attempts to refute scepticism, since if the definition of knowledge is made too stringent it is thought to leave the door open to doubts as to whether we could have any. The methodology of inquiry, on the other hand, concerns itself not with the *end-product* of inquiry but with the *process* of inquiry, and the question of how that process might be improved. It is worth noting that the study of the methodology of inquiry is itself inquiry (whereas the epistemology which concerns itself with defining knowledge does not necessarily possess this bracing reflexive character). For these reasons, the difference between these two studies is analogous to the difference in aesthetics between, on the one hand, taking a course in Fine Art and, on the other hand, entering a studio and learning how to paint. Scepticism, then, falls by the wayside in the methodology of inquiry as irrelevant, in the same way that the question of whether it can be proven that ‘Art exists’ does not concern a life drawing class.

Peirce himself thought of the methodology of inquiry as properly part of *logic*, as he construed that term more widely than is current. As Peirce’s distinctive understanding of logic will be drawn on in the thesis, a short presentation of what he meant by the term is in order. Peirce thought of logic as the science that defines truth and studies how to maximise the truth of our beliefs. What is nowadays thought of as logic (which almost exclusively consists in formal logic) was only the second of three branches of logic as conceived by Peirce, the first being (very roughly) a study of

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12 Most popular has been the analysis of knowledge into “justified true belief plus x”, with controversy centring around what best serves as the ‘x’. Of course much that goes on under the heading of epistemology is not of this character, but enough of it is to justify a profound distinction between epistemology as conceived by the analytic tradition and the methodology of inquiry as conceived by Peirce.
meaning (which he thought of as his theory of signs or “semeiotic”) and the third being, also very roughly, the methodology of inquiry.\textsuperscript{13}

Synechism has flow-on effects in metaphysics with respect to the nature of reality, but Peirce thought that synechism should be established on its own terms before these may be explored. Indeed, a proper understanding of synechism requires a grasp of Peirce’s ambitious hierarchy of the sciences. Peirce engaged in the project, popular in the nineteenth century (where it was begun influentially by Auguste Comte) of drawing up a classification of the sciences according to which each branch of science draws laws and principles from the science(s) above it, and observational data from the science(s) below.\textsuperscript{14} (For a diagram of the section of the hierarchy with which this thesis is concerned, see Appendix A.)

For example, physics draws principles from mathematics: a physicist uses differential equations, trusting in the mathematician to inform her of their proper behaviour. She would never think to question the theory of differential equations if, say, she were modelling fluctuations in the reflective patterns of light and it emerged that certain replicable phenomena in optics were contrary to what her model predicted. She would assume that the problem must lie within physics, and attempt to amend her model. In such a case, the science of optics (which Peirce explicitly identifies as subordinate to physics in his 1902 research grant application to the Carnegie Institute\textsuperscript{15}, possibly his most fully worked-out presentation of his hierarchy of the sciences) would then be providing phenomena for the science of physics. Physics (with its more general study of the phenomenon of light) would then be a source of principles for optics, just as mathematics is a source of principles for physics.

Peirce put mathematics at the top of his scientific hierarchy, defining mathematics very broadly as “the science that draws necessary conclusions”. Directly after mathematics he placed phenomenology, which studies that which is immediately present to consciousness without making reference to questions of truth or falsity. Some phenomenologists might wish to object that phenomenology is not without a conception of truth, for one may give an accurate or inaccurate report of one’s own experiences. However Peirce did wish to define phenomenology this way; it was important to him that truth be ‘public’ in a way that is not possible for reports of one’s own experiences, as we will see. After phenomenology Peirce envisaged a progression

\textsuperscript{13} See, for instance, 1.191, where he says:

All thought being performed by means of signs, logic may be regarded as the science of the general laws of signs. It has three branches: 1, Speculative Grammar, or the general theory of the nature and meanings of signs, whether they be icons, indices, or symbols; 2, Critic, which classifies arguments and determines the validity and degree of force of each kind; 3, Methodetic, which studies the methods that ought to be pursued in the investigation, in the exposition, and in the application of truth.

\textsuperscript{14} See for instance, Peirce, 6.1.

\textsuperscript{15} Peirce, MS L75.
of three "normative sciences" culminating in logic. Only after logic had established the concept of truth and the norms which govern its most efficient discovery could the special sciences (of which Peirce conceived metaphysics to be the first and highest) emerge and make their particular truth-claims, he thought.

1.1.3 Peirce as Naturalist and Antinominalist

Within Peirce's logic we will see that the notion of continuity is important for understanding his brand of pragmatism, which is at bottom an explication of meaning, not truth (in contrast with many later versions of pragmatism). It is also crucial to understanding Peirce's realism which, as noted, will be presented as a 'meaning realism', by contrast to the commitment to the existence of ordinary middle-sized objects, or of entities allegedly 'quantified over by science', which is often seen as paradigmatic of realism these days. For Peirce the most important aspect of realism is a rejection of nominalism, mediavely construed. Nominalism is a broad view with many different 'faces'. As it was Peirce's main philosophical enemy, against which he defined his realism (and therefore is much discussed in this thesis) it is important to note what is meant by it. At the most general level, a 'nominalist spirit' may be identified which seeks the simplest theory to explain any given phenomenon (the spirit which found expression in Ockham's Razor). Nominalism and reductionism therefore go hand in hand. The traditional way in which this impulse towards simplicity has manifested itself, however, has been reduction of the logically general to the logically particular (which in the medieval period created a complex debate over the reality or otherwise of "universals").

In a sense to be elaborated in the thesis, Peirce saw his synechism precisely as antinominalism. Peirce thought nominalism fundamentally came to grief over the issue of explanation, for, as he wrote:

The form under which alone anything can be understood is the form of generality, which is the same thing as continuity (6.173).

Nominalism thus conflicts fundamentally with what may be referred to as Peirce's naturalism. Though Peirce rarely used the term 'naturalism' (except in ethical contexts, and with a different meaning), the view may be understood very broadly as an attempt to learn from the enormous success enjoyed by natural sciences since the Scientific Revolution, and this is something Peirce greatly wished to bring to his philosophy. For instance he once wrote:

...in brief, my philosophy may be described as the attempt of a physicist to make such conjecture as to the constitution of the universe as the methods of science may permit, with the aid of all that has been done by previous philosophers (1.7).

Peirce's naturalism may be understood as a belief that every question will receive an answer, and that everything is capable of being further understood, insofar as every
concept is capable of further precisification. This view (and its connection with Peirce’s realism) will be a major theme in this thesis. The current philosophical literature is veritably bursting with naturalist claims, not all meaning the same thing by ‘naturalism’, and Peirce’s naturalism should be defined against three key features to be found in contemporary naturalisms. The first is that many contemporary naturalisms make ontological claims, albeit idealised. Edward Zalta and Bernard Linsky speak for many naturalists when they write:

Naturalism is the realist ontology that recognizes only those objects required by the explanations of the natural sciences.\(^\text{16}\)

Peirce’s naturalism by contrast, is methodological.

Secondly, and on a more methodological note, naturalism is often defined against scholasticism, or medieval philosophy. It is thought that the Scientific Revolution was enabled by European thought throwing off the shackles of an overly a priori approach to the answering of questions (which consisted in a mixture of ratiocination and appeals to the authority of the Bible and Aristotle), and discovering the experimental method, which opened up a new, a posteriori approach to questions. Peirce would not disagree with much of this, however he believed that despite the medi evals’ naïvety about natural science, philosophy had much to learn from them about logic, as opposed to a certain slapdash approach to that subject which was ushered in by the early modern period, in direct reaction to a perceived dizziness in the monasteries.

Finally, there has been an increasing tendency to define naturalism against what is often referred to as the “normative”. Huw Price, for example, singles out morality, modality, meaning and mentality as automatically threatened by the “rising tide” of naturalism since the seventeenth century. What these topics have in common is that they all seem somehow to transcend actual, descriptive fact. That Price does not feel the need to justify his claim that these topics are threatened by naturalism shows that he considers it somehow definitive of naturalism that they are. Thus, with respect to the moral case, he writes:

Some topic of human discourse—morality, say—seems difficult to accommodate in a naturalistic world view. The choices seem to be to accept the existence of moral aspects of reality distinct from the aspects of reality described by science, or to conclude that science has shown that moral talk is in error, in failing to connect with anything in the external world.\(^\text{17}\)

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We will see that naturalism construed in this descriptivist manner is alien to the Peircean perspective.

1.1.4 Thesis Overview and Chapter Summary

Section 1.2 will present an initial evaluation of Peirce’s hierarchy of the sciences. It will be contrasted with an apparently common-sensical view (which will be dubbed the ‘Scientific Ontology’) which considers that the world is made up of ‘a set of things’ and that success in inquiry may be analysed without residue into one’s quantifying over the things there are. The rest of the chapter will be concerned with the upper reaches of Peirce’s ‘Scientific Hierarchy’, with particular reference to his synechism. Section 1.3 will present Peirce’s distinctive take on the mathematics of continuity, noting some of the distinctive formal features possessed by the concept as he understood it. Section 1.4 will turn to Peirce’s phenomenology. There will be a brief discussion of phenomenology as a philosophical methodology (in particular, how it was viewed by Peirce) followed by an introduction to the categories by way of Peirce’s 1903 Harvard lectures. Various paradigmatic ‘categorical’ experiences will be presented. Particularly important, however, will be feeling (for Firstness), struggle (for Secondness) and representation or predication (for Thirdness).

The idea of predication which arises from Peirce’s third category will then be used to open up the science of logic, in §2. ‘Logical generality’ will be defined as our application of concepts beyond the finite number of particular cases in which we have encountered them in the past, into situations the exact like of which we have never encountered. It has been wondered in what this ability might consist, and thus I will present the “rule-following problem” which Saul Kripke has derived from the later Wittgenstein.

After presenting the problem, I will present Kripke’s “sceptical” solution to it. I will then argue that this solution resembles a view which goes by the name of “response-dependence”, which seeks to analyse certain concepts in terms of responses had by human subjects, which is seen by some philosophers as providing a solution to the rule-following problem, and moreover has been seen as a form of latter-day pragmatism. Some further contemporary pragmatisms will then be presented, most of which see pragmatism as in some sense offering a definition or theory of truth. In §3, I will distinguish between such neo-pragmatisms and Peirce’s own brand of the position which, by contrast, takes the form of a maxim which may be used to clarify the meaning of our concepts. I will then explore Peirce’s account of meaning proper, which is intimately tied to his account of the development of signs (or semeiotic). The concept of continuity has an important role to play here, as it does in Peirce’s account of truth in terms of the community of inquiry, which will be the subject of §4.
Armed with these understandings of meaning and truth, I will then highlight two ways in which the analytic tradition has committed itself to what I will call a ‘logical nominalism’ (logical in Peirce’s broad sense which includes issues in semantics and the methodology of inquiry). The first is the extensionalism notable in Quine who, it will be argued, embraced an unnecessary eliminativism with respect to meanings. Seduced by the idea that theoretical commitment may be entirely concentrated in the bound variable – things referred to – Quine dismisses any need for a logic which can treat “attributes” of those things as entities in their own right. He suggests that this would just lead to the sort of pointless (or, depending on the context, viciously circular) scholasticism which supposed that the fact that opium makes one sleepy may be explained by saying that it possesses a “dormitive virtue”. Chapter 5 will be devoted to a critique of such an extensionalist nominalism, by way of Peirce’s apparently subversive defence of “hypostatic abstraction” as “a very special mode of thought”.

This criticism of Quine will lead naturally to a consideration of Peirce’s scholastic or medieval realism. In §6, Peirce’s realism will be compared with the modern-day, analytic scholastic realism of David Armstrong. The second ‘logical nominalism’ will thereby be identified as the tendency (present in Armstrong as in much analytic philosophy) to understand reality as existence. This tendency, it will be argued, leads to the apparently paradoxical result that even Armstrong, who explicitly embraces realism about universals, comes out as a nominalist by Peirce’s lights. The main difference between Peirce’s and Armstrong’s realism about universals will be found to consist in Peirce’s focus on the real general as possessing predictive power, as opposed to Armstrong’s focus on universals as “truthmakers” for general predication.

In §7, I will return to the rule-following problem. The problem will be greatly clarified by dividing it into two separate questions: the problem of how we manage to project general concepts, and the problem of (what is often referred to as) the truth-conditions for propositions containing general concepts. In §7, the answer to the former problem will be shown to lie in Peirce’s phenomenological derivation of his categories, and interesting resonances will be uncovered between Peirce’s phenomenology and Wittgenstein’s distinctive philosophical methodology in the *Philosophical Investigations*. In §8, I will turn to the latter problem and note that response-dependence and neopragmatist positions both define themselves in terms of a rejection of a certain “metaphysical realism” which they see as deeply problematic. In this way, I shall argue, they partake in a ‘Traditional Realist Dialectic’, according to which the realist position claims that the world delivers truth-conditions for the proper application of our concepts, while the antirealist claims that for such truth-conditions we needn’t go past ourselves, in some sense (which claim is sometimes put by saying that truth-conditions have been replaced by “assertability conditions”). Having presented Peirce’s synechistic realism I shall argue, however, that one can have the
benefits of pragmatism without the epistemic conservatism which many of those who reject metaphysical realism commit themselves to. Peirce’s theory of signs, and in particular his notion, derived from his categories, of the sign as irreducibly triadic (consisting of ‘representamen’, ‘object’ and ‘interpretant’) will be drawn on crucially in explicating his distinctive realism.

It will be argued that the dichotomy (often expressed as a distinction between “things” and “concepts”) around which the Traditional Realist Dialectic turns is, in fact, a misleading reification of an issue which is not metaphysical. This reification has been produced, it will be suggested, precisely by the widespread acceptance within the analytic tradition of the view that “To be is to be the value of a [bound] variable”\(^\text{18}\), which has led to unnecessary confusion in the realist debate. The thesis will therefore close with a consideration of the way in which Peirce’s categories or modes of being, and also his hierarchy of the sciences, challenge the view (enormously widespread in contemporary philosophy) of existential quantification as the only measure either of ontological commitment or of scientific discovery.

1.2 Why Have a Scientific Hierarchy?

On first encountering Peirce’s hierarchy of the sciences, it can easily seem overcomplicated and somewhat archaic. It might be wondered – what scientific purposes do the different levels serve? Does the world not consist of just one set of things? If so, why not just assume that the sciences are all endeavouring to discover and to study that one set of things? All that would seem to be required, if science is viewed in this way, would be a single level of what might be termed ‘Scientific Ontology’. One of the greatest advocates of this sort of simplicity is of course Quine, who has written:

Our acceptance of an ontology is, I think, similar in principle to our acceptance of a scientific theory, say a system of physics: we adopt...the simplest conceptual scheme into which the disordered fragments of raw experience can be fitted and arranged. Our ontology is determined once we have fixed upon the overall conceptual scheme which is to accommodate science in the broadest sense, and the considerations which determine a reasonable construction of any part of that conceptual scheme, for example the biological or the physical part, are not different in kind from the considerations which determine a reasonable construction of the whole.\(^\text{19}\)

Quine’s claim that we can use the same theory-forming “considerations” across different sciences as are used within individual sciences rules out the kind of internal


\(^{19}\) Quine, p. 16-17.
structure (where principles travel ‘downwards’ and phenomena travel ‘upwards’, but not *vice versa*) which is seen in Peirce’s hierarchy. More recently, Frank Jackson has written,

Physicalism...claims that a complete account of what our world is like...can in principle be told in terms of a relatively small set of favoured particulars, properties and relations.

The first thing to be noted with regard to the question, “Why bother with a Scientific Hierarchy? Why not rest content with a Scientific Ontology?” is that science as it currently exists appears closer to Peirce’s than Quine’s model. By and large the sciences are organised into distinct groups of researchers with distinct subject matters and technical terms. Moreover, some of these distinct subject areas do seem to have relationships involving the one-way traffic in principles which Peirce describes. For instance mathematics does seem to supply indubitable principles to the natural sciences in a way that the natural sciences do not reciprocate (notwithstanding a certain grey area in applied mathematics where the two enterprises are hard to disentangle from one another).

Nevertheless, it might be argued that this is only a temporary state of affairs due to the sciences being in an inferior state of development, and that the scientific ideal is for the current hierarchical structure to be resolved into a single level. For are not intertheoretic reductions always celebrated by scientists when they occur? Alternatively, it might be argued that it is scientists’ job to work within their particular (exceptionally intellectually demanding) frameworks, and it is philosophers’ job to put together the many and varied particular results of scientists into a coherent overall ontology. Thus, Jackson writes:

Metaphysics is about what there is and what it is like. But it is not concerned with any old shopping list of what there is and what it is like. Metaphysicians seek a comprehensive account of some subject-matter—the mind, the semantic, or, most ambitiously, everything—in terms of a limited number of more or less basic notions.

If the inconclusive empirical argument from current scientific structure is set to one side, however, the issue of Scientific Hierarchy versus Scientific Ontology can be reapproached from a more philosophical angle. This approach notes that whether the discoveries of science can be in some sense understood as a giant quantification over entities (whether those entities are concrete physical objects, or more abstract objects such as properties, laws and more specifically scientific posits such as fields) is already in some sense the issue of nominalism. For the nominalism which Peirce was most concerned to oppose claims that reality is exhausted by the *logically particular*. A

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20 Jackson, *From Metaphysics to Ethics*, p. 6.
21 Jackson, *From Metaphysics to Ethics*, p. 4.
good definition of the logically particular is, arguably, that which can be the value of a bound variable.

It is likely to be protested that, although Quine would not have approved, one can make concepts (just one example of something logically general) the values of bound variables – such being the case, for instance with Frege’s “second-order quantification”. However such a strategy is precisely to turn concepts into logical particulars, creating a form of (what Peirce called) “nominalistic Platonism”: or so it will be argued in §5 and §6.\(^\text{22}\) As noted, it will be one of the more important arguments in this thesis that Peirce would not have thought the discoveries of science were reducible to the values of bound variables. Rather, he argued that the structure of scientific theory (in particular in the form of the expectations which it is designed to foster) is as important a dimension of reality as its explicitly posited entities. Even more radically, he believed that the structure of scientific reasoning itself has an equal claim to be viewed as a ‘scientific discovery’.

Therefore it is permissible for the antinominalist not to beg the question against herself – to work with Peirce’s conception of the sciences’ proper structure and see what results emerge.

### 1.3 Continuity in Mathematics

As noted, mathematics lay at the crown of Peirce’s scientific hierarchy. Because he believed that “[m]athematicians have always been the very best reasoners in the world”\(^\text{23}\), Peirce went to mathematics to work out his notion of continuity.

#### 1.3.1 The Development of the Concept of Continuity

Reflect for a moment on the idea of continuity provided by common-sense and ordinary language. One thinks of gaplessness, of uninterrupted flow, and possibly of space and time as paradigms of such uninterrupted flow. What is it about, say, an unbroken line that makes it continuous? First of all, it appears that every two points on the line have another point between them, that the line is infinitely divisible. Peirce called this aspect of continuity Kanticity, since Kant thought that it was in fact sufficient for continuity.\(^\text{24}\) Is it, though? Consider an infinite number of points each

\(^{22}\) Thanks to Philippe Chuard and Neil McKinnon for input on this point.


\(^{24}\) Things are slightly more complicated in that Peirce claims that Kant’s actual definition of the continuum, “something all of whose parts have parts of the same kind”, is not strictly equivalent to infinite divisibility and is in fact rather more promising than mere infinite divisibility, but that Kant himself (and others) took it to be so equivalent. Kant’s actual definition is not equivalent to infinite
separated by breaks from all the others, such that between each pair of points there are further points (and breaks). Such a situation is possible – in fact this is the situation with respect to the rational numbers on a number-line, if we extract the irrational numbers – and it satisfies the definition of Kanticity. Yet it is not continuity, because of the breaks. A further criterion for the continuity of a line, then, Peirce called Aristotelicity, after Aristotle’s definition of continuity as exemplified by those things whose “adjacent parts have their limits in common (6.164)”. Peirce defined Aristotelicity as something’s containing, “every point that is a limit to an infinite series of points that belong to the system (6.167)”. Kanticity and Aristotelicity blend together in the following definition of continuity which he developed in 1908, near the end of his life:

...my notion of the essential character of a perfect continuum is the absolute generality with which two rules hold good, first, that every part has parts; and second, that every sufficiently small part has the same mode of connection with others as every other has (4.462).

The clarification of the notion of continuity forms a significant chapter in nineteenth century mathematics. This era in mathematics was characterised by a concerted search (which was still optimistic at that point in time) for logical foundations for many mathematical tools which previously had just been used by mathematicians in good faith, such as the rational and complex numbers.25 The search for a logical grounding for the distinctive forms of inference known as calculus was particularly intense, given the counterintuitive nature of this singular mathematical process and its apparent logical inconsistency, which had been noted from its inception in the seventeenth century, most famously by Bishop Berkeley.26 In the 1860s Karl Weierstrass managed to rewrite calculus entirely in terms of the limits of convergent series, which was applauded as freeing mathematics from ontological commitment to the “fluxion” or the “derivative”. This mathematical result was enabled by Weierstrass bringing new clarity to the conception of continuity (sorting out, for instance, that continuity does not imply differentiability).

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26 Berkeley was philosophically outraged by what he perceived as a double standard in those who would criticise the Christian religion for its mysteries of faith, while apparently believing in Newtonian “fluxions” or Leibnizian “differentials”, which are treated as equal to zero when subtracted from an equation, and (very conveniently) not equal to zero when it becomes necessary to divide by them. He called his treatise on this subject, “The Analyst Or a Discourse Addressed to an Infidel Mathematician. Wherein it is Examined Whether the Object, Principles, and Inferences of the Modern Analysis Are More Distinctly Conceived, or More Evidently Deduced, than Religious Mysteries and Points of Faith. ‘First Cast the Beam Out of Thine Own Eye; and Then Shalt Thou see Clearly to Cast out the More Out of Thy Brother’s Eye’”.

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Another notable event in nineteenth century mathematics was the birth of so-called transfinite numbers – the recognition that some infinities are bigger than others. This proposition had previously been considered by many to be analytically false, as the term ‘infinite’ just means “number than which no greater exists”. Georg Cantor effectively opened up the field of transfinite arithmetic when he proved that the set of all sets of the natural numbers (their “power-set”), possessed a cardinality greater than the (already infinite) cardinality of the natural numbers themselves. This greater infinity he identified with the real numbers. It is little known that Peirce was thinking through these issues at the same time as Cantor, and in fact proved Cantor’s famous result independently.27

1.3.2 Continuity as “Supermultitudinous”

Peirce’s approach to transfinite numbers and to continuity differed from Cantor’s, however, in that Cantor assumed that with the Reals he had reached continuity as exemplified by the geometric line. He thus identified what is now called “continuum-many” with the Reals, which has been mathematical orthodoxy ever since. Peirce, on the other hand, was not satisfied with this, which can be seen in his definition of continuity as something whose determination no possible multitude of individuals can exhaust. Peirce thought there had to be more to a line than a multitude of points. For given that points have no extension, how can one get an extended line from assembling points, no matter how many points one puts together? And given this, how can one think of the line as composed of points (even as many points as there are real numbers)? Points are more properly thought of as breaks in a line productive of discontinuity than as any sort of ultimate constituent of linear continuity:

Breaking grains of sand more and more will only make the sand more broken. It will not weld the grains into unbroken continuity (6.186)

Peirce thought that if a true continuum may properly be spoken of as having parts, they must be capable of being what he called “welded together”. Thus, referring to the continuum as a “supermultitudinous collection”, he wrote that. “A supermultitudinous collection is so great that its individuals are no longer distinct from one another”.28

Another way of making this point is to say that continuity is a geometric notion which is actually not reducible to or expressible in the language of arithmetic, which quantifies over numbers, for numbers are necessarily discrete.

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27 This story has been well told by Joseph Dauben. See in particular, “C.S. Peirce’s Philosophy of Infinite Sets”, American Mathematics Magazine, vol. L, no. 3, (May, 1977), p. 128. In New Elements of Mathematics, vol. 3, part i, one may in fact find several different proofs by Peirce of Cantor’s result by different means than Cantor employed. For example on pages 51-2 there is a proof entirely in Peirce’s own brand of set-theoretic logic. Also, on page 78, a proof using ever decreasing sections of a continuous line.

We become habituated to think that numbers are capable in themselves of expressing magnitude, or at least proportional magnitude...but taking magnitude in the sense of continuous magnitude, numbers in themselves can express neither magnitudes, nor the ratios of magnitudes. Numbers express nothing whatsoever except order, discrete order...Numbers cannot possibly express continuity.\(^{29}\)

Thus, when Peirce’s definition of continuity (Cl): “A true continuum is something whose possibilities of determination no multitude of individuals can exhaust”) is applied to the geometrical line, the phrase “multitude of individuals” may usefully be interpreted as meaning the infinity of points all of which lie on the line, but no collection of which can be said to comprise the line. No collection of points can comprise the line because no matter how numerous that collection is, there will always be a “possibility of determination” of further points on the line which are not included in the collection.

It is worth noting that late in Peirce’s life he apparently reconsidered his claim that the geometric line contains a greater multitude of points than the Reals insofar as it appears that a set of points corresponding to the power-set of the Reals (which Peirce called a “second abnumerable multitude”) cannot, in any obvious way, be arranged in linear order.\(^{30}\) However, he wanted to leave open the possibility that they may yet be so ordered in some way not previously thought of. He also remained certain that there was no way that a line could be literally composed of some given multitude of points, (so that if that number of points were removed from the line, the line would cease to exist)\(^ {31}\).

The most important points that Peirce’s mathematical researches into the notion of continuity have revealed, then, is that the geometric line and the discrete point are mathematical concepts which, though related, possess some fundamentally different properties. For while any multitude of discrete points may be extracted from any given line, the line remains after this has taken place.\(^ {32}\) Moreover, while within the line these points are somehow not discrete. We can discuss the line without mentioning its points. These mathematical features of the concept of continuity will be found to have applications further down Peirce’s hierarchy of the sciences.

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30 "...it is evident that all members of a pure second-abnumerable collection...cannot, in any such way, be in any linear series. Should further investigation prove that a second-abnumerable multitude can in no way be linearly arranged, my former opinion that the common conception of a line implies that there is room upon it for any multitude of points whatsoever will need modification (4.639)."
31 See, for example, 4.640.
32 In more contemporary terms, this feature of Peirce’s concept of continuity might be thought of as ‘non-mereological composition’, and this issue could bear further discussion.
1.4 Phenomenology and the Categories

Immediately after mathematics in the hierarchy of the sciences comes phenomenology. Phenomenology has been an influential strand in twentieth century philosophy. Peirce’s excursion into it is little known and (as was unfortunately common with Peirce) isolated from the main current of development in the discipline. Peirce’s phenomenology is similar in methodology to that of well-known phenomenologists such as Husserl and Heidegger, but different in the way Peirce wanted to work phenomenology into a wider scientific naturalism.

Phenomenology for Peirce is, as Hookway has stated, “a prelogical science which depends only on mathematics” 33. As noted, phenomenology studies those properties that inhere in veridical and illusory perceptions alike, for its proper subject matter is anything that might present itself to consciousness. 34 This might make phenomenology seem a strange and subjective sort of science. However, Peirce claimed, it is “the most primal of all the positive sciences” (5.39). The “positive sciences” are made up of the special (or natural) sciences and the normative sciences which precede them (namely aesthetics, ethics and logic).

1.4.1 Peirce’s Derivation of his Categories.

Peirce conceives phenomenology’s main role to be the identification of his categories. The notion that part of the work of philosophy is to identify categories is an idea that was influential from Aristotle to Kant, after which it largely disappeared. 35 Categories are the most fundamental ‘types’ into which can be sorted the things in Heaven and Earth which are dreamt of by one’s philosophy. Consider, for example, the difference between numbers and physical objects such as tables. It might be thought that the difference between these two types of ‘thing’ is more fundamental than the difference between, say, chairs and tables, for to apply certain predicates which are applicable to physical objects to numbers (in a sentence such as “Eight is a yellow number”), is not merely false but somehow deeply senseless. There is therefore a link between categories and predication. Indeed, when Aristotle framed the first definitive list of categories, he treated them precisely as a division between groups of predicates.

Peirce presents his vision of the role of phenomenology thus:

The business of phenomenology is to draw up a catalogue of categories and prove its sufficiency and freedom from redundancies, to make out the characteristics of each category, and to show the relations of each to the others (5.43).

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33 Hookway, Peirce, p. 103.
34 This mental ‘arena’ Peirce liked to refer to somewhat archaically as the phaneron.
35 There is, however, the odd twentieth century exception such as Gilbert Ryle (whose use of the criticism “category error” was, for a time, widely echoed) and Roderick Chisholm. A recent issue of Philosophical Papers was also devoted to the issue.
How is this task to be performed? Peirce claims to possess two “special arts” for this purpose, namely prescissive and hypostatic abstraction. To abstract prescissively is to note that something has a certain feature; to abstract hypostatically is to treat that feature as an entity in its own right. Peirce explains the distinction by stating:

The most ordinary fact of perception, such as “it is light”, involves prescissive abstraction, or prescission. But hypostatic abstraction, the abstraction which transforms “it is light” into “there is light here,”...is a very special mode of thought (4.235).

Through these two levels of abstraction Peirce obtains three different fundamental “modes of being”, which he calls (not too surprisingly) Firstness, Secondness and Thirdness. In the second of his 1903 Harvard lectures, Peirce presents these categories by encouraging his listeners to prescind from certain unmistakable and characteristic experiences, and then to treat what those characteristic experiences have in common as ideas in their own right. It should be noted that in this instance Peirce is presenting the categories as fundamental and irreducible concepts. The argument for the reality of the three modes of being is separate and comes in the fourth lecture.

The first category Peirce refers to as “presentness” or “feeling”. He exhorts his audience:

Imagine, if you please, a consciousness in which there is no comparison, no relation, no recognized multiplicity (since parts would be other than the whole), no change, no imagination of any modification of what is positively there, no reflection – nothing but a simple positive character. Such a consciousness might be just an odour, say a smell of attar; or it might be one infinite dead ache...(5.44).

Firstness thus has a lot in common with what is nowadays referred to as qualia. Consider, for example, the concept of the taste of pineapple. This concept is irreducible to any other concept(s): as Russel might have put it, the taste of pineapple must be known by acquaintance, not description. Integrating qualia into epistemologies which do not allow them to be irreducible has been found to be a difficult problem. Firstness refers not just to the pureness or conceptual simplicity of

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36 In the 1903 Harvard lectures, Peirce actually claimed that Firstness, Secondness and Thirdness are only his “Short List” of “universal” categories, and that he also had derived a “Long List” of “particular” categories. The difference between the two lists is as follows:

- The particular categories form a series, or set of series, only one of each series being present, or at least predominant, in any one phenomenon. The universal categories, on the other hand, belong to every phenomenon, one being perhaps more prominent in one aspect of that phenomenon than another but all of them belonging to every phenomenon (5.43).

However, he treats this long list of categories as greatly inferior in importance to the short list, and I will therefore ignore it henceforth.

37 It might be protested that the comparison between qualia and Firstness is not entirely felicitous in that not all qualia possess the unanalysability which is characteristic of Firstness: however, the term ‘qualia-simples’ may be used instead.

38 A recent very influential presentation of this problem may be found in Frank Jackson’s thought-experiment which centers on an unfortunate colour-deprived natural scientist named “Black and White Mary”. (Frank Jackson, “Epiphenomenal Qualia”, Philosophical Quarterly 32 (1982), pp. 127-
the taste of pineapple, however, but also to its radical newness, in that when someone
who has never tasted pineapple before first encounters the taste, their sensorium may
be said to 'grow'. New possible experiences have been added to their understanding.
The term 'radical newness' is used as in such cases the Firstness involved does not
consist in the fact that the taste is an unexpected event (though it is unexpected) – but in
that it is an event of an entirely new kind. Firstness, then, refers to such radical
newness generally, not just in the arena of human feeling.

The second category Peirce refers to as “struggle”:

...the second category, is the element of Struggle. It is convenient enough, although by no means necessary, to study this, at first, in a psychological instance. Imagine yourself making a strong muscular effort, say that of pressing with all your
might against a half-open door. Obviously, there is a sense of resistance (5.45).

This second category also presents itself (in a form particularly germane to inquiry) as
"surprise":

Experience is our only teacher...But precisely how does this action of experience take place? It takes place by a series of surprises. There is no need of going into
details. At one time a ship is sailing along in the trades over a smooth sea, the
navigator having no more positive expectation than that of the usual monotony of
such a voyage, when suddenly she strikes upon a rock (5.50-51).

Struggle and surprise resemble each other in that unlike Firstness, which might take
the form of a single quality alone in its own possible world, at least two things are
required to create a struggle or surprise. It was mentioned that Secondness is the
category that pertains to discontinuity and this can be seen in the separation between
any two things which are struggling (or surprising each other). It might be objected
that one may 'struggle with oneself'. In such cases, however, one needs at least two
discriminable parts of oneself in order to engage in the struggle in question (if only
one’s desires and one’s values – the usual form such cases take). For, as Peirce puts
it, “A man cannot startle himself by jumping up with an exclamation of Boo! (5.58)
Another instructive paradigm of Secondness (though less specifically
phenomenological) is the banging together of Hume’s billiard balls – the kind of direct
contact between objects which characterises efficient causation. (This aspect of
Secondness will be found to be important as the thesis develops).

The example Peirce uses to illustrate his third category is a great deal more obscure
than the previous two, and concerns “non-mechanical action”. This, he argues,
embodies irreducibly triadic relations:

All nature abounds in proofs of other influences than merely mechanical action,
even in the physical world...Such, for example, are the right-handed and left-

136.) However, the problem goes back at least as far as Hume’s discussion of “the missing shade of
blue”, (David Hume, A Treatise of Human Nature, ed. L.A. Selby-Bigge and P.H. Niddich (Oxford:
Clarendon Press, 1978), I.1.i, p. 6), which has also been much discussed in recent times.
handed screw-structures of the molecules of those bodies which are said to be "optically active." Of every such substance there are two varieties, or as the chemists call them, two modifications, one of which twists a ray of light that passes through it to the right, and the other, by an exactly equal amount, to the left. All the ordinary physical properties of the right-handed and left-handed modifications are identical. Only certain faces of their crystals, often very minute, are differently placed. No chemical process can ever transmute the one modification into the other (5.65).

This claim appears to be not so much phenomenological as taken from physics and chemistry, and thus seems several levels down the hierarchy of the sciences from where Peirce is meant to be in this lecture, though the significance of the idea it seeks to express – a feature of reality not produced by (or explicable via) efficient causation – will emerge (from §3.6 onwards). However, in an earlier draft of this lecture (now available in Patricia Turrisi’s excellent edited collection of the 1903 lectures) he provides a better example, taken much more from everyday experience:

We open our eyes and look at something. Now if we are not in a sleepwalking state we immediately form a judgement as to what sort of thing it is that we are looking at; and that judgement predicates some general quality of the object of perception...As I am looking out the window in writing these words my eye lights on something and before I know what I am about, I have told myself that it is a chimney, a perfectly square prismatic chimney, a chimney of red brick, with a drab piece at the top. I could not think all that without thinking of something in my mind equivalent to those words. Something is thought as general signs. Now the idea of a sign belongs in this third category.

Thus, a fundamental idea which conveys the concept of Thirdness is predication – one's attributing of a property or properties to something. The concept of predication will be a major theme in this thesis. It is important to recognise that here predication is taken in a general sense which includes not just written or spoken statements, but thoughts or judgements as well. Note that Peirce is not making any claim about the truth of such predications. He is merely claiming that we do so predicate. Indeed it seems that we cannot avoid doing so – for note the way Peirce puts it. He says, "before I know what I am about, I have told myself that it is a chimney...[my emphasis]."

Therefore, my experience does not just include immediate feelings and the shock of reaction with objects. I also represent the world to myself as having certain projectible properties. Representation, then, is another word which comes close to capturing the essence of Thirdness. I can only make sense of perceiving the world, without representing it to myself as being some way (from which expectations arise), in some

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30 Peirce may possibly be defended on this point by arguing that if we consider the phenomenology of a researcher who possesses what Peirce described as the "singleness of heart" which distinguishes the true scientist, the inexplicable divergence between the left-handed and right-handed molecules would strike this person with the immediate and qualitative irreducibility with which nonscientists are struck by, say, redness. However such a defence seems somewhat strained.

very degenerate sense of perception – such as is represented by the Firstness-only world which is “one infinite dead ache”. Note, however, by contrast, that a Thirdness-only world is not possible. I cannot have the perception of the chimney without simple concepts such as redness and squareness. Moreover, I cannot represent the world to myself as something about which I have expectations without invoking a dyadic relation between myself and the world represented. (Note that such a dyadic relation is not presupposed by the Firstness-only world which consists in pure feeling). In this way the ordering of the categories is cumulative, and their numbering significant, for each category entails the categories before it.

Another word for Thirdness which will become important is prediction. Prediction is in fact a species of predication, insofar as to predict is to predicate some property of events not yet encountered. In his Lowell Lectures (which he also gave in 1903) Peirce highlighted this aspect of Thirdness:

Now for Thirdness. Five minutes of our waking life will hardly pass without our making some kind of prediction; and in the majority of cases these predictions are fulfilled in the event. Yet a prediction is essentially of a general nature, and cannot ever be completely fulfilled... (1:26)

Peirce’s concept of continuity may be recognised in the phenomenology of Thirdness. For how do we predict the future? We predicate our present concepts of future events, on the assumption that those concepts give rise to certain stable expectations. So for instance, if eating raw sausages has made me ill in the past I expect that, other things being equal, the same results will ensue from eating raw sausages in the future. This might be thought of as a ‘diachronic’ dimension of continuity.

However a more ‘synchronic’ concept of continuity may be discerned in Firstness, insofar as feelings may be noticed to have a certain overall quality irreducible to any component parts. (Recall that the way in which, it was remarked, the continuity of a geometric line allows one to describe the line without necessarily mentioning the points which lie on it.) This aspect of Firstness will be found to be significant later in the thesis. It will also become evident later in the thesis (particularly in §6) the way in which the mathematical concept of continuity is an important tool for Peirce in explicating his realism. However, for now, in phenomenology, the concept of continuity consists merely in the fact that we are inclined to have irreducible feelings, and also to frame hypotheses about the future which are predicated on our concepts’ possessing a certain reliability.

This investigation of what may be termed the ultimate genera of being might seem presumptuously a priori. It has been noted that when doing phenomenology Peirce emphasises that he is not offering any kind of proof of the results he is putting forward. He is only asking his listeners to engage in honest introspection, upon
which, he believes, they will perceive the results he is presenting. Even so understood, however, Peirce’s project might still appear somewhat presumptuous, for he is at least claiming that his categories exhaust the possible most general headings under which phenomena might appear. This claim of exhaustiveness is an extremely ambitious one. Should he not provide some proof that this is the case?41

1.4.2 Phenomenology Defended as a Philosophical Methodology

However, Hookway has noted usefully that – speaking purely methodologically – the practice of phenomenology is not so very different from appeals to what analytic philosophers call ‘intuition’, despite widespread mistrust of the term ‘phenomenology’ within analytic philosophy (which derives from what may be referred to as certain long-running geographically-focussed demarcation disputes within the profession). Hookway attributes this insight about the common ground between the phenomenological and analytic traditions to certain remarks made by Stanley Cavell on the relationship between the later Wittgenstein and the analytical tradition, and writes:

...when philosophers appeal to ordinary usage to justify a philosophical move...they see no need to appeal to empirical facts about usage. Rather, they consult their own ‘intuitions’, report on what they find themselves wanting to say in certain circumstances, and claim to speak with a ‘universal voice’. Unless the speaker could demand that others acknowledge what he says, his intuitions would be of no philosophical interest.42

Compare, then, Peirce’s method in deriving his categories with analytic philosophers’ notorious Twin Earth “intuition pump”43, which goes as follows. In our world, the clear liquid which fills rivers and lakes possesses the chemical formula H2O. Imagine, however, another world (Twin Earth) where the clear liquid which fills the rivers and lakes possesses a different chemical formula, enigmatically referred to as “XYZ”. The inhabitants of this world may refer to their clear liquid as water but, the argument goes, their clear liquid just is not water, for water “is” H2O. It doesn’t matter that until about two hundred years ago no-one knew that water was H2O, and that before that time water was in fact defined as the liquid which fills rivers and lakes, so that everyone would have claimed, if asked, that the liquid on Twin Earth was water. They would have been wrong to do so. This is an a posteriori necessity, at least according to the “intuition” concerned.

41 Charles Hartshorne has made this complaint in “A Revision of Peirce’s Categories”, The Monist 63, no. 3 (1980), pp. 277-289.
42 Hookway, Peirce, p. 110.
This result has been accorded many consequences in the philosophy of language, the philosophy of mind and the philosophy of science. Note, however, that no proof (either *a priori* or *a posteriori*) is being offered that the liquid in the rivers and lakes in Twin Earth is not water. We are just meant to perceive this fact upon attending closely to it. Phenomenology has often been understood as a specifically sensuous investigation, but if understood more broadly as *any* investigation whose methodology is *introspection*, it appears that phenomenology is an acceptable (and indeed widespread) philosophical methodology. Of course, sometimes the intuitions of the person on the street need to be massaged in order to deliver the claim that “Twin Water” is not water, and the consequent training of undergraduates’ intuitions by the profession has caused some controversy.\(^{44}\) It has been protested that consulting intuition is just a matter of gauging our pretheoretic opinions about a given subject. If this is right then the training of intuitions would be unacceptable, for it would seem to destroy the very thing it is meant to be studying. (It would be like an anthropological study which brought its subject community to work in an anthropology department as graduate students, and then sought to study their behaviour). Something similar is suggested by Noam Chomsky who writes:

A good part of contemporary philosophy of language is concerned with...exploring intuitions about the technical notions “denote”, “refer”, “true of”, etc., said to hold between expressions and something else. But there can be no intuitions about these notions, just as there can be none about “angular velocity” or “protein”. These are technical terms of philosophical discourse with a stipulated sense that has no counterpart in ordinary language—which is why Frege had to provide a new technical meaning for “Bedeutung”, for example.\(^{45}\)

However, it is undeniable that a powerful and highly suggestive idea of rigid designation can be formed given the right training.

Perhaps this stand-off can be ameliorated by a greater clear-headedness about the aims and proper province of phenomenology as a philosophical methodology, as follows. If phenomenology is understood (with Peirce) as providing *useful concepts* rather than *true statements*, perhaps the advocates of the Twin Earth intuition are right that one can train intuitions\(^{46}\) – in this case, to deliver the useful concept of rigid designation – but wrong to proceed straight to a truth-claim, that ‘water’ rigidly designates with respect to ‘H\(_2\)O-ness’. The truth or otherwise of this claim would on the contrary be a matter for logic, or perhaps even scientific inquiry. At the same time, the opponents of the Twin Earth intuition can be right to oppose the blithe truth-claim

\(^{44}\) Mainly confined to mutterings amongst postgraduate students in philosophy, of which the author and her friends surely cannot be entirely unrepresentative. However, see Noam Chomsky, “Language and Nature”, *Mind* 104, 413 (January, 1995), pp. 1-61, and David Chalmers, “The Tyranny of the Subjunctive” (work in progress, delivered at staff seminar, Australian National University, 12th January, 1999).

\(^{45}\) Chomsky, pp. 24-5.

\(^{46}\) Though this is not to say that they would necessarily endorse this description of their behaviour!
that water is necessarily coextensive with H₂O and to seek an argument that 'water' should rigidly designate, but wrong either to attack the use of intuition in philosophy altogether, or to claim that intuition is mere pretheoretic opinion and therefore should not be trained or otherwise developed. The stand-off could thus be argued to arise from both sides of the dispute failing to separately treat what are in fact two separate stages in the scientific hierarchy – namely phenomenology and logic. Since it seems that ‘intuitions’ will always be part of the philosophical toolkit, a self-conscious phenomenology, aware of its proper role and limitations, might therefore have a lot to offer contemporary analytic philosophy.

The answer to the charge that Peirce is being overly ambitious and should prove that his categories are only three, then, is analogous to the argument above. In his phenomenological derivation of the categories Peirce is not providing truth-claims but useful concepts. If the categories are useful, this is the only justification they require. It is incumbent on those who would argue that Peirce’s list of categories is not exhaustive to derive a different, longer list and demonstrate its usefulness. ‘Demonstration’ here is taken not in the sense of deductive proof, but in the sense of showing that the concepts in question enable the framing of useful hypotheses which would not be possible without them. (The explication of this sense of ‘useful’ will in fact be a large part of the business of this thesis.)

Phenomenology as conceived by Peirce, then, sets itself the task of examining our conscious experience for its most general and fundamental features. Having applied himself to this task, Peirce derived three fundamental “modes of being” – Firstness, Secondness and Thirdness. It is worth noting that this is not the only approach Peirce took to the derivation of his categories. His original derivation, in his 1867 paper “On a New List of Categories”, was Kantian, although since this derivation concentrated on the percept and what is required to “to reduce the manifold of sensuous impressions to unity (1.546),” this is arguably a proto-phenomenology. Peirce also attempted a further, more different categorial derivation within formal logic, which considered Firstness, Secondness and Thirdness as monadic, dyadic and triadic logical relations respectively, and sought to prove first that three categories are necessary to give formal expression to all possible valid inference, and then that three categories are sufficient (in other words, there is no irreducible ‘fourthness’). However, the validity of this proof is somewhat controversial.⁴⁷ I will therefore concentrate on the phenomenological derivation as Peirce’s most fundamental (in terms of his hierarchy of the sciences) and fruitful derivation of the categories. At any rate, with the

categories in place, it is now time to proceed down Peirce’s hierarchy of the sciences, to logic.
Chapter 2.

GENERAL PREDICATION, RULE-FOLLOWING AND CONTEMPORARY PRAGMATISM

2.1 Generality and a Logical Remedy

consider a fundamental idea which
worthwhile - the idea of making or at least
he grasp an idea that in principle has
If we consider, considering, the

If we suppose that, nevertheless,

Wissenschaft, that is, in no way is
how the need for making the service

*The Nature of Reason

Logique, for a short

Der Pragmatismus

* Local Pragmatism

* Local Pragmatism

* Local Pragmatism

* Local Pragmatism

* Local Pragmatism
Peirce wrote, “True generality is, in fact, nothing but a rudimentary form of continuity (6.172)”. What exactly does Peirce mean by “generality” here? It might be assumed that he is referring to, say, the existence of universals. However, this would be to jump the gun philosophically, for Peircean generality is in the first instance not an ontological but a logical notion, which pertains to predication. (That the so-called “problem of universals” is – properly regarded – a logical rather than an ontological debate will be argued in §6.) The concept of predication was introduced in the last chapter as an aspect of Thirdness, which manifests itself in such phenomena as our perceiving the world as possessing certain properties. In this chapter the very possibility of general predication will be challenged through a famous sceptical argument of Kripke’s, adapted from the later Wittgenstein. The solutions offered to the problem by Kripke himself and by Philip Pettit – whose “response-dependent” solution resembles Kripke’s in certain key respects – will then be presented. This will then lead naturally to a consideration of the views of other response-dependent theorists, and certain contemporary pragmatists. (A Peircean approach to the problem will presented in §7).

In this discussion of logical generality and the rule-following problem, I will sometimes speak of general terms and sometimes of general concepts. This terminological ambivalence reflects the literature on the rule-following problem itself. This is not surprising, however, insofar as both terms and concepts are particular manifestations of a deeper notion of general predication, which is common to both linguistic competence and thought, and which is what is really at issue with respect to the rule-following problem 48 – or so it will be argued.

2.1 Generality and Rule-Following

2.1.1 Generality as a Logical Rather than Ontological Notion

Consider a fundamental idea which was influential highlighted by the later Wittgenstein – the idea of following a rule. Wittgenstein noted that when we grasp a rule, we grasp an idea that in principle outruns any set of particular applications of the rule. If we consider, counting, for example, Wittgenstein writes:

...let us suppose that...[someone who is being taught to count] continues the series correctly, that is, as we do it. So now we can say he has mastered the system.–But how far need he continue the series for us to have the right to say this? Clearly you cannot state a limit here.49

48 The bleeding of the rule-following problem from language to thought has been noted in the literature, for example by Paul Boghossian, in “The Rule-Following Considerations”, Mind 98, 392 (October, 1989), p. 509.

In a similar vein, Peirce writes:

Let us examine the idea of generality. Every cook has in her recipe-book a collection of rules, which she is accustomed to follow. An apple pie is desired. Now, observe that we seldom, probably never, desire a single individual thing. What we want is something which shall produce a certain pleasure of a certain kind... An apple pie, then, is desired – a good apple pie, made of fresh apples, with a crust moderately light and somewhat short, neither too sweet nor too sour, etc. But it is not any particular apple pie; for it is to be made for the occasion; and the only particularity about it is that it is to be made and eaten today. For that, apples are wanted; and remembering that there is a barrel of apples in the cellar, the cook goes to the cellar and takes the apples that are uppermost and handiest. That is an example of following a general rule (1.341).

What is common to both these remarks is the idea that we have understandings which reach beyond any set of particular cases. So, for example, understanding counting requires grasping a set of principles which mean that even if I have never seen the number 13, 900, 900 before, I still know that the number that comes directly after it is 13, 900, 901, and not 13, 900, 903. Similarly, learning how to cook an apple pie requires grasping general principles. Each time Peirce’s cook takes apples to make a pie, it doesn’t matter that she has never seen those particular apples before. She knows what to do with them based solely on their being apples.

There is thus an essential normativity involved in what Wittgenstein calls rule-following and Peirce calls general predication, and this claim may usefully be divided into two parts. The first is that understanding a rule or a general predicate requires one in principle always to be able to project that rule or general predicate. For this reason, no finite number of applications can exhaust the rule or predicate. Secondly, a norm is essentially something which discriminates between alternatives, whether it is (for example) an ethical norm which says that one course of action is more good or virtuous than another possible course of action, an aesthetic norm which says that certain types of thing are more beautiful (or otherwise intrinsically attractive) than others, or at the more general level, a ‘meaning-norm’ which dictates that the extension of a certain predicate should embrace certain individuals and not others. We can give no meaning to the notion of a norm which does not so discriminate, or ‘carve logical space’. Peirce expresses this idea by defining a normative science (with colourful simplicity) as one that “proposes to separate the sheep from the goats (5.37)”. This essence of normativity as consisting in the possibility of error – of applying a rule wrongly – will become an important antidote to more problematically reified notions of normativity in later chapters.

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50 The congruence is not entirely coincidental as Wittgenstein received an indirect influence from Peirce both through Ramsey, who read the first edition of Peirce’s Collected Papers in the ‘30s, and also through the works of William James, which were read by Wittgenstein with interest. See Jaime Nubiola, “Scholarship on the Relations Between Ludwig Wittgenstein and Charles S. Peirce”, in Angelelli & M. Cerezo, eds., Proceedings of the III Symposium on History of Logic (Berlin: Gruyter, 1996).
Are not these understandings which reach beyond any set of particular cases rather mysterious? Indeed, philosophers have puzzled over how rules and/or rule-followers manage to perform their characteristic feats of (what may be termed) ‘semantic reaching’ – feats which, when one thinks about them in the right way, are liable to seem ‘superphysicalistic’. For no physical process seems infinitely inexhaustible in the way that rules (or general predicates) apparently are. The law of entropy dictates that every expenditure of energy will eventually ‘run down’ and cease to have measurable effects. Yet the rule for counting apparently applies to every instance of counting possible (and not just physically but logically possible), and yet at the same time this rule is something which we, whose minds are finite and demonstrably fallible, grasp. Once we grasp the rule for addition we know that, to the heat death of the Universe and beyond, adding two things to two other things will produce four things. How do we manage to know such a thing?

Thus Wittgenstein’s discussion of rule-following is widely perceived to have identified a distinctive and challenging philosophical problem, the “rule-following problem”, which has been influentially presented by Saul Kripke in particular as “the most radical and original sceptical problem that philosophy has seen to date”51. I will now outline Kripke’s presentation of this problem.

2.1.2 The “Rule-Following Problem”

Kripke notes that it is not logically impossible, supposing for simplicity’s sake that I have never added numbers larger than 56, for what he calls a “bizarre sceptic” to declare that he believes my answer to the sum “68 plus 57” should be 5! When I express incredulity he explains that what I mean by addition is in fact the *quus* function, defined thus:

\[
\text{x \ quus \ y} = \begin{cases} 
  x + y, & \text{if } x \text{ and } y \text{ are less than 57} \\
  5 & \text{otherwise.}
\end{cases}
\]

As I have never added a number higher than 56 before, this function does not directly contradict my past instances of adding. So how can I prove to the sceptic that that is not in fact what I meant by “the sum of 68 and 57”?

It would seem that the answer lies in the fact that adding is a specifiable algorithm. One takes two piles of, say, apples, of the two quantities that are to be added. One pools the apples and counts the total. I can then claim that this algorithm is of course to be used to evaluate *all* cases of addition, not just those below 57. However, as Kripke points out, the sceptic can reply that by *counting* (the apple total) I really mean “quounting”, a procedure which yields the answer 5 when one of the quantities is greater than 56. Thus, following my algorithm will yield the answer “5” for “68 plus

just as surely as direct addition. In fact, as Kripke points out, the sceptic can likewise counter any attempt I might make to explain adding in terms of a more basic procedure or recipe:

It is tempting to answer the sceptic by appealing from one rule to another more “basic” rule. But the sceptical move can be repeated at the more “basic” level also. Eventually...I am left with a rule which is completely unreduced to any other. How can I justify my present application of such a rule, when a sceptic could easily interpret it so as to yield any of an indefinite number of other results?\(^\text{52}\)

Kripke argues that the paradox is not just the epistemological one that in following a rule “I can have no justification for one response rather than another”\(^\text{53}\). There is no fact about me, no set of unambiguous instructions encoded in my brain, which determines whether I mean plus or quus.

At this point many philosophers wish to respond that the challenge is quite ridiculous. The world contains natural kinds and regularities, it will be pointed out, and so surely we can identify our rules with these on some level.\(^\text{54}\) Answers to the sceptic of this form usually claim that our rule-following behaviour is a disposition we possess. Just as delicate crystal has the disposition to shatter if knocked, we have the disposition to produce “125” as the answer to “68 + 57”, it will be claimed.

To this reply Kripke has two counter-arguments. The first is that our dispositions are finite, in the sense that the number of adding operations a person can perform before they physically expire is finite; yet the adding rule is infinite, and must cover the infinite number of addings that no human is physically capable of performing. Once we extend the plus-function beyond all such finite dispositions, an opportunity is open for the rule-following sceptic to claim that the rule should be extended in apparently bizarre ways:

The dispositional theory attempts to avoid the problem of the finiteness of my actual past performance by appealing to a disposition. But in doing so, it ignores an obvious fact: not only my actual performance, but also the totality of my dispositions, is finite. It is not true, for example, that if queried about the sum of any two numbers, no matter how large, I will reply with their actual sum, for some pairs of numbers are simply too large for my mind... to grasp.\(^\text{55}\)

Kripke’s second counter-argument, which arises from the first, draws on the rule’s essential normativity. He writes, “a dispositional account misconceives the sceptic’s problem – to find a past fact that justifies my present response”\(^\text{56}\), and claims that the anti-sceptic cannot claim to locate a source for true ‘rule-making’ normativity in anything dispositional or otherwise naturalistic without begging the question against

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\(^{52}\) Kripke, Wittgenstein on Rules, p. 17.

\(^{53}\) Kripke, Wittgenstein on Rules, p. 21.


\(^{55}\) Kripke, Wittgenstein on Rules, pp. 26-7.

\(^{56}\) Kripke, Wittgenstein on Rules, p. 24.
the sceptic. Kripke considers as an example the claim that if our brains were technologically enhanced then of course we would perform *addition* on numbers out of our present range of mental arithmetic. If the rule-following sceptic replies, “No, I believe we would perform ‘quaddition’”, then the anti-sceptic can only claim to *know* that we would perform addition by implicitly drawing on the rule, for “We have no idea what the results of such experiments would be. They might lead me to go insane, even to behave according to a quus-like rule.”

Thus, though it was just noted that the metaphysical dimension of the rule-following problem as presented by Kripke is not to be overlooked, the problem is a challenging synthesis of epistemological and metaphysical demands. It cannot be solved by pure ontological postulation (for example, of brute dispositions to ‘go on’), without an epistemological story which explains and makes plausible our grasp and straightforward application in particular cases of whatever is being postulated to solve the problem, or so Kripke claims.

Kripke considers a further counter-argument which suggests that what distinguishes the plus from the quus rule is a certain *special feeling* which plus has and quus does not:

> Why not argue that “meaning addition by ‘plus’” denotes an irreducible experience, with its own special *quale*, known directly to each of us by introspection?

Kripke argues that this solution (which he claims derives from “classical empiricism”) will not work, however. He argues that it does not answer the epistemological demand made by the sceptic that the proffered solution to the rule-following problem should somehow *justify* the way in which I go on. How can a *feeling* deliver the result that, say, 68 plus 57 is 125, not 5?

> If there were a special experience of ‘meaning’ addition by ‘plus’, analogous to a headache, it would not have the properties that a state of meaning addition by ‘plus’ ought to have – it would not tell me what to do in new cases.

Moreover, Kripke argues that the idea of meaning as “an introspectible experience” is precisely what Wittgenstein was concerned to argue against in the *Philosophical Investigations*, most notably in the famous private language argument.

Kripke concludes that, incredible as it may seem, we really have no justification for extending our meanings in the way that we do, if we consider ourselves in isolation. There is no fact about *me* that determines that I mean plus rather than quus. This, then,

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57 Kripke, *Wittgenstein on Rules*, p. 27.
is the rule-following problem. Having been highlighted so vividly by Kripke, the problem has been much discussed by others in the analytic tradition.\textsuperscript{61}

2.1.3 Kripke’s Sceptical Solution to the Rule-Following Problem

Kripke described the rule-following problem as the most “radical” form of scepticism philosophy has seen to date, and it seems that it would indeed be devastating if it succeeded. If every general predicate could be extended in any bizarre way with equal justification, what would be left of language? What would be left of thought? Note that the sceptical problem transfers naturally from a problem about meaning (which is how Kripke describes it) to a problem about truth-conditions. If we cannot refute the sceptic’s claim that “57 + 68 = 5” is a legitimate extension of the plus-function, this seems to undermine our own claim that “57 + 68 = 125” is true. However, Kripke offers a response to the rule-following sceptic.

When it comes to sceptical problems, Kripke writes, one must distinguish between a “straight solution” to the problem concerned, which answers the problem on the sceptic’s own terms, and a “sceptical solution”, which concedes that the problem is unanswerable but argues that, for some reason, the fact that the problem is unanswerable does not matter:

Call a proposed solution to a sceptical philosophical problem a straight solution if it shows that on closer examination the scepticism proves to be unwarranted; an elusive or complex argument proves the thesis the sceptic doubted. Descartes gave a ‘straight’ solution in this sense to his own philosophical doubts...A sceptical solution of a sceptical philosophical problem begins on the contrary by conceding that the sceptic’s negative assertions are unanswerable. Nevertheless our ordinary practice or belief is justified because...it need not require the justification the sceptic has shown to be untenable.\textsuperscript{62}

In the case of rule-following scepticism, then, a straight solution would locate some fact about me which determines that I mean plus rather than quus. Kripke therefore argues that only a sceptical solution is possible, which “...does not allow us to speak of a single individual, considered by himself and in isolation, as ever meaning anything.”\textsuperscript{63} To this end, he replaces what he calls “truth conditions” for what someone means with what he calls “justification conditions” or “assertability conditions”. These latter, which he refers to as “the tests suggested in Philosophical


\textsuperscript{62} Kripke, \textit{Wittgenstein on Rules}, p. 66.

**Investigations**, concern the role which saying that someone means something might play in a community:

All that is needed to legitimize assertions that someone means something is that there be roughly specifiable circumstances under which they are legitimately assertible, and that the game of asserting them under such conditions has a role in our lives. No supposition that ‘facts correspond’ to those assertions is needed.64

So, if we look at one person in isolation, all we can say is that he applies rules unhesitatingly according to his own inclinations. However:

The situation is very different if we widen our gaze from consideration of the rule follower alone and allow ourselves to consider him as interacting with a wider community. Others will then have justification conditions for attributing correct or incorrect rule following to the subject...65

In other words, I apply any rule just how I think it should be applied. However, where I depart from the accepted usage of the rule (for instance by failing to carry a number while adding) the community corrects me, and it is this rather than my own certainty about my particular applications that establishes the proper extension of the rule.

Kripke is careful to say that the rule cannot be *reduced* to facts about community usage:

Wittgenstein’s theory should not be confused with a theory that, for any \( m \) and \( n \), the value of the function we mean by ‘plus’ *is* (by definition) the value that (nearly) all the linguistic community would give as the answer. Such a theory would be a theory of the *truth* conditions of such assertions as “By ‘plus’ we mean such-and-such a function.”66

To this end Kripke stresses to his readers that rather than truth-conditions for the proper extension of the plus-function, his sceptical solution offers only “assertability” conditions. Still, according to Kripke there is no further fact about what the rule means than what the community does. To sum up Kripke’s solution to the rule-following problem, then, if I look at lone users of the plus-function, what they are doing looks quite mysterious. How can users *know* that their rule goes on in any particular direction in cases they will never encounter? However, when I look at the community as a whole and its practices of encouraging and correcting rule-followers, the rule-following behaviour becomes explicable, though it is strictly speaking not *true* that individual rule-followers mean anything.

### 2.1.4 Challenges for the Kripkean Solution

It might be wondered how factoring in the community and the corrections it offers to the rule-follower can help with such a radical meaning scepticism as the one Kripke

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raises, as surely the community is still only finitely large. It might be conceded that his invocation of communal "assertability conditions" can extend the plus-function a long way beyond what any individual adder might be physically capable of, and also remove from the extension of the plus-function any adding mistakes that he might be prone to make. However, what about additions that are so very large that no member of any human community will ever consider them (say, because the numbers involved are so large that no-one could write them down in an entire lifetime)? Does Kripke claim that the plus-function has an extension in such cases? If so, how can he do this without his sceptical problem rearing? If not, hasn't he only pushed back rule-following scepticism by a small amount? In fact, given that the community and its additions are finite and the number of possible applications of the plus-function is infinite, it would appear that he has only pushed back rule-following scepticism by an infinitesimal amount. Is the rule-following community finite, however? This issue will be discussed in later chapters.

Secondly, it might be wondered whether Kripke's solution falls to the same objection as Kripke himself raises about the dispositional account. Kripke complained that a mere disposition to continue a rule in a certain way does not provide a normativity sufficient to answer the sceptic who wonders why the rule should not be continued in quite another way. Offering something projectible as an explication of the rule is not enough, he claims: we need a justification for projecting in that way and not in some other way.

Yet Kripke's assertability conditions do not offer the justification for going on which he criticises the dispositional solution for not providing. Kripke will argue that this is due to his shift from providing truth-conditions to providing assertability-conditions for the proper application of the rule. That is, with the shift from a "straight" to a "sceptical" solution of the rule-following problem, we are meant to be giving up the requirement of justification. However, note that Kripke puts his assertability-conditions into the functional role which truth-conditions normally play in an account of general predication – analysing the meaning and the correct application of concepts such as 'plus'. In so replacing the concept of truth with the concept of assertability, Kripke seems to sacrifice much with his sceptical solution to the rule-following problem. These issues will be further discussed in §7 and §8.

I will now consider a view of our concepts which has been dubbed "response-dependence", and has been offered as a solution to Kripke's problem of rule (or logical generality) scepticism. This solution is similar to Kripke's in that Pettit suggests that the way to determine which rule someone is following is to look more broadly than the rule-following individual, to the individual's context. However it is different in that it offers truth-conditions rather than assertability conditions for the proper application of
a rule, and thus purports to be a straight, not a sceptical solution to the rule-following problem.

2.2 Response-Dependence as a Solution to the Rule-following Problem

2.2.1 On Not Conflating Meaning with Reference

The rule-following problem, in its attack on general predication, seems to destroy meaning. For it seems to establish that one person considered in isolation does not mean anything. It has been thought, however, that if we consider that person’s community and its practices, then we can uniquely determine whether the person means plus or quus. Rules are not facts about individuals, it has been conceded to the sceptic, but they are facts about communities.

Furthermore, it has been noted that the problem with the traditional picture is that it assumes that when we follow a rule or apply a general predicate, there is always some specific thing we are responding to in extending the rule or predicate in the way we do. This idea could be crudely summarised as conflating meaning with reference. Therefore, it might be argued that what Wittgenstein has taught us is that, rather than looking for what we are responding to every time we use a term, sometimes we should just look at our responses – for sometimes nothing but our responses is there to be investigated. For instance, Wittgenstein writes:

I send someone shopping. I give him a slip marked “five red apples”. He takes the slip to the shopkeeper, who opens the drawer marked “apples”; then he looks up the word “red” in a table and finds a colour sample opposite it; then he says the series of cardinal numbers...up to the word “five” and for each number he takes an apple of the same colour out of the drawer....“But how does he know where and how he is to look up the word “red” and what he is to do with the word ‘five’?”—Well, I assume that he acts as I have described. Explanations come to an end somewhere.—But what is the meaning of the word “five”?—No such thing was in question here, only how the word “five” is used.67

Passages such as this have given birth amongst some Wittgensteinians to the slogan, “Meaning is use”, which is intended to draw just such a contrast between the meanings of terms as dictated by (what is often referred to as) “things in the world”, and the meanings of terms as dictated by human practices or responses. (The sharp contrast that this presupposes between “things in the world” and “practices” is worth noting and will not go unexplored later on.) A family of views which seeks to make this turn to our responses explicit, and which has gained some currency in recent years, goes by the name of “response-dependence”.

2.2.2 Pettit: An “Ethocentric Genealogy” of Rule-Following

Pettit is one of many philosophers who have set out to argue against Wittgenstein as presented by Kripke. He acknowledges the force of Kripke’s discussion of rule-following scepticism, but conceives the problem not so much to concern what fact about the rule-follower guarantees that he means what he does, as to concern what sort of thing a rule is. Pettit argues that, whatever a rule is to be, it must meet both the “subjective conditions” of being directly accessible to us finite rule-followers (in other words, the extension of the rule must be accessible a priori), and the “objective conditions” of being infinitely normative. The rule-following problem, then, concerns how anything can play both roles simultaneously.

Pettit believes that a “straight solution” can in fact be presented to the sceptic. To this end he offers what he calls an ethocentric genealogy of rule-following, an account of how human beings do in fact come to follow rules. This he feels will solve the sceptical problem insofar as the problem taxes the form: how can human beings so much as follow rules? His account has two parts. First of all he claims that it is a brute fact that, provided with certain sets of individuals, we possess inclinations to extrapolate those examples in the direction of similarities that the individuals are perceived to share. Thus, presented with a banana and a buttercup, one may select a piece of cheese to join them, responding to the yellow colour they all have in common. It is not hard to see that the fact that we possess such inclinations could be given some naturalistic explanation in terms of our evolving in environments in which it is useful to classify objects according to various similarities they share. (Edibility springs to mind, for example.) Such inclinations cannot be called instances of rule-following, however, as they are not yet fallible. There is no way one can say that such inclinations are right or wrong, they are just ‘there’. A further precondition for rule-following, then, is that corrections might somehow be presented to those who follow their inclinations.

So far Pettit’s account seems equivalent to Kripke’s. However, Pettit’s account is more naturalistic in that it assumes that such corrections will only be necessary where some perturbation to our normal judgement-forming processes has occurred – that is, where the judgement has not occurred in what he calls “favourable conditions”. Otherwise, he claims, the rule and the inclination are one. (“The rule is fixed by what goes in favourable conditions with my inclination...”) Consider, for instance, the concept of redness – which is offered as a paradigm case of rule and inclination coinciding. Pettit claims that when the normal inquirer views objects under the right

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70 Judging redness might seem to be so much a matter of pure “inclination” that it might seem strange to call it a rule at all, insofar as seeing something as red seems to be something which I have
lighting, without having imbibed hallucinogenic drugs or being under any other disturbing influence, redness just extends to whatever he is inclined to group together with the paradigm cases of redness (such as cherries and stop signs) which he has viewed in the past. There can be no further question about the proper extension of the concept of redness.

There is in fact a long tradition of viewing colour-concepts as ‘ours’ in this sense. The so-called secondary qualities were defined by Locke as, “such qualities which in truth are nothing in the objects themselves but powers to produce various sensations in us”\(^{71}\), and Locke offered colours as a paradigmatic example of secondary qualities. He argued that, for instance, the whiteness of manna (a mysterious substance familiar to Biblical authors and early modern philosophers) is no more an object ‘in’ the manna independent of us, than the sickness which we experience upon eating manna can be said to be ‘in’ the manna and independent of us. In both cases all we have is a response by us to the manna. However, unlike Locke, Pettit wants to extend this secondary quality analysis to all semantically “basic” concepts, and thereby show that:

...none of our concepts conform to the traditional image of primary quality concepts; all are contaminated with subjectivity in a manner that is thought to be distinctive of secondary quality concepts.\(^{72}\)

### 2.2.3 Response-dependence as a “Straight Solution”

This, then, is response-dependence, which seeks to define the meaning of a given concept in terms of a biconditional (which is seen as holding a priori), which has something like the following form:

...something is red if and only if it is such as to look red to normal observers in normal circumstances.\(^{73}\)

In other words, it is a feature of our human physiology that we respond reliably to certain perceptual stimuli so as to say that they ‘look red’. This fact is then invoked in order to analyse the concept of redness. We can then give an account of the proper extension of ‘red’ not in terms of a ‘thing in the world’ (for redness is notoriously hard to translate into the terms of the natural sciences and seems, at least at this stage of scientific inquiry, not to be a natural kind\(^{74}\)), but in terms of our disposition to respond to that world in certain reliable ways.

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\(^{72}\) Pettit, “Realism and Response-Dependence”, p. 2.

\(^{73}\) Pettit, “Realism and Response-Dependence”, p. 16.

This is a “straight” solution to the rule-following problem because Pettit seeks to account for the proper extensions of rules solely in terms of the individual, his inclinations, and the favourable conditions under which those inclinations are corrected to become rules proper. In this way, the individual is not hostage to the community in order to mean anything at all in the way he is under Kripke’s account. Since all that is at stake when it comes to distinguishing rules from mere inclinations to extend predicates in certain ways is the possibility of one’s inclinations being corrected in unfavourable conditions, it seems that one could investigate the nature of such unfavourable conditions on one’s own, at least to some degree. For instance, if one noticed that sticks which normally appeared straight appeared bent when immersed in water, one might conclude that immersion in water is an “unfavourable condition” for judging an object’s shape (and one might make such decisions even if one were Robinson Crusoe). Pettit admits as much (“[r]ule-following as such requires interaction...But that interaction can be provided in principle by oneself at other times as well as by other persons.”).

However at the very end of “The Reality of Rule-Following” Pettit tries to ‘have a bet both ways’ on the role which the community plays in providing truth-conditions for rules’ proper application. He claims that at the end of the day rules are “public”, for “[it is] only if the person identifies the rule on the basis of an interpersonally as well as intertemporally standardised inclination that I can know which rule he is following”.

So here he seems to undermine his claim to be giving a straight solution to some degree. He attempts to limit this damage, however, by urging that I can still know which rule I am following in a “straight” sense. The interpersonal requirement only comes in with respect to knowing what rules other people are following. Such a solipsistic account of rule-following knowledge does, however, seem a high price to pay for a straight solution to the rule-following problem.

Obviously a great deal hangs on how these “favourable conditions”, in which inclinations deliver no error, are to be defined. How is it to be done in a way that does not beg the question by defining favourable conditions as “whatever it takes” (to, for instance, judge something to be red)? What if the only favourable conditions it is possible to frame turn out to be situations in which an object is, in fact, red? Response-independence would then re-enter his position through the back door. Pettit’s

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The self isolated in time and society, the solitary, momentary self, cannot follow a rule, cannot try to be faithful to any constraint, because it has nothing to play off against. We human beings can follow rules...so far as we interact with ourselves across time or, more plausibly, interact with one another.” (p. 9).

77 Mark Johnston has raised this objection. See, for example, “Are Manifest Qualities Response-Dependent?”. The Monist 81, no. 1 (1998), pp. 9-10.
“ethocentric” account of rule-following seeks to define favourable conditions in a non-question-begging way through some sort of study and systematisation of the practices we actually go through when we decide that certain conditions are error-producing, and proceed to “discount” them. He writes:

The approach suggested in my ethocentric account of the redness concept is to describe the practice of participants in discounting certain responses, and then to define normal conditions in a higher-level way as those conditions, whatever they are, which survive the relevant discounting practice.  

Whereas normal conditions are those which survive all “relevant” discounting practices, Pettit notes that ideal conditions may usefully be defined as those which survive all discountings.

To sum up Pettit, then, his response to the rule-following problem seeks to narrow down the infinite multiplicity of possible alternative extensions of any concept to a single rule by allowing us and our responses (suitably corrected) to determine the proper extension of any concept. Note that Pettit’s account concerns itself not just with the meaning of our concepts, but also with truth-conditions for the proper extension of any given rule or concept (unlike Kripke who merely presents “assertability conditions”). If an entire community responds under normal conditions to a given object that it looks red, then for Pettit it is true that that object is red. Moreover, Pettit’s is a global response-dependence. There is therefore no conceptual ‘room’ for there to be true statements about objects ‘behind’ our responses. (This issue will be further discussed in §8.2.) Indeed, the concept of truth itself will have a response-dependent analysis according to Pettit.

So far all of this chapter has been in some sense concerned with predication. It began by equating the Peircean concept of logical generality with Wittgenstein’s notion of following a rule. This led to the “rule-following problem”, which seemed to highlight a bewilderingly infinite number of different possible ways of extending any given general predicate, such as ‘plus’, none of which can be proven to be any more justified than our own. Kripke argued that this unhelpful multiplicity cannot be reduced by reference to any ‘thing in the world’, for anything we provide to this end (such as a disposition, a natural kind or a special feeling) will underdetermine the rule just as its past applications do.

One way of viewing Kripke’s result, it was suggested, is that it demonstrates that meaning is not reference. It is wrong to expect a determinate object in the world both to stand for the meaning of every general term and to justify its extension. But what is meaning exactly? This question will be discussed much more fully in §3, where Peirce’s answer to it will be presented. For now, however, it is worth noting that

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75 Pettit, “Realism and Response-Dependence”, p. 17.
76 This includes the provision of further information, Pettit has noted (in private correspondence).
Kripke suggested that meaning may be identified in some sense with our community’s “assertability conditions” for terms such as ‘plus’, while Pettit turned to the rule-following individual’s responses to the world in “favourable conditions” in order to solve Kripke’s problem. The rest of this chapter is devoted to discussing the way in which some recent authors who describe themselves as pragmatist deal with this issue of how to open up a space for meaningful (or even, as we will see, “right”) predication that is not necessarily referential. For, as has been noted, response-dependent accounts of concepts have been explicitly identified with pragmatism by at least one prominent author.

2.3 Pragmatism and “Metaphysics in the Pejorative Sense”

What exactly pragmatism is, is a large and complex question. Nevertheless if the question is approached on a very general level, it may be noted that pragmatism seeks to gain philosophical insight from understanding us as acting in the world, not just representing it. Thus philosophers may be found defining pragmatism, for example, as “a philosophy that stresses the relation of theory to praxis”\textsuperscript{80}, a philosophy whose “central emphasis” is “the emphasis on the primacy of practice”\textsuperscript{81}, or the exceedingly vague remark that pragmatism concerns “a distinction between beliefs which serve some purposes and beliefs which serve other purposes”.\textsuperscript{82} Issues pragmatism has been thought to illuminate include truth, meaning, belief, ethics, probability and causation.

However, what exactly should follow philosophically from this fact that we “intervene” in the world as well as “representing” it\textsuperscript{83}, is a question that has received a wealth of contrary responses. Indeed it is tempting to speculate that no philosophical ‘ism’ has spawned such directly contradictory claims amongst those within its fold as has ‘pragmatism’. Famously, this conflict goes back to the term’s initial appearance in the philosophical community, when Peirce found it necessary to distance himself from the use to which his term was being put by philosophers such as William James and Frederick Schiller by coining the self-consciously repulsive term “pragmaticism” to apply to his own view.\textsuperscript{84}

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\textsuperscript{83} The phrasing of this question draws on Ian Hacking’s suggestive terminological opposition in his Representing and Intervening (Cambridge: Cambridge University Press, 1983).

\textsuperscript{84} See, for instance, 5.414-416.
Nicholas Rescher has usefully divided the differing interpretations of pragmatism into what he calls “a pragmatism of the right” and “a pragmatism of the left”. Both positions analyse certain key philosophical concepts in terms of what he calls “what works”, in the sense of what helps us to achieve our ends. However, pragmatism of the right he describes as “‘What works impersonally’–through proving efficient and effective for the realization of some appropriate purpose in an altogether person-indifferent way”, while pragmatism of the left is “‘What works for X’ in proving efficient and effective for the realization of a particular person’s (or group’s) wishes and desires”\(^85\). Rescher locates Peirce (and himself) on the right hand side of this division, and the pragmatists I am about to discuss (who take their inspiration more from James and Dewey than Peirce) may all be found on the left.

2.3.1 Johnston: “Progressive” Pragoreanism

It was Mark Johnston who coined the term “response-dependent”, though similar ideas were also put forward under the name “judgement-dependence” by Crispin Wright.\(^86\) Johnston identifies response-dependence with what he calls “Progressive Pragmatism”. This position is to be distinguished from what he calls “Verificationist Pragmatism”, which he identifies in the work of Hilary Putnam, and criticises at length. (These criticisms will be discussed in §4.4.) Progressive Pragmatism he describes as:

a critical philosophy which not only corrals the developed manifestations of metaphysics within philosophy but also serves the ends of practical criticism.\(^87\)

Though he criticises Putnam, he concedes that they have a common enemy in a certain metaphysical realism, which he calls “metaphysics in the pejorative sense”. He views such metaphysics as an outdated remnant of what he calls “medieval theology”, which is “the idea of the world’s having a structure privileged independently of our cognitive activity”.\(^88\) He is somewhat vague about why such an idea should be rejected, but he refers to it as “scientistic” and claims that “the only real legitimation of [our] practices consists in showing their worthiness to survive on the testing ground of everyday life”.\(^89\)

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Like Pettit, Johnston focuses on the analysis of concepts. His definition of response-dependence proceeds explicitly *via* the notion of a secondary quality. He begins by defining a contemporary version of a secondary quality concept, which he calls a *response-dispositional concept*. A response-dispositional concept is a concept which may be given an analysis of the following form:

The concept \( F = \text{the concept of the disposition to produce } R \text{ in } S \text{ under } C \)

He defines \( R \) as “some response of subjects which essentially and intrinsically involves some mental process”, while \( S \) is “some subject or group of subjects”, and \( C \) is some set of appropriate background conditions. Thus Johnston offers the following biconditional for redness:

\[
\text{The concept of being red} = \text{the concept of the disposition to look red to standard perceivers as they actually are.}
\]

A response-dependent concept, then, is some truth-functional compound of response-dispositional concepts. He notes that the notion of a response-dependent concept is broader than the notion of a secondary quality, however, in that it need not be restricted to “concepts of sensible qualities”.

Unlike Pettit, Johnston is not a global response-dependence theorist. However, having introduced the notion of a response-dependent concept, he considers a position which he calls *Descriptive Protagoreanism*. Alluding to the famous Protagorean dictum that “man is the measure of all things”, this position holds that many of our concepts in fact have response-dependent truth-conditions. Johnston offers, as possible candidates for this position, concepts in ethics and causal theory (among others):

I propose to appropriate the term ‘Descriptive Protagoreanism’ for the position which has it that at least at the conceptual level, human response is the measure of most things, so that many or most concepts have built into them conditions on our dispositions to respond...

A philosophically interesting Protagoreanism might put forward *a priori* claims like

\[
(13) \text{x is a good state of affairs iff we are stably disposed to judge it so under conditions of increasing non-evaluative information and critical reflection.}
\]

\[
(14) \text{Xs cause Ys iff under conditions in which we wanted to bring about Ys and in which our abilities were not subject to the various sorts of contingent limitations from which we suffer we would be disposed to manipulate Xs as a means of bringing about Ys...}
\]

Similar to Descriptive Protagoreanism but more philosophically ambitious is *Revisionary Protagoreanism* – the view that many of the concepts which we believe to be response-independent are in fact furtively or confusedly projective, and should be

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replaced with concepts which wear their response-dependence on their sleeve. Johnston suggests that colour concepts fall into this category:

The case of colour is a kind of philosophical paradigm for a Revisionary Protagorean, that is, a philosopher who recognizes that our concepts are not many of them response-dependent as they stand and yet holds that they need to be replaced with response-dependent surrogates.\(^{93}\)

Johnston holds a more complex position than Pettit with respect to the concept of truth. He claims that truth is a straightforwardly response-independent concept.\(^{94}\) However, although Progressive Pragmatism does not apply to the concept of truth itself, he claims that it is a claim about which truths are worth our attention. This is how he does away with “metaphysics in the pejorative sense”, for pragmatism, he claims, “nowhere needs to claim that metaphysical statements...are devoid of truth-value. It is enough that an interest in such unconstrained claims is idle.”\(^{95}\)

Johnston pours some scorn on the desire to pursue truth as an end in itself, suggesting that it might be called “a fiendish curiosity”. Rather, he claims that we need a theory of the “rightness” of accepting a theory for certain practical purposes. This too is a response-dependent notion, he claims:

The practical element in Pragmatism is best presented as a normative claim, the claim that our interest in truth should always be a practically constrained interest, an interest restricted in principle to accessible truth. The relevant notion of in principle accessible truth is a response dependent notion.\(^{96}\)

The benefit of heeding Pragmatism’s normative claim, then, is that it keeps us from wasting epistemic energy on “idle speculation”. Thus, Progressive Pragmatism begins as an analysis of the truth-conditions of our concepts and, like Pettit, Johnston looks to our responses to the world to provide this analysis. However, this form of pragmatism ends on a more epistemological note, by blocking inquiry into what might give rise to the responses which provide truth-conditions for response-dependent concepts, for such an inquiry would be “metaphysics in the pejorative sense”.

2.3.2 Some Unanswered Questions for Progressive Pragmatism

This theory has a certain exhilarating anti-speculative revisionism, but on closer examination the details of its implementation appear somewhat vague. Let us take as an example of Progressive Pragmatism in action the truths of chemistry. Is Johnston saying that we should only be interested in the parts of chemistry which will serve our practical ends? So for instance does he think we should study the compounds which are useful in plastics and pharmaceuticals and ignore the higher reaches of the periodic

\(^{95}\) Johnston, “Objectivity Refigured”, p. 112.
\(^{96}\) Johnston, “Objectivity Refigured”, p. 112.
table, the elements of which can only be created at great expense in controlled laboratory conditions? But how are we to know in advance which parts of chemistry will serve our practical ends? Could eighteenth century chemists, for instance, have anticipated which of the areas of their discipline would yield practical results in the nineteenth? Science is notorious for the surprises it throws up and the (increasing) speed with which the most abstract theoretical inquiries become life-changing applications. How are we to predict the future in this most unpredictable of human activities?

Moreover, if scientists are unable to predict the future of their own disciplines, to which they have devoted years of specialist training, it seems even less likely that philosophers would be able to make such judgements. If pragmatism is meant to help philosophers to make such judgements, how is it to achieve this? Johnston, in advocating response-dependence as a new and challenging approach to philosophy, makes much of a supposed turn from high metaphysics to “an emphasis on practical upshot even in high theoretical matters”. Therefore if his theory itself fails to be practically applicable, this suggests the possibility of a ‘pragmatic refutation’ of it.

Johnston does provide one example of the application of Progressive Pragmatism to the vexed question of whether John F. Kennedy was truly assassinated by Lee Harvey Oswald, about which many people have longed to know the truth. He says:

If under critical conditions we are stably disposed to judge it right to accept the theory for the purpose of knowing the truth about the assassination this is only because under ideal critical conditions we would be provided with enough information to recognize that the theory is true. In such cases the rightness of accepting the theory may seem in no important sense up to us...It follows directly from the fact that the theory is true that it is right to accept it for the purpose of knowing the truth.97

However he immediately follows his endorsement of believing the truth in this epistemic context with an apparent recommendation against doing so in all contexts:

Pragmatism is partly the reminder that even in theoretical matters we have more complex purposes than the purpose of simply knowing the truth (at whatever cost to our other interests)...Once we move away from a pure unadulterated interest in the truth at whatever cost (a fiendish curiosity?) a gap opens up between a theory’s being true and its being right to accept the theory for certain purposes...There is the further evaluative question of whether the theory is a good means to our end.98

Unfortunately, however, he provides no examples of circumstances where a particular theory might be true and yet not a good means to our end, and thus best passed over by the Progressive Pragmatist.

Johnston is also rather vague about how “our interests” are to be defined. For example, does he mean material self-sufficiency? Pleasure? The fulfilment that comes

from leading a life in which one is challenged to develop one’s talents to the full? Furthermore, what is meant by saying that this is a response-dependent notion? Is something an interest of ours if and only if we would describe it as such when asked, or does he have other less explicit ‘responses’ in mind also?

Putting these worries aside, however, we may conclude that for Johnston pragmatism is fundamentally a theory about where we should apply our epistemic energies. Pragmatism advises us not to waste them on a futile pursuit of truth for its own sake, but to save them for forming beliefs concerning “what answers our interests”, where this itself is a response-dependent concept. In this way, then, Johnston instantiates the pragmatist platitude which describes us as acting in the world rather than just representing it. Despite its different emphasis, however, Johnston’s pragmatism shares the moral Kripke and Pettit take from the later Wittgenstein, that one cannot and should not look behind the responses which constitute many of our concepts to try to describe the world’s ultimate structure. Pragmatism is the “denial of independent justifiers of our responses”.99

2.3.3 Price: Philosophical Cartography

Huw Price engages with Pettit and Johnston and gives the issues discussed by them an interesting twist. He also sees response-dependence as a form of pragmatism, but he urges that it is not the only form. He claims that in explicating our concepts Pettit sees himself as providing content-conditions for those concepts and this is a mistake. It is not that there are no content-conditions to be given, Price argues, it is just that pragmatism is a claim about what he calls usage-conditions. Usage-conditions do not determine the meaning of a concept, but in what circumstances it should be applied. For instance, one might argue that it is not part of the meaning of the statement “Have a nice day” that it is typically encountered in shops and hotels. We have seen that for Kripke such a distinction is not possible, insofar as the “sceptical solution” to the rule-following problem identifies the meaning of a term such as ‘plus’ with its “assertability conditions”. However, Price wants to distinguish between the two. He writes:

...I emphasise that I am not suggesting that content-specifying conditions have no role to play in the philosophical project of explicating meaning...My argument simply concerns the appropriate vehicle for the distinctive points a pragmatist wants to make about the dependence of particular areas of discourse on human capacities or points of view. I want to urge that these points are better made in terms of usage conditions than in terms of the kind of biconditional content conditions that writers on response-dependence have offered us.100

What difference does it make to adopt a usage rather than a content pragmatism? Price sees two prime areas for pragmatist analysis to be moral and probabilistic.

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statements, and here the difference between the two forms of pragmatism can be illustrated clearly, he feels. He asks his readers to consider the difference in ethics between self-descriptivism, the view that when we make moral claims we are actually talking about our own attitudes of, say, approval or disgust – and expressivism, the view that we can explain moral claims by understanding them as expressions of, say, approval or disgust:

...self-descriptivism is actually quite different from expressivism. The difference is just like that between the (correct) view that we typically say that \( P \) when we believe that \( P \) and the (incorrect) view that in saying \( P \) we say \( that \) we believe that \( P \). In each case the difference rests on that between two distinct possible roles for the psychological state concerned: a usage-based role in an explanation of a linguistic practice, and a content-based role in an analysis or explication of the content of the utterances comprising that practice. Expressivism is usage-based, self-descriptivism is content-based.\(^{101}\)

As pragmatists, therefore, Price urges that we explain predication rather than translating it, or giving its truth-conditions. So, for instance, applications of the plus-function would presumably be explained in terms of the usefulness of adding in negotiating the world and entering into various interpersonal transactions. Like Johnston’s, this description of pragmatism is somewhat underdetermined, and it would be illuminating to see the explanations in question actually framed. Price offers few instructions as to the methodology one might pursue with respect to such a wide-ranging and ambitious inquiry.

Of course Price’s abandonment of content-conditions means that his pragmatism cannot be used as a solution to the rule-following problem. But this form of pragmatism is worth presenting as it will form an instructive contrast to Johnston and Pettit’s views later in the thesis.

2.3.4 Putnam: Pluralistic Holism

The next two pragmatists that will be discussed have not come to pragmatism through the response-dependence debate but through a self-conscious rediscovery of American philosophy’s historical legacy (both being American). Putnam (like Johnston) also targets, and defines his view against, a certain “metaphysical” realism. He has previously had a distinguished career in the metaphysical realist camp doing just what Johnston would call “metaphysics in the pejorative sense”.\(^{102}\) However, he has recanted and become influential in pragmatism’s revival in order to oppose such realism.

For Putnam (in *Renewing Philosophy* and *Pragmatism*), pragmatism makes two main claims. The first is a (qualified) pluralism about truth. This he claims to have

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\(^{101}\) Price, “Two Paths to Pragmatism”, p. 120.

\(^{102}\) See, for example (possibly his most influential realist offering) “The Meaning of ‘Meaning’”, cited above.
taken from the later Wittgenstein for, he writes, Wittgenstein’s private language argument contains the “uncontroversial” insight that “rightness or wrongness in a language game is internal to that language game”\(^\text{103}\). Not surprisingly, this remark connects with the previous discussion of rule-following. We saw that the rule-following sceptic pointed out that there is no way of deriving the proper extension of a rule such as addition from some “fact” which would determine the rule’s proper extension without error across the infinite number of possible additions. Such a ‘rule-making fact’ would be “external” in that it would be independent of the community and its practices in some ontological sense (for instance, it might exist without them).

Due to this apparent lack of anything “external” with which to answer the sceptic, Kripke sought to prevent the collapse of all our concepts into meaninglessness by presenting a “sceptical solution” according to which in order to add one merely has to engage in a certain set of community practices (or responses, following Pettit and Johnston). These practices or responses are “internal” in that the rightness or wrongness of particular addings is then not a matter of some fact independent of us but, in some sense, is a matter of what we do. Thus if we did not exist, neither would the rule, it seems. (It has already been noted in the discussion of Pettit that this dialectic presupposes a certain sharp distinction between “external” things and “internal” practices or responses, and that this matter will receive further discussion.) Such an internal analysis of a given concept – in terms of a certain set of practices – raises the possibility that other equally legitimate practices are possible, in a way that would be ruled out by the presence of an external fact with respect to adding. In this sense, then, “internal” means ‘no one right way’ – which is what leads Putnam to derive pluralism about truth from pragmatism.

The second meaning which pragmatism has for Putnam is holism. He writes that the pragmatist should reject the “familiar dualisms” of fact and value, fact and theory, fact and interpretation. For him this means that truth and verification are “not independent”. He claims that someone who lacked the set of practical abilities which surround the human use and recognition of chairs:

> would not just lack the ability to confirm the claim, “There is a chair in front of me”; such a person would lack the very concept of a chair, and hence would lack the ability to understand what it is for, “There is a chair in front of me” to be true.\(^\text{104}\)

In *Reason, Truth and History* (which may be seen as something of a bridge between Putnam’s earlier metaphysical realism and later thorough-going pragmatism) he offered a position which he called “Internal Realism”. This position defined truth as “an idealisation of rational acceptability”\(^\text{105}\) (as noted, an extended criticism of this view by

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Johnston will be explored in §4.4). In Pragmatism, however, Putnam merely claims more vaguely that truth and verification “interpenetrate”.

Again, this resonates with response-dependence, in that Putnam is suggesting that ‘chair-hood’ – whether something is a chair or not – depends to some degree on our responses to the object in question (such as the shape people perceive it to be, whether people sit in it, and so on). Chair-hood is not a primary quality. Putnam also puts forward Johnston’s view that the true beliefs which we should adopt are those which serve our purposes in some way:

...we view our system of knowledge as more than just a prediction machine; we aim at a Weltanschauung. As [William] James remarks, “An outrée explanation, violating all our preconceptions, would never pass for a true account...We should scratch around industriously until we found something less eccentric.”

Johnston referred to such a view as response-dependence with respect to “the rightness of a cognitive response”. However in Putnam’s case the responses in question seem specifically to include a measure of epistemic conservatism (which, following James, he seems to assume is an essential aspect of human nature).

2.3.5 Rorty: “Antiessentialist” Conversation

Richard Rorty is another notable figure in pragmatism’s contemporary revival. Rorty sees three main strands to pragmatism. The first is Putnam’s pluralism (which Rorty calls anti-essentialism) about truth:

[consider] James’s definition of “the true” as “what is good in the way of belief.” This has struck his critics as not to the point, as unphilosophical, as like the suggestion that the essence of aspirin is that it is good for headaches. James’ point, however, was that there is nothing deeper to be said: truth is not the sort of thing which has an essence.

If truth has no essence, this would suggest that it is at best an irreducibly family-resemblance concept. The concept of truth just differs in meaning with respect to, for instance, scientific, ethical and religious questions, and the attempt to discover what those differing truths have in common is doomed.

Moreover, the concern to remove predication from a pedestal of transcendental correspondence to “things in the world”, and to explain it as a human activity which answers to human concerns, also appears in Rorty:

When the contemplative mind, isolated from the stimuli of the moment, takes large views, its activity is more like deciding what to do than deciding that a representation is accurate. James’ dictum about truth says that the vocabulary of

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106 Putnam, Pragmatism, p. 15.
practice is ineliminable, that no distinction of kind separates the sciences from the crafts, from moral reflection, or from art.  

Again we have a dichotomy set up between predication conceived as a relationship between language and things (what Rorty calls “accurate representation”), and predication conceived as a set of practices (which he refers to as “what to do”). Rorty’s pragmatism also resonates with Johnston’s response-dependence about the precedence which some truths should take over others, according to our interests. Rorty is making a stronger claim than Johnston, though, in that he is defining the concept of truth itself in what seems to be a response-dependent manner. Our interests do not just determine our choices to focus on certain truths rather than others, for Rorty, but shape truth itself.

Thus, the second strand to pragmatism, Rorty claims, is that:

there is no epistemological difference between truth about what ought to be and truth about what is, nor any metaphysical difference between facts and values, nor any methodological difference between morality and science.

This recapitulates Putnam’s claim of “holism” between fact and value, fact and interpretation. Rorty writes that a non-pragmatic philosophy makes the mistake of believing that rationality consists in obeying mechanical principles in order to obtain true beliefs. If, on the other hand, we are to allow room for human judgement and dialogue to play a role in reaching the truth, he claims, we need to allow that human faculties such as desire, appetite and will (which he sees as necessary ingredients of human judgement and dialogue) are inseparable from the truth-seeking process.

One might hold such a view and still hold the view that inquirers with different “human faculties” might still all be reaching for the one truth. Rorty’s third aspect of pragmatism, however, is the claim that to be a pragmatist is to hold that there are no constraints on inquiry save conversational ones:

[there are] no wholesale constraints derived from the nature of the objects, or of the mind, or of language, but only those retail constraints provided by the remarks of our fellow-inquirers....The pragmatist tells us that it is useless to hope that objects will constrain us to believe the truth about them, if only they are approached with an unclouded mental eye, or a rigorous method, or a perspicuous language.

What does it mean to model inquiry on conversation in this way? It is, Rorty urges, to recognise that we exist in a particular time period, that has particular epistemological methods and sets of beliefs, and that the products of our inquiry are contingent because of that. (This notion of “contingency” is for Rorty an important part of understanding the human condition.) Rortian contingency with respect to inquiry is a special case of the general philosophical notion of contingency (usually
explicated as a fact which will not obtain, or a property which will not accompany its possessor, in all “possible worlds”). Rorty means that a group of people faced with exactly the same “external world”, but with a different culture or set of background beliefs (which he calls a different “starting point”) would come to a different conclusion about what is true:

Pragmatists follow Hegel in saying that, “philosophy is its time grasped in thought”. Antipragmatists follow Plato in striving for an escape from conversation to something atemporal which lies in the background of all possible conversations.112

Rorty sees the embrace of contingency as an escape from philosophers’ need to “ground” our epistemological practices – their need to provide a justification for the fact that we go on in particular ways. He points out that in each cultural era one will see philosophers “grounding” the presuppositions of the day, and given that many of these presuppositions have been quite contrary to one another, the activity does not seem to mean much:

Since the time of Kant, it has become more and more apparent to non-philosophers that a really professional philosopher can supply a philosophical foundation for just about anything. This is one reason why philosophers, in the course of our century, become increasingly isolated from the rest of culture. Our proposals to guarantee this and clarify that have come to strike our fellow-intellectuals as merely comic.113

This admonition of Rorty’s to give up the project of grounding our practices seems to resonate with Wittgenstein’s account of the learning the meanings of our terms as “not explanation but training”, and thus with Putnam’s and Kripke’s (and to some degree Pettit’s and Johnston’s) claim that rightness or wrongness in a language-game is “internal” to that language-game.

Rorty sums up his own position by negatively defining it against what he calls Platonism.114 Rorty dislikes this view for its monism about truth, its claim that truth is a descriptive rather than a normative notion, and its refusal to recognise that all truth-claims are made in a particular “contingent” context, which may include contingent concepts of truth. Pragmatism, therefore, is defined as the rejection of all these allegedly Platonistic claims. We will see that the first and third of Rorty’s claims are false of Peirce’s variety of pragmatism, and the second is true, but in a very different way than Rorty thinks. (Though to be fair to Rorty it should be noted that he explicitly claims James and Dewey and not Peirce as his pragmatist forebears.115)

112 Rorty, Consequences of Pragmatism, p. 174.
113 Rorty, Consequences of Pragmatism, p. 169.
114 This summary is presented in Rorty, Consequences of Pragmatism, pp. xiii-xvii.
115 In fact he makes the (somewhat sensationalised and not untypically tendentious) claim that Peirce’s contribution to pragmatism was, “merely to have given it a name, and to have stimulated James”. Rorty, Consequences of Pragmatism, p. 161.
2.3.6 Conclusion

This chapter began with a discussion of the way Peirce’s concept of continuity appears in logic in the notion of general predication. The very possibility of general predication was then challenged by invoking the Kripke-Wittgenstein “rule-following problem”, which asked how the general terms or concepts utilised by us fallible, finite beings can have the infinite ‘semantic reach’ with which they are naively attributed by us. Kripke’s community-invoking “sceptical solution” to this problem was presented, and this led to Pettit’s response-dependence, which resembled Kripke’s solution in what Pettit called its “ethocentric” character – its explication of what someone means in terms of their responses, suitably corrected by their community. This discussion led in turn to pragmatism, via Johnston, who identified his own brand of response-dependence as a form of pragmatism. Finally, the meaning of pragmatism amongst some contemporary American philosophers was explored.

Just from this somewhat lightning survey, it should be apparent that a considerable variety of claims have been called pragmatist. Nevertheless, the survey has revealed that all these ‘neo-pragmatists’ except Price define themselves largely against a certain realism (variously dismissed as “Metaphysical”, “external” or “Platonist”). This is despite differences between Johnston, Putnam and Rorty with respect to the concept of truth – whereby Johnston maintains truth as a response-independent concept while Rorty claims that truth is “contingent” on, and Putnam claims that it is “internal to”, human practices or forms of life. Despite these differing accounts of the concept of truth, however, the pragmatists discussed in this chapter resemble Kripke and Pettit in their rejection of a certain traditional realist picture of the justification or “grounding” of our predication. This traditional picture is referred to by Kripke as “facts” about the extension of rules such as plus, for Pettit it is the response-independent (or “primary quality”) concepts which his global response-dependence eschews, while for Johnston it takes the form of “independent justifiers of our responses”. Putnam refers to it as “external rightness”, while Rorty refers to it as “objects”, and as “something atemporal which lies in the background of all conversations”.

This common eschewal of realism will emerge as the largest difference between these neo-pragmatisms and Peircean pragmatism. Despite the fact that Peirce defines realism rather differently to the neo-pragmatists, there will be sufficient overlap for the Peircean to demonstrate that the pragmatist can ‘have his realist cake and eat it too’ in a way unanticipated by the contemporary authors just discussed. However, before discussing the realism question in later chapters, I shall present Peirce’s accounts of meaning and truth with respect to general terms, and point out the way in which the concept of continuity is at work in each, as this forms an important background to his realism.
Chapter 3.

MEANING, PRAGMAT(IC)ISM AND THE DEVELOPMENT OF SIGNS

"the word meaning has not hitherto been recognized as a technical term of logic..."

Charles Peirce.
Chapter 2 explored the idea of general predication, which is a species of the Thirdness which Peirce uncovered in his phenomenological investigations. This idea of general predication immediately gave rise to the rule-following problem. It emerged that much of this problem concerns the meaning of general terms – specifically, how we can make philosophically respectable the claim that those terms mean anything. (It was noted, however, that the problem also creates issues with respect to truth, in that the truth of statements such as “68 plus 57 equals 125” seems compromised by our failure to prove to the sceptic that “68 plus 57 equals 5” is an incorrect application of the plus-function.)

It is time, then, to delve more deeply into the issue of meaning. This chapter (after a background discussion of popular understandings of meaning in §3.1) will consist of two ‘passes’ across the issue of meaning from a Peircean perspective. The first flows from Peirce’s influential pragmatic maxim, which identifies the meaning a term or concept has for us with the expectations which we would be led to form from hypotheses containing that term or concept. The maxim will be presented in §3.2, where it will be noted that it is not a rival to more traditional approaches to the clarification of meaning by means of definition – rather it is an attempt to capture the a posteriori precisification of meanings made possible by the experimental method which has been so successful in the natural sciences. A consequence of this understanding of meaning which will be drawn out in §3.3 is the essential indeterminacy of meaning by Peirce’s lights, which will be used to defend Peirce against the charge that his maxim merely produces a crude form of positivism.

For the second ‘pass’ across the issue of meaning, it will be necessary to introduce some of Peirce’s distinctive triadic ‘philosophy of language’ (which he liked to think of as a theory of signus) in §3.4. Having distinguished the formal structure of any given sign into ‘representamen’, object and ‘interpretant’, Peirce’s theory of meaning proper will be shown in §3.5 to identify the meaning of a sign with its interpretant, which is just to say that Peirce identifies the meaning proper of our concepts with the development which they undergo. §3.6 will then discuss the irreducible teleology of such development. It is important to note that the two explications of meaning presented in this chapter are not in conflict. The first concerns the meanings which concepts have for us, while the second concerns the meanings which concepts have simpliciter. That the two may come apart is in fact presupposed by the fact that meanings may be precisified a posteriori, and the distinction will thus be drawn on in later chapters as an important foundation for Peirce’s realism.
3.1 Recent Influential Conceptions of Meaning

‘The meaning of meaning’ is one of the more fundamental philosophical issues\(^\text{116}\). The concept of meaning seems to be intertwined with the concept of truth, insofar as the truth of a statement such as “68 plus 57 equals 5” is somehow dependent on its terms, such as ‘plus’, meaning what they do. However, meaning seems to be a concept of broader application than truth, in that statements which are patently untrue – such as “Cats have six legs” – can be perfectly meaningful. Although cats do not have six legs, we know what it would be for cats to have six legs (enough to know, for example, that this would not be a pretty state of affairs). Sentences can also be meaningful without being truth-apt (for example, questions and requests). Thus, the set of all true sentences seems to be a subset of the set of all meaningful sentences. Meaning also seems to be something over and above reference, in that terms which refer to the same object can have different meanings – ‘The Morning Star’ and ‘The Evening Star’ being one of the most notorious examples of this.

Early modern philosophy was shot through with a dualistic metaphysics of material things (often referred to as ‘bodies’) and ideas. Things and ideas were viewed as entirely different substances by Descartes. Although later empiricist philosophers of the period such as Locke and Hume sought a more scientifically respectable monism, they retained as the basic unit of logic and epistemology a notion of the idea which was very Cartesian in its ‘privacy’ (that is, its location somehow ‘within’ an individual mind) and also in its incorrigibility, such that I have first person authority about what the terms I use mean (which was thought to form some sort of Archimedean point for grappling with the sceptic). Thus in the early modern period, the fact that ‘The Morning Star’ and ‘The Evening Star’ differ in meaning despite both referring to Venus would have been accounted for by saying that although the two terms correspond to the same heavenly body, they correspond to different ideas (these ideas being insufficiently “clear and distinct” for many minds to be able to discern their identical reference).

By the time of Frege, however, it had come to be felt that this sort of understanding of meaning in terms of ideas was too psychologistic. Meaning was after all a logical concept, and so it was thought that it should be definable more objectively than in terms of private notions of individual minds – which may be subject to all kinds of randomness and error. Thus, Frege wrote:

The same sense is not always connected, even in the same man, with the same idea. The idea is subjective: one man’s idea is not that of another...A painter, a

\(^{116}\)
horseman, and a zoologist will probably connect different ideas with the name ‘Bucephalus’.\textsuperscript{117}

He therefore claimed that while ‘The Morning Star’ and ‘The Evening Star’ had the same reference (Bedeutung), each had a different sense (Sinn). This ‘Sinn’, which Frege referred to as the mode of presentation of the reference, was an abstract object, common to everyone who grasps the meaning of a term such as ‘The Morning Star’.\textsuperscript{118}

However, while he gave up the privacy of the Cartesian model of meaning, one might inquire whether he kept the incorrigibility, insofar as it seems doubtful whether I can be wrong about the ‘mode of presentation’ which a given referent has, given that I grasp it at all.

Frege’s account of meaning was extremely influential in twentieth century philosophy. However Quine – empiricist to Frege’s rationalism – found Frege’s notion of meaning as an abstract object to be unacceptable within a naturalistic epistemology. He proposed to do away with the notion that a term or sentence might possess (or be otherwise associated with) an entity called ‘a meaning’, in favour of the notion that two sentences might be synonymous\textsuperscript{119} – though he famously argued that the notion of synonymy itself is far from straightforward\textsuperscript{120}. Quine’s ‘deflationary’ view of meaning will be discussed in much greater detail in §5.

Meanwhile, the later Wittgenstein also reacted against Frege’s view of meaning as abstract object, giving birth to the view of meaning as ‘use’ which was already mentioned in §2.2 and is, as we have seen, influential in neo-pragmatist circles. Although Quine and Wittgenstein share a resistance to the idea that was expressed in §2.2 as the conflation of meaning and reference, they differ over the legitimacy of naturalistic methodology when applied to the study of meaning. Where Quine suggests that meaning might be analysed eliminatively down to the level of stimulus and response using the scientific method\textsuperscript{121}, Wittgenstein is implacably opposed to such a naturalism, which is much of the point of his discussion of rule-following.

Despite the popularity of these views, recently the idea that meaning might somehow be conceptually connected with truth has transformed itself into a rival theory of meaning, which identifies the meaning of a sentence with what are called its “truth-conditions”. In the 1970s Donald Davidson proposed to formalise such an


\textsuperscript{118} “This constitutes an essential distinction between the idea and the sign’s sense, which may be the common property of many and therefore is not a part or a mode of the individual mind”. Frege, p. 59.

\textsuperscript{119} In “Two Dogmas of Empiricism”, \textit{FLPV}, p 22, Quine writes:

“Once the theory of meaning is sharply separated from the theory of reference, it is a short step to recognizing as the primary business of the theory of meaning simply the synonymy of linguistic forms and the analyticity of statements; meanings themselves, as obscure intermediary entities, may well be abandoned.”

\textsuperscript{120} Quine, “Two Dogmas of Empiricism”, pp. 23-32.

account of meaning analogously to Tarski's influential account of truth (replacing 'means that' systematically by 'is true if and only if'). More recently the analysis of meaning as truth-conditions has been understood more 'metaphysically', in that the truth-conditions for a particular sentence are understood to be the set of possible worlds in which it is true. A similar analysis has been proposed for singular terms, whereby the sense of a singular term consists in its reference across different "possible worlds".

However, in recent times the pendulum seems to be swinging back to the early modern view, insofar as meaning is seen as corresponding somehow to the intentions of individual speakers. Thus, Tim Crane has written:

> the general idea of reducing meaning to the psychological states of speakers is now widely accepted...This is illustrated by the fact that, at the time of writing, the philosophy of language has to some extent yielded the centre stage to the philosophy of mind—and the problem of meaning has become the problem of intentionality.

There is, however, an attempted hybridisation with the metaphysical possible worlds approach whereby it is envisaged that the ideas of individuals (or, to use more contemporary terminology, those individuals' mental contents) pick out sets of possible worlds in some rather mysterious way. Influential recent approaches even produce a "two-dimensional modal logic" whereby one world-collecting dimension corresponds to reference as it is usually understood, while the other dimension attempts to capture some of the apparently non-referential residue of meaning in a further collection of possible worlds.

For example, to return to the example of water and H₂O, Jackson has claimed that the term 'water' used by an individual speaker has a C-extension, which includes all instances of H₂O (in this and other worlds), and an A-Extension, which includes all substances which behave like water: are clear, pourable and present in rivers and lakes (in this and other worlds). The two extensions are identical in this world but part ways in other possible worlds. In this way, Jackson attempts to do justice both to the Kripkean insight that water 'is' H₂O (that is, the term 'water' picks out a specific natural kind), while also acknowledging that other aspects of the meaning of 'water' are not captured by this reference. Such analyses seem to introduce a new fallibilism to meaning, insofar as what is epistemically accessible to us is only our concepts' A-extensions. However they introduce a considerable uncertainty as well, insofar as for

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125 Jackson, *From Metaphysics to Ethics*, p. 48-9.
all we know anything could be the case with respect to the C-extensions of our concepts in other possible worlds. This issue will be revisited at various places in the thesis.

This brief survey of recent approaches to analysing meaning is not meant to be a definitive study, but merely to provide some sense of the variety of different positions which have recently been held in this area. For the Peircean account of meaning which will be presented in this chapter differs from all these positions.

3.2 Peircean Pragmatism as an Explication of Meaning.

3.2.1 The Pragmatic Maxim
We have seen that pragmatism, insofar as it has been adopted by contemporary philosophers such as Putnam and Rorty — and to some degree the response-dependence theorists also — is treated largely as a theory of truth. For Putnam and Rorty it is a theory of the concept of truth itself, for Johnston it is a theory with respect to the “rightness” for us of accepting certain truths. For Pettit it is a theory of the truth-conditions of propositions containing response-dependent concepts. (Only Pricean pragmatism escapes this truth-centredness, at least as presented so far — though in another publication he too offers an extended account of the use of the concept of truth under the pragmatist rubric.) However, in its Peircean form, pragmatism is first and foremost an explication of meaning, though what Peirce says about meaning then has profound consequences for the meaning of ‘truth’. Peirce’s pragmatic maxim, which he formulated early in his career but referred back to until the end of his life, states:

Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is our whole conception of the object.

This, then, is how Peirce exemplifies the pragmatist platitude which claims that pragmatism seeks to understand us as agents in the world rather than passive representers of that world. For Peirce, if a concept is to be meaningful it must make some claim about experiences which we might have in the world. It is not enough to refer to the world in some abstract sense in order to mean something by our statements, we must be in some real experiential contact with it. (The claim might be even better expressed by saying that it is not possible to refer to a world without being

127 Note that it is an explication, not a theory. As noted at the start of this chapter, Peirce’s theory of meaning proper will be presented in §3.5.
128 The maxim appears in the Collected Papers at 5.2, 5.402, 5.438 and 8.119.
in some experiential contact with it.) Thus Peirce’s instantiation of the pragmatist platitude, unlike that of the neo-pragmatists, is not about us as creatures pursuing various specific worldly interests, (whose use of truth-claims is somehow explained by, or even translatable into, the way in which they help us to further those worldly interests). It concerns us as agents (as Rescher pointed out) in a much more rarefied, ‘impersonal’ sense of agency.

An example of the pragmatic maxim in use which Peirce provided at its first presentation (in the paper “How to Make our Ideas Clear”) is the meaning of hard. When we use the term ‘hard’, he claims, we mean that the objects we apply it to will resist pressure, not break when struck, and a whole manner of similar experienceable effects, and there is nothing else that we mean. Misak has pointed out that the pragmatic test of meaningfulness is properly applied to terms embedded in propositions, rather than in isolation, and that these propositions are hypothetical in character. Thus, when we inquire into the meaningfulness of ‘hard’, we ask what expectations we would draw from hypotheses of the form “X is hard”. (One does not form any expectations if one is approached at random by someone who cries “Hard!” with no obvious salient hard item in the vicinity.) Indeed, in this way the concept of hardness may usefully be understood as a set of hypothetical conditionals.

As one might expect from previous discussions, this point extends from concepts to rules. One can best teach the ‘plus’ rule to someone by adding some particular numbers in front of them. Indeed, how could one teach the rule entirely in abstraction from such particular applications? Such an attempt (with someone who genuinely does not understand how to add) is liable to lead only to great confusion. It is also worth noting that this point about the explication of meaning taking place within propositions echoes Frege’s claim that terms often become meaningful only in the context of something properly true or false (in which “unsaturated” concepts become “saturated”), an insight which gave birth to many of the developments in logic which are at the heart of the analytic tradition.

Misak adds that the pragmatic maxim is not intended to replace more traditional methods of clarifying the meaning of concepts, such as analysis and the framing of definitions or necessary and sufficient conditions for a concept’s proper application. Rather, Peirce presents the pragmatic maxim as a distinctive “third grade” of meaning-clarity, which was introduced to the world along with the scientific method, and which philosophy is now poised to benefit from. Peirce claims that the first grade of clarity with respect to a concept such as ‘hard’ consists in one’s being able to identify those objects which are hard – without necessarily being able to give reasons for doing so.

129 Misak, p. 11.
130 This insight of Frege’s has been dubbed “The Context Principle”. For an extended discussion of it see, for example, Greg Currie, Frege: A Introduction to his Philosophy (Totowa NJ: Barnes and Noble, 1982).
The second grade of clarity consists in one’s being able to frame a verbal definition of ‘hard’ (for instance, “Hardness consists in the ability to resist pressure.”). The third grade, however, assigns future expectations to hypotheses containing the term in question. (For instance, one might predict that if a particular table is hard, then one can put a plate on it without the plate falling through.) This third grade of meaning-clarification is derived from the scientific method in that scientific experimentation is precisely the process of deriving predictions about the future from hypotheses and then testing those hypotheses by testing their predictions.

On the continued importance of the second grade of clarity, Misak cites Peirce:

...if the Maxim of Pragmatism be acknowledged, although Definition can no longer be regarded as the supreme mode of clear Apprehension; yet it retains all the absolute importance it ever had, still remaining indispensable to all Exact Reasoning.\(^{132}\)

Misak therefore points out that a contrast exists in Peirce’s philosophy between “nominal” and “pragmatic” explications of a term, which correspond to the second and third grades of meaning-clarification respectively. Only the former deserves to be called a definition of the term in question.\(^{133}\)

### 3.2.2 A Posteriori Meaning-Precisification

T. L. Short has urged that despite the fact that the first and second “grades” of meaning-clarification never disappear from the Peircean philosophical toolkit, it is essential for philosophers to benefit from the third grade. As a paradigm of using the second grade alone, he offers G.E. Moore’s vision of philosophy as the search for “definitions”. The problem with this methodology, he argues, is that one can never attain clarity greater than that of the terms one is using to frame the definition. Most people have had the experience of looking up a word in the dictionary, finding it defined in terms of other words one does not know and being led in a frustrating verbal circle. On the other hand, Short argues, the pragmatic maxim helps one attain greater clarity using concepts of lesser clarity:

A person who can distinguish a hot from a cold stove has some idea of temperature, but not so clear a one as he who can explain the difference between heat and temperature and show you how to measure degrees of temperature. But would we have arrived at the latter idea without having begun with the former?\(^{134}\)

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\(^{131}\) Misak, p. 13.

\(^{132}\) Peirce, MS 647, p.2, cited Misak p. 15.

\(^{133}\) Misak, pp. 35-8.

Short describes how scientists used empirical investigation to ‘triangulate’ a clearer meaning for ‘heat’. When the thermometer was first invented, its operation was poorly understood. However, it did provide a clear, measurable set of expectations (that is, the highly sensitive rise and fall of the mercury bar) which obviously had something to do with the heat of the thermometer’s surroundings. The concept of temperature was aligned with these precisely measurable expectations and then it became possible to investigate temperature itself and, in the process, to discover how the thermometer worked. In this way, the concept of heat, which had been a vague secondary quality concept (having to do with such things as how one felt when near the fire) received a scientific precisification in the concept of temperature. The same point may be made with respect to the now somewhat familiar example of the concepts of water and H₂O. The latter may be understood as a scientific precisification of the former.

Such experimental or a posteriori clarification of meaning is an important theme of this thesis and, we will see, crucial to Peirce’s realism. One might protest that heat and temperature (and also water and H₂O) are in fact different concepts, and what has really happened is that the former has been superseded by the latter in scientific contexts (while continuing to be used in ordinary language). Yet this seems not to do justice to the fact that the two concepts share so many expectations (such as that if it is healthy for me to drink eight glasses of water a day then it is healthy for me to drink eight glasses of H₂O a day), and also the way in which, as Short points out, our having the former concept somehow led us to discover the latter, in a process of refinement that was far from clean or discrete. It therefore seems more accurate to say that the new concepts ‘grew from’ the old.

It is also worth saying something about this use of the term ‘precisification’ and its related claim that the meanings of our concepts or terms are, as they stand, vague. There exists a huge literature on vagueness, presenting many subtly differing analyses of it. Susan Haack, however, noting that vagueness may be construed paradigmatically as “uncertainty about the applicability of a predicate”, has made a useful distinction between two different possible understandings of that phrase:

1. The qualifications for being F are imprecise
2. The qualifications for being F are precise, but there is difficulty in determining whether certain subjects satisfy them.

Peirce’s developmental analysis of meaning actually allows an interesting middle position here, given that at any time our understanding of our concepts’ “qualifications” is genuinely open. (It is not merely the case that, to give an example

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135 This is my choice of term, the triadicity of which is not without intended significance.
136 Thanks to Neil McKinnon and Sallyann Parker-Ryan for pressing this point.
Haack herself uses to illustrate (2), we are unable to make requisite measurements. Yet over time those “qualifications” are continually made more precise in a manner that suggests (2) rather than (1) – though there is no end-point of absolute precision to this process. It is also important to note that Peirce distinguished between vagueness and generality. Vagueness is defined as signification which is indeterminate in that further information must be supplied for it to become more determinate, whereas generality is indeterminate only in that it applies to many individuals.

A final objection which might arise at this point is that the pragmatist approach to meaning-clarification is all very well for concepts taken from the natural sciences, which are designed with the possibility of tangible experimentation in mind – but is it appropriate for philosophical terms, which are notoriously abstract and rarefied? However, we will see in §4 that the pragmatic maxim may readily be extended to truth – than which few concepts are more fundamental within philosophy, or traditionally more contested in the most abstract of debates.

3.2.3 The Fine Line Between Positivism and the Thing-In-Itself

An important effect of conscientious application of the pragmatic maxim, Peirce claimed, is to banish those notorious philosophical posits, “things-in-themselves”, from consideration as meaningless. If we cannot conceive a way in which a given object of our thought would make an observable difference in experience, then it is pointless for us to imagine that we are so much as thinking about it. As has been noted, Peirce thought that this pragmatic cast of mind – this “experimentalist’s view of assertion” – was what most distinguished scientists from philosophers, and that if philosophy wished to learn from the great acceleration in discovery which took place when this attitude was adopted in the seventeenth century, it would do well to adopt it also. So far Peirce’s maxim seems to accord with the desire of Johnston and other neo-pragmatists to do away with “metaphysics in the pejorative sense”.

It may however be objected at this point: in so banishing things-in-themselves from consideration, are we not committing ourselves to a crude scientistic positivism? We need the possibility of talking meaningfully about things-in-themselves, it will be argued, to stop us from ruling as meaningless terms which do not feature in our notoriously limited stock of concepts. However, note that all Peirce says is that our conception of the effects of the object to which we are applying the pragmatic maxim is our whole conception of the object, not that our conception of its effects is the only possible conception of the object. Something which appears to be an effectless thing-in-itself at some stage in the development of human thought may in fact be recognised to have quite measurable effects once our thinking becomes clearer and we know more. Peirce offered the chemical composition of stars as an example of such a shift (which occurred in his lifetime) from a matter which was supposedly closed to any
possible observation to a matter which was, in fact, known\textsuperscript{138}. This idea will be further developed in the next section.

3.3 The Indeterminacy of Meaning

Along with Peirce’s pragmatic maxim, which urges us to clarify the meanings of our concepts \textit{via} their conceivable effects, goes a thesis about the \textit{indeterminacy} of meaning according to which we never know the full meanings of our terms. In fact, a large part of the progress of science occurs through scientists’ clarifying and extending the meanings of scientific terms (such as ‘force’ or ‘electricity’) by hypothesising observable effects in particular situations with respect to which current understanding of the term is indeterminate, then making the requisite observations – which process just is scientific experiment. (This just is the \textit{a posteriori} precisification of meaning discussed in the last section.) Thus, Peirce wrote:

How much more the word \textit{electricity} means now than it did in the days of Franklin; how much more the term planet means now than it did in the time [of] Hipparchus. These words have acquired information...\textsuperscript{(7.587)}\textsuperscript{39}.

Once it has been recognised that our apprehension of the meanings of our concepts is so limited, it should be evident how unwise it would be to make judgements that the only concepts that are meaningful may be selected from those that are currently meaningful for us.

It has been recognised for some time by philosophers that it is appropriate to apply a doctrine of fallibilism to our \textit{beliefs}, but \textit{meanings} are still rarely considered in these terms. Philosophers still mostly assume in practice some sort of Cartesian first-person authority with respect to what terms mean, despite the recent conspicuous embrace of referential externalism with respect to natural kind terms (which rides on rigid designation) which we have seen in the case of water and \textit{H}_2\textit{O}.

Now, recall Peirce’s definition of continuity:

\textbf{(C1):} A true continuum is something whose possibilities of determination no multitude of individuals can exhaust.

With respect to meaning, then, we can take the “individuals” in this definition to refer to individual effects the expectation of which constitutes the meaning of a term for us. In this sense, to claim that meanings exhibit continuity is just to claim that a term such as ‘hard’ does not ‘run out’ with any set or even possible set of individual ‘hard

\textsuperscript{138} See, for instance, 1.138.

experiences’ (such as knuckle-bruisings, failures to break when dropped, frustrated attempts to break with an axe...and so on). Nor is it exhausted by any set of individual hard objects (such as tables, rocks, diamonds...and so on), even if the set is infinitely large. Finally, neither is it exhausted by any set of individual hypotheses containing the term ‘hard’. Meanings just do not behave that way; they (as it were) come in an inexhaustible supply. (The Kripkean rule-following sceptic will, of course ask how this is possible and whether Peirce is not just ignoring the rule-following problem. This objection will, however, be addressed in §7.)

We can also put Peirce’s definition of continuity to work in this context by taking “individual” in the sense of human individual. Then, to say that the meanings of concepts exhibit continuity is to say that no multitude of users of a term could ever exhaust its possible effects, and thus that no attempted clarification of the meanings of terms will ever ‘touch bottom’ by reaching utter meaning-determinacy. ¹⁴⁰

This latter claim may be dubbed a claim of Communitarian Continuity with respect to meaning, and it resonates with Kripke’s claim that “all talk of an individual following rules has reference to him as member of a community”.¹⁴¹ Kripke states that to speak of someone meaning plus rather than quus is automatically to speak of a community and its assertability conditions – in the same way that (Kripke argues) Hume thought that to talk about one event causing another is to speak not solely of the two events in question, but also of a clear pattern of association between all events which appropriately resemble them. Similarly, Peirce says that to speak of the meaning of the term ‘hard’ is to speak of a whole pattern of possible experiences, which stretch across an indefinite number of possible users of the term.

3.3.1 The Evolution of Meaning

Peirce’s indeterminacy claim goes further than Kripke’s, though, as it is not just a point about the essentially public nature of meaning, but also a point about the essentially undeveloped nature of meaning. According to Peirce, we are not just hostage to the rest of the community for what we mean, but hostage to the future as well; for the meanings of our terms develop in ways which are unable to be anticipated, even by an entire community at a particular time. Indeed, this follows from the a posteriori clarification of meaning presented in §3.2.2.

It might be objected that this difference between Kripke and Peirce with respect to the indeterminacy of meaning is not a substantive philosophical disagreement, but is just to say that the community in question is larger for Peirce than for Kripke, stretching across future individuals instead of just members of a given language

¹⁴⁰ Such a claim seems so far to be borne out by the history of philosophers’ exploration of their fundamental terms.

community at a time. However, the matter is not quite that simple, for the temporal dimension introduces an evolution into meanings which is not to be found within a language community, however large, at any given time. This is to say that later usages of terms are privileged over earlier to some degree. For example, the use of the term ‘atom’ by a twentieth century professor of physics is privileged over its use by, say, Democritus. The term has, as Peirce remarks, “acquired information”, and the physics professor has access to that information, while Democritus did not. (This idea of evolution will also be seen to be important in Peirce’s discussions of truth and realism, as will the notion of Communitarian Continuity.)

To return to Kripke’s own example, the ‘plus’ rule has not been static; it has been expanded by mathematicians over the past few hundred years to include radical new applications such as the ‘addings’ of matrices and imaginary numbers. These are not straightforward applications of the addition rule for natural numbers but adaptations of it, although a commonality (or analogy) in meaning can certainly be discerned between the old and new usages. It is difficult to see how such developments in the meaning of ‘plus’ might be possible according to Kripke’s account of the assertability conditions for ‘plus’, whereby any departure from the community’s generally accepted usage merely renders the rule-follower subject to correction. Kripke’s “sceptical solution” to the rule-following problem seems to offer only two choices in this regard: to apply the rule as the community in general does, or to be in error.

The falseness of this dichotomy set up by the sceptical solution seems particularly acute in mathematics, for the meanings and proper application of mathematical terms is a particularly large part of the subject matter of mathematics, and is undergoing constant change and development. In §1.3 the initial resistance by mathematicians to the introduction of higher orders of infinity was mentioned, and the attempt by Poincaré and others to ‘correct’ Cantor’s radical departure from predominant community usage with respect to the term ‘infinite’ (whereby if a set is infinite then no set can be in any sense more numerous than it) was alluded to. Yet Cantor’s break with the then accepted usage of the term ‘infinite’ has now become mathematical orthodoxy. So what did Cantor’s transfinite arithmetic have that Kripke’s “bizarre sceptic” does not? This question will be revisited later in the thesis.

3.3.2 Pragmaticism is not Positivism
Having presented the essential indeterminacy of meaning according to Peirce, it should now be clear that Peircean pragmatism and positivism, far from being philosophical kin (as was suggested by their mutual rejection of the thing-in-itself), are deeply

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142 It is interesting to note in the present context that Cantor’s discovery was only made possible by his precisifying the concept of number itself, into cardinality (which required distinguishing it from ordinality).
opposed. For a new and complete determinacy with respect to the meanings of our terms was just what the logical positivists saw themselves as providing, after which decisions could be made once and for all about which suburbs of the city of philosophy were ‘meaning-less’, and those suburbs could be razed. Consider for example Moritz Schlick’s remarks about the future of philosophy in his forthrightly named “The Turning Point in Philosophy”. Schlick writes that it used to be thought that philosophy provided answers to questions (which he refers to as “metaphysical questions” – here again the idea of “metaphysics in the pejorative sense” is present). However, the true role of philosophy has been discovered, and this is solely to show which, if any, entirely determinate meanings our statements have:

...the concept of probability or uncertainty is simply not applicable to the acts of giving meaning which constitute philosophy. It is a matter of positing the meaning of statements as something simply final. Either we have this meaning, and then we know what is meant by the statement, or we do not possess it, in which case mere empty words confront us, and as yet no statements at all.143

From the Peircean perspective such a project can only be quixotic. As we have seen, Peirce argued that all our statements are essentially indeterminate in their meaning though, somewhat paradoxically, our concepts are constantly being made more determinate through inquiry. This apparent paradox is in fact made possible by the continuity of meaning since, as noted, the hypothesis of synecism just is the hypothesis that “no multitude of individuals can exhaust” the determination of meaning. This point finds metaphorical expression in the following passage:

The meaning of a representation can be nothing but a representation. In fact, it is nothing but the representation itself conceived as stripped of irrelevant clothing. But this clothing never can be completely stripped off; it is only changed for something more diaphanous (1.339).

Yet despite this essential indeterminacy in their meaning, our statements, contra Schlick, are not “empty words”. To fully understand how meaning-determinacy might be a matter of degree rather than the yes-no affair conceived by Schlick, one needs to understand Peirce’s distinctive philosophy of language (which he thought of as a theory of signs), and this is the subject of the next section.


In the domain of metaphysics, including all philosophy of value and normative theory, logical analysis yields the negative result that the alleged statements in this domain are entirely meaningless.
3.4 The Triadic Sign.

3.4.1 Representamen, Object and Interpretant

For a deeper understanding of Peirce’s account of terms, concepts, reference and meaning than has been presented so far, one needs to explore his theory of signs (which he called semeiotic). Philosophers, who have traditionally devoted much attention to the study of language and of thought, have not generally considered this wider topic of signs to be worth separate study.\(^{144}\) Yet for Peirce the formal conditions exhibited by signs were usefully identifiable not only across human cognition in all its forms, but in the natural world as well (though an exploration of this dimension of Peirce’s semeiotic is beyond the scope of this thesis and I cannot do more than gesture towards it here\(^{145}\)).

For Peirce a sign is any token, either linguistic (such as a word, a phrase, a proposition) or non-linguistic (such as a gesture, a picture, or even a spot on a butterfly’s back) which partakes of a certain formal structure. The most important thing to note about the Peircean sign is that its structure is irreducibly triadic. A sign consists of not just the Quinean “word and object”, but also what Peirce calls an “interpretant”. James Liszka has described the interpretant as “a sign which translates and develops the original sign”\(^{146}\). This is just to say that a sign must represent an object such that this representation is capable of being understood, as such further understanding just consists in the generation of further signs. (As Peirce puts it, “a sign is not a sign unless it translates itself into another sign in which it is more fully developed (5.594)”).

It may be objected that this sets up an infinite regress, whereby the explanation of understanding in terms of a further series of signs serving as interpretants (which themselves will presumably require further interpretants) is unsatisfactory. However, the aim here is not to provide an explanation of understanding, but only its formal semeiotic structure.

Here is an example to clarify the irreducible triadicity of the sign. If I breed a charming new variety of cat and give it the name ‘Felis Gorgeous’, that name (which Peirce calls the sign’s representamen) will operate as a sign by virtue of the new breed (which is the sign’s object) but also, crucially, there will be no new sign generated unless other people pick up on my new name and start to use it themselves. These responses to my use of the sign in further sign-uses occurring in a variety of contexts are the interpretants of my new sign. They will explore and develop the meaning of my

\(^{144}\) Though, interestingly in this context, Wittgenstein also talks of signs and signifying (see for example, Investigations, §15).


sign beyond what I originally conceived by it. For example, they will work out how the breed behaves under continued breeding, what its genetic makeup is, and how the various individuals that make up the breed behave in day to day life. These facts are part of the meaning of ‘Felis Gorgeous’, for Peirce, just as facts about, say, the way electrons behave in experimental situations are part of the meaning of ‘electron’.

3.4.2 Transcending the Meaning-Fact Distinction

Peirce’s account of meaning contrasts in this way with a certain broadly accepted picture of meaning, which assumes a separation in principle between, on the one hand, the meanings of terms or concepts and, on the other hand, ‘facts about things’ — which are thought of as being known \textit{a priori} and \textit{a posteriori} respectively. This distinction is arguably an heir of the classical empiricist distinction between (what Hume called) “Relations of Ideas” and “Matters of Fact”.\footnote{\textit{\textcolor{red}{\textsuperscript{147}}}} (Somewhat notoriously, causal necessity fell between these two stools for Hume, leading him to adopt a profoundly sceptical attitude toward it.) As noted, the early modern understanding of the idea was very Cartesian, which entrenched the notion that one might possess first person authority with respect to the meaning of one’s ideas.

Likewise, now it is widely held that a sharp separation may be drawn in philosophy between \textit{ontology}, conceived as the question of what things exist, and \textit{semantics}, conceived as the question of what things (or sets of things) are referred to by our terms (or concepts). The separation is often encountered in discussions of realism, for realism — it is often claimed — is an ontological rather than a semantic question.\footnote{\textit{\textcolor{red}{\textsuperscript{148}}}} Semantics seems not to be explored as enthusiastically as ontology in contexts where the two are distinguished in this way. There seems to be a general feeling that, as opposed to the epistemic contact with real-world things that is ontology, the meaning of our terms is a mere matter of our \textit{stipulating} which real-world things will be located within the extension of any given term, and it does not matter how terms are used as long as both parties to a given debate stipulate that they will use them in the same manner. It is this sort of thinking that lies behind the oft-heard remark, “But that is just a semantic question”. It has already been suggested in §3.2.2 that, on the contrary, what our terms mean not always subject to \textit{a priori} stipulation, and this issue will be revisited.

Peirce redraws this landscape substantially, due to the experimental character of the meaning-clarification on which his pragmatism rests. To be more specific, meaning is

\begin{footnotesize}
\textsuperscript{147} It arguably has even deeper roots in the medieval distinction between “essential” properties, thought of as being known \textit{a priori} by virtue of understanding the nature of the thing in question, and “accidental” properties, known \textit{a posteriori}.

\end{footnotesize}
*a priori* for Peirce in the sense that the meaning of a term for any given users of the term is the expectations it leads them to project into the future from hypotheses containing that term (for example, the meaning of ‘hard’ for us is a whole raft of expectations concerning the behaviour of hard objects). However, as we have seen, the meanings of our terms also develop. They are clarified *a posteriori*, through the generation and testing of their defining expectations. This *a posteriori* clarification however, then leads to further *a priori* expectations with respect to hypotheses containing that term.

The clarification of meaning (or, in Peircean terms, the development of signs) is thus a cyclical process, and the distinction between *a priori* (features of meaning) and *a posteriori* (facts) is for Peirce not a distinction between distinct bodies of knowledge or belief. Rather, whether any particular belief is held *a priori* or *a posteriori* can depend on the surrounding context of inquiry. Consider for example the ‘fact’ that electrons have a negative charge. At one stage in the development of physics this was an open question, and the fact was discovered in *a posteriori* experimental fashion. However, it is now so entrenched in physical theory that it is arguably part of the very meaning of electron, such that if we were to contradict this feature it seems that (as with any essential property) we would not be talking about electrons any more but about something else.

It might be objected, however, that now the concepts of meaning and truth have been run together, in that if *every* fact about: electrons becomes part of the meaning of ‘electron’, then does this not commit Peirce to an unworkable essentialism according to which no claim is meaningful that is not factual? It has already been noted that we need to open *some* logical space between meaning and truth. How is this to be done under Peirce’s account of meaning? It will be argued in the next section that – once again – the solution is provided by the essential indeterminacy of meaning (which is predicated, as has been noted, on Peirce’s hypothesis of synechism). In order to provide this solution, however, more must first be said about the role of Peirce’s distinctive third element to the sign-relation in his account of meaning.

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149 A related form of essentialism with respect to the properties of the natural sciences – specifically with respect to their causal powers – *has* been explored in the analytic tradition. See, for instance, Sydney Shoemaker, *Identity, Cause and Mind* (Cambridge: Cambridge University Press, 1984), especially chapters 10 and 11. However it is very much a minority view.
3.5 Meaning and the Interpretant

3.5.1 Meaning and Reference

When the pragmatic maxim was presented in §3.1, it was noted that it does not offer a definition or theory of meaning, merely a technique for clarifying the meanings of our terms, and thereby "laying the dust of pseudoproblems (8.186)". So what is meaning, according to Peirce?

Compare Peirce's triadic account of the sign with the idea introduced in §3.2 of conflating meaning with reference. It was noted that Wittgenstein was reacting against such a view in the Investigations, which view he described (in a manner which exaggerates it, but instructively) as follows:

Every word has a meaning. This meaning is correlated with the word. It is the object for which the word stands.\(^{150}\)

Famously, this theory of meaning was identified by Wittgenstein near the birth of the Western tradition, in St. Augustine\(^{151}\). Given its dyadic nature, where meaning is solely a matter of a word and its corresponding meaning-object, it is hard not to conclude that meanings are utterly determinate. For the usual conception of objects, patterned after our conception of physical objects, is that they are entirely determinate (though, interestingly, this conception of physical objects will be challenged in §5).

For Kripke, Wittgenstein's own Tractatus is the key source of this mistaken picture of meaning as a form of reference where, as he puts it:

To each sentence there corresponds a (possible) fact. If such a fact obtains the sentence is true; if not, false. For atomic sentences, the relation between a sentence and the fact it alleges is one of a simple correspondence or isomorphism. The sentence contains names, corresponding to objects...Other sentences are (finite or infinite) truth-functions of these. Even though the details of this theory have struck some as an implausible attempt to give natural language a chimerical a priori structure based on logical analysis alone, similar ideas, often advanced without any specific influence from the Tractatus, are much alive today.\(^{152}\)

Here Kripke is correlating the meanings of whole sentences with (possible) facts, whereas Wittgenstein in his caricature of Augustine was describing the more extreme view that every word has its own determinate meaning-object. However, the underlying idea is the same, that meaning is constituted by a dyadic relation between some piece of language and some determinate object, either actual or possible. According to the Tractarian view, where the reference of a sentence picks out the actual facts, if any, to which the sentence corresponds, the meaning picks out a determinate


\(^{152}\) Kripke, Wittgenstein on Rules, p. 71.
set of possible facts as well. (As already noted, such a view owes much to Frege, whose Sinn is also a further object, albeit abstract, picked out by a sign.).

For Peirce on the other hand, the meaning of a sign may be identified not with the sign’s object but with its interpretant:\textsuperscript{153}

...it seems natural to use the word meaning to denote the intended interpretant of a symbol (5.175).

In this way a logical space is opened up between reference and meaning in an original manner. That is, the meaning of my term ‘Felis Gorgeous’ is not some shadowy abstract object over and above the breed itself, but it is what the sign does – how it spreads and grows (if, indeed, it does spread and grow).\textsuperscript{154} In this way, the notion of the interpretant bears some similarity to Price’s usage-based pragmatism according to which we explicate concepts in terms of the functional role which applying those concepts plays in the life of the community, except that the interpretant consists not in what people do with the sign (in some conscious or explicit sense) but in what the sign itself does. The consequences of this subtle but profound difference will be further explored.

3.5.2 Further Thoughts on Meaning-Indeterminacy

Arguably the most important consequence of this identification of meaning with the interpretant is that, rather than possessing the discreteness or logical particularity of a (physical or abstract) object, the interpretant is better thought of as a process. Moreover, it is a potentially endless process which is undergoing constant development. It is in this way that meanings are essentially indeterminate, since it is specifically the development of the process that is the interpretant that extends beyond any particular user or users of a term, into the users’ language community and also into the future (as noted in §3.3.1).

There is an instructive further argument for the indeterminacy of meaning from Peirce’s identification of meaning with the interpretant. If the meaning of my sign ‘Felis Gorgeous’ were to be determinately apprehended at its inception (or indeed at any point), the full details of its observable effects in every possible situation would have to be known, according to the pragmatic maxim. So, to take an example intended to highlight the absurdity of such a proposition, one would have to know just by virtue

\textsuperscript{153}Murray Murphey has claimed to the contrary that “the interpretant sign cannot be the meaning”, for “the whole point of pragmatism is the identification of meaning and habit”. See Murphey, The Development of Peirce’s Philosophy, p. 316. This, however, can only be an objection to the identification of meaning with the interpretant if the interpretant itself cannot be viewed as a habit. For precisely this view see, for example, 5.476.

\textsuperscript{154}The identification of meaning and the interpretant does presuppose a certain optimism with respect to what may be referred to as ‘the spreading powers of signs’. How can we be sure that every possible aspect of the meaning of a term such as ‘cat’ will be thought somewhere, somehow? However, what would it be for this claim to be false pragmatically speaking?
of grasping the sign ‘Felis Gorgeous’ that six kittens were born to a Felis Gorgeous mother on 6th December 1998 in Canberra, Australia. As already noted, Peirce complicates the meaning/fact distinction as currently understood. The proposition is worse than absurd, however. If everyone who so much as grasped the sign ‘Felis Gorgeous’ did have to know all such facts, there would be no point in anyone using it, since there could be nothing new that anyone could tell anyone else using the term. Without such further use it would cease to be a sign, as it is only the continued occurrence of interpretants which distinguishes “living” signs from “dead” ones. We can see therefore that it is specifically Peirce’s notion of the interpretant that produces the essentially public nature of meaning noted by Wittgenstein and Kripke.

Unlike Wittgenstein and Kripke, however, rather than seeing signs as essentially tools used by human beings jointly pursuing various “forms of life” – in a move that combines great intellectual daring with a certain ruthlessness, Peirce bypasses the human intermediary, and treats signs as primarily acting on one another and with the world at large in undergoing their evolutionary development. The formal structure of evolution, Peirce believed, may be characterised as a three-stage process whereby certain ‘units of selection’ (in the context of certain host ‘organisms’) undergo mutations which may usefully be regarded as random. Those mutations are then tested against a background set of conditions which expose the units of selection to some form of struggle. This then encourages the further flowering and reproduction of some units of selection, and the dying off of others. This is exactly how signs develop in constant interaction with the world, according to Peirce. Signs (in the context of hypotheses and theories) are the units of selection, the ‘background conditions’ of semeiosis are, of course, the world and its real objects, and the generation (or not) of interpretants corresponds to the reproduction (or not) of units of selection in the biological world. Thus it may be seen that Peirce means his distinction between “living” and “dead” signs in an entirely non-metaphorical way.

3.5.3 Meaning and the Distinction between Immediate and Dynamic Object

This separation of reference and meaning through distinguishing between the object and interpretant of any given sign points the way towards solving the problem of separating meaning and truth which was raised in §3.4.2. There it was noted that it is traditional to make an in-principle separation between ‘facts about meanings’ and ‘facts about things’, which, it is claimed, are known a priori and a posteriori respectively, and to suppose that any given piece of knowledge belongs irrevocably in one or other of these camps. Call this the Static Model of meaning. By contrast, we have just noted

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More exactly, the self itself is treated as possessing the formal properties of signhood by Peirce. For an extended discussion of this issue, see the work of Vincent Colapietro, especially his *Peirce’s Approach to the Self* (New York: S.U.N.Y Press, 1989).
that according to Peirce’s account of signification there is no extra abstract object – the meaning – picked out by a sign. All that is referred to by a sign is the sign’s object. However, the interpretant consists in the fact that other people use the same sign to refer to the same object. Through these further uses, Peirce claimed, the sign’s object is continually rendered more determinate. It is important to note that what is made more determinate is what exactly the object of a given sign is; the object itself is not somehow rendered more determinate by our inquiring into it. In this way, vagueness properly speaking pertains to the sign’s interpretant not its object.  

Thus Peirce distinguishes between the Immediate Object, or the object as it appears to us (which he refers to enigmatically as a “hint”), and the Dynamic Object, which is the object we are referring to as it really is. So, to draw on an already familiar example, the Immediate Object of the term ‘water’ consists in such features as colourlessness, odourlessness and pourability, while the Dynamic Object of the term is at least approached through the discovery that water’s chemical formula is H₂O. (Thus for Peirce even the object of a sign is more like a cluster of properties than a brute ‘thing’, and this point will be further developed in §5.) In this way, then, inquiry, via the process of meaning-precisification already noted, is largely a process of bringing the objects of one’s concepts closer and closer to their Dynamic Objects. This only happens, however, due to the role the interpretant is playing in the sign-relation. For if a given sign ceases to be used then the object of that sign ceases to be refined. For example, if people (for some fanciful reason) had irrevocably ceased talking about water in the Middle Ages, then the discovery that water is H₂O could never have been made.

This essentially developmental character which underlies all sign use, then, renders Peirce’s a Dynamic Model of meaning. Note that, unlike Kripke’s account whereby the meaning of a term such as ‘plus’ is entirely constituted by a rule and its (communitarian) assertability conditions, Peirce’s model allows that the rules for deriving future possible experiences from any given sign can be overwitten via experimental interaction with the sign’s (Dynamic) object – though (somewhat paradoxically) the pragmatic maxim teaches that that object is only known through rules about possible future experiences. This allows that the Immediate Object of any given sign might be not just vague but also partially erroneous. For example, in the Middle Ages water was erroneously conceived to be a fundamental, indecomposable element, but despite the fact that water has now been decomposed into hydrogen and

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157 See, for instance, 4,536, though here Peirce refers to the Dynamical Object.  
158 In this way the distinction between Immediate and Dynamic Object may be understood as a distinction between ‘reference for us’ and ‘reference simpliciter’ by analogy to the distinction between ‘meaning for us’ and ‘meaning simpliciter’ which is an important theme in this chapter.
oxygen, it would be extremely counterintuitive to deny that the Medievals were talking about \textit{water} when they made claims such as that the ocean is full of water. It was noted in §1.4.1 that Peirce’s second category could be prescinded from the phenomenology of struggle and \textit{surprise}, and a glimpse of the fundamental role of Secondness in his thinking is apparent in the elimination of erroneous features of any given sign’s Immediate Object, as part of its progress towards its Dynamic Object.

Amongst the many theories of reference currently on offer, there is little scope for modelling such a dynamic process of self-correction between term and referent. The Kripkean turn towards rigid designation (which is seen as creating a new, \textit{a posteriori} form of necessity) has helped matters for, as noted, it opens up a degree of fallibilism with respect to the meaning of terms such as ‘water’. However the correction presupposed by such \textit{a posteriori} necessity is a very all-or-nothing affair (whereby the chemists who discovered H\textsubscript{2}O are conceived to have discovered once and for all water’s very essence) rather than the process of continual refinement modelled by Peirce’s account – which, in its greater generality, is potentially more powerful.

Also, the fact that the feature with respect to which the meaning of the term is corrected must be treated as a \textit{necessity} is not without its problems. For instance, with respect to natural kind terms such as ‘water’, it creates a series of somewhat mysterious metaphysical necessities that are not logically necessary (insofar as no logical \textit{contradiction} seems implied by the statement “Water is XYZ”, despite that statement’s necessary falsehood). This new category of necessity is now being dutifully explored in the literature.\textsuperscript{159} But, given that metaphysics concerns itself with fact, what sort of fact is it that water is necessarily coextensive with H\textsubscript{2}O? It doesn’t seem to be any sort of physical necessity or law, like the law of gravitational attraction. Interestingly, the addition of this new category of necessity to logical and physical necessity recapitulates medieval scholasticism, insofar as a distinction was made by Duns Scotus between the “logical universal”, the “metaphysical universal” and the “physical universal”.\textsuperscript{160} This dense and somewhat offputting scholasticism might be mitigated somewhat if it could be established that questions such as the meaning of ‘water’ are \textit{not} metaphysical questions, pertaining to a new realm of fact, but are merely questions of logic more broadly conceived. (This suggestion will be explored in §6.)

At any rate, the answer to the problem of avoiding an unworkable essentialism and distinguishing appropriately between meaningfulness and truthfulness lies (once again) in the indeterminacy of meaning. Insofar as meaning is continuous, “no multitude of individuals can exhaust” the interpretation required to winnow the Dynamic from the Immediate Objects of our concepts. There will always be further discoveries to be

\textsuperscript{159} See, for example, Sydney Shoemaker, “Causal and Metaphysical Necessity”, \textit{Pacific Philosophical Quarterly} 79 (1998), pp. 59-77.
made about which among the currently meaningful statements are in fact true. In that sense, then, the meanings which our concepts have at any time will always in principle outrun our factual knowledge at that time, thereby avoiding an essentialism whereby no claim is meaningful that is not true. It might be objected that this may account for the meaningfulness of statements concerning matters we don’t yet know about, but what about statements which we know are false, but are still meaningful – for example, the aforementioned “Cats have 6 legs”? Surely no possible future development of the concept of cathood could deliver such a result? Here one must be careful not to underestimate the stringency of Peirce’s fallibilism. Though the possibility that cats might turn out to have six legs (due, for example, to some rare and strange optical illusion) is so unlikely as not to waste time investigating it, still we should leave the possibility open, and it is on this that the statement’s meaningfulness depends.\footnote{161}

Of course, at the \textit{limit} of inquiry there are no further interpretants, and there meaning would seem to converge with truth. \textit{Pragmatically}, however, meaning and truth are now and will always be discriminable. Again, the mathematical interpretation of continuity is pertinent here. Just as a hyperbolic function can continually approach zero while never actually reaching zero, so the Immediate Objects of our signs can continually develop towards their Dynamic Objects while never entirely coinciding with them. In the next chapter, this issue will be discussed further with respect to Peirce’s explication of truth.

It has been noted that there seems to be some conceptual connection between meaning and truth, and a popular account of meaning analyses it in terms of truth-\textit{conditions} (which are envisaged, for example, as sets of possible worlds). The pragmatic maxim, we have seen, states that the meaning of a hypothesis such as “Cats have four legs” is the experiences we can expect if the hypothesis is \textit{true}, and so far the pragmatic maxim might seem to accord with the truth-conditional analysis of meaning. However the term truth-\textit{conditions} seems ill-placed, as the expectations created by any given hypothesis are (as we have seen) radically open-ended and, moreover, subject to change and development. In this sense, use of the pragmatic maxim clarifies the meanings of our concepts, but never captures the process that is sign-development in a set of determinate ‘conditions’ which are necessary for a statement such as “Cats have four legs” to have the meaning that it does. This issue of the problematic character of the term “truth-conditions” will be addressed further in §8.6.

\footnote{160} This is discussed in Engel-Tiercelin, p. 57, Almeder, p. 162, and Boler, p. 44-6. 
\footnote{161} See 1.149-50. This does still leave the problem of accounting for the meaning of statements which are not truth-apt, and here it seems Peirce is forced to say something like that not all development of signs tends towards the truth. This does make sense, however, given his hierarchy of the sciences according to which logic is a special case of ethics (and thus there are goods to be strived for other than the truth).
To conclude this section, although Peirce’s pragmatism concerns the clarification of meaning, to understand Peirce’s theory of meaning proper requires an understanding of his theory of signs, insofar as he identifies the meaning of a sign with its interpretant. It is worth noting, however, that rather than stating that meaning is the interpretant (simply), it is more exact to say that the interpretant is the sort of scientific precisification of the ordinary language concept of meaning which is made possible by the pragmatic maxim. Peirce’s concept of the interpretant raises the concept of meaning to the third level of clarity, for through it Peirce makes the claim that if a sign is meaningful then it will generate further signs in the appropriate context. This provides a clear (if highly general) expectation for the hypothesis that a statement is meaningful. So, for example, a noticeboard which says “Danger: crocodile-infested waters” (a meaningful group of symbols) is likely to produce observable behaviour in those who come across it, whereas a sign containing the meaningless string of symbols “DGHYTRESP” will not do so. (These particular worldly expectations seem not to be provided by the early modern notion of meaning as a private “idea” in the individual’s head, nor by the Fregean notion of meaning as the “mode of presentation” of a given denotation, nor by the notion of meaning as truth-“conditions” of either the Davidsonian or the possible world variety.) So here again we may observe the “experimentalists’ view of assertion” being put to work in philosophy by Peirce in a tangible way.

The next section will present some further consequences of the irreducible triadicity of the sign and its development according to Peirce.

3.6 Real Teleology and the Sign

3.6.1 Recent Influential Conceptions of Reference

Due to their irreducible evolutionary triadicity, Peircean signs can never be properly conceptualised on the dyadic model which has characterised naturalistic study of language and the mind since the Early Modern period (which is perhaps not unrelated to the fact that the causal relation has also been conceived almost exclusively in dyadic terms during that time).

The dyadic model of signification takes various forms, which all have in common that signification consists in some two-place relation between a linguistic and a worldly item. Consider Russell’s “logically proper names” and their contemporary Kripkean

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the sciences according to which logic is a special case of ethics (and thus there are goods to be strived for other than the truth).

equivalents. Also consider for example the notion of indexicality.\textsuperscript{163} When I make a statement such as, “I’m over here”, there seems to be some direct unanalysable relationship between my statement and a particular location in space – the location where I happen to be. My statement does not describe the place, it is directly indexed to it by virtue of it being the place where I happen to be when I make the statement. However such an understanding of reference is somewhat mysterious epistemologically. How is it that words and things come to be related in this brute, unanalysable way? This question (which nowadays, as Crane noted, is often referred to as “the Problem of Intentionality”) has been the subject of considerable philosophical puzzlement.

At least partly in response to such puzzlement, the dyadic model has found forceful expression in recent times in the so-called Causal Theory of Reference.\textsuperscript{164} This theory seeks to identify the apparent two-place relation holding between the term ‘tiger’ and actual tigers with the (dyadic) causal relation. It therefore posits a causal chain from actual tigers to actual uses of the term ‘tiger’ (though the causal chain will often proceed via people teaching each other the term ‘tiger’, reading about tigers in books and so on). This theory is attended by well-known problems of the ‘breadth’ and ‘depth’ of what lies at the origin of such a causal chain. On the breadth side, the question arises why the cause of our term ‘tiger’ should be tigers themselves, and not, say, tigers plus the characteristic environment in which they are typically encountered. On the depth side, the question arises why the cause should begin with tigers and not with their distant invertebrate ancestors, which are in some sense causally responsible for producing tigers in the first place.

Therefore, most theories of reference include at least some ‘descriptive’ element along with the causal, according to which objects are picked out by terms (to some degree) by virtue of their satisfying some explicit or implicit general description.\textsuperscript{165} For example, the description ‘the bravest cat in Narrabundah’ picks out Bruce only insofar as Bruce has certain properties, and if he ceases to exemplify those properties, though he continues to exist, the term ceases to pick him out. However, theories of reference which try to work in a descriptive element almost all retain a basic dyadic structure

\textsuperscript{163} Influentially highlighted, for example, by John Perry in “The Problem of the Essential Indexical”, \textit{Nous} \textbf{13} (1979), pp. 3-21, and Robert Stalnaker in “Indexical Belief”, \textit{Synthese} \textbf{49} (1981), pp. 129-151.


whereby reference is seen primarily as a relationship between a linguistic or mental and a worldly item. As such, I will argue, these theories make an unsatisfactory compromise which has profound implications for the issue of realism, despite widespread contemporary relegation of the realism question to “ontology” as opposed to “semantics”. In later chapters I will argue that the realism question is, properly understood, a question in logic (understood in Peirce’s broad sense which includes issues in semantics and the methodology of inquiry), and that Peirce’s notion of Thirdness points the way to a principled incorporation of the descriptive element of reference within a theory of signification which, by contrast to prevalent dyadic models of reference, will prove the key to a realism of great coherence and power.

3.6.2 Efficient vs. Final Causation in the Development of Signs

By contrast with the causal theory of reference, the formation of the interpretant in Peircean semeiosis is best explicated not as a species of efficient causation but as a species of real teleology. Another term for teleology is the now rarely heard-of (Aristotelian) “final causation”, which Peirce explicates as follows:

The signification of the phrase “final cause” must be determined by its use in the statement of Aristotle that all causation divides into two grand branches, the efficient, or forceful; and the ideal, or final. If we are to conserve the truth of that statement, we must understand by final causation that mode of bringing facts about according to which a general description of result is made to come about, quite irrespective of any compulsion for it to come about in this or that particular way (1.211);

In other words, final causation is a tendency over time towards an end, an end which in some sense can be said to constrain the thing subject to the final cause towards itself.

Such teleological explanations developed a very bad epistemological reputation during the period when medieval was being replaced by early modern philosophy. During that time, scholastic realist explanation in natural philosophy, using Aristotelian (“ideal, or final”) forms, was a degenerating research program. The phrase “dormitive virtue” is shorthand for a paradigm of poor quality scholastic explanation which has entered philosophical folklore, though it dates not from the medieval but the early modern period, and comes not from a work of science but from a comic play. In a famous passage from Molière’s Malade Imaginaire, a candidate for a degree in medicine is asked during his examination why it is that opium makes people sleepy. The candidate replies that it is because the opium has a “dormitive virtue”, to loud acclaim from his examiners and the chorus. This reply seems to be the very essence of a spurious explanation, appearing merely to restate the thing which is to be explained in a more obscure and pretentious form. (This criticism of Aristotelian and scholastic
forms of inquiry will, however, be discussed at length in §5, where it will be found that the issue is not as simple as Molière suggests.)

Scientific mechanism, on the other hand, which defined itself at least partly as the eschewal of final in favour of efficient causation, achieved great explanatory successes in the seventeenth century. It is worth noting that mechanism in the natural sciences soon hit a stumbling block in the form of gravitational theory which forced its abandonment, but the mechanistic understanding of causation has continued to dominate philosophy. There are certain *prima facie* straightforward examples of final causation, however. Consider, for example, the unfolding of a talented mathematician’s career. Some lucky individuals discover a talent early in life which draws them towards the full development of that talent. In such a situation it can be said that the talent itself is exerting a form of final causation on the individual. The work of Darwin has also served to render teleological explanations newly respectable, insofar as organisms’ behaviour may often be explained in terms of their striving towards ends such as the preservation of the species.

Peirce thought that there are more than *prima facie* reasons to posit real teleology, however. In fact, such real teleology will emerge in later chapters as the key to Peirce’s distinctive synechistic realism. There the most profound difference between Peirce’s realism and the nominalism it opposes will emerge as a difference over the direction of justification of our true beliefs. Nominalism, with its emphasis on the logically particular, emphasises justifications which cite our beliefs’ (prior) efficient causes – which are, we hope, unmediated perceptions of worldly objects (on the part of ourselves or some relevantly situated observers). Realism on the other hand justifies our true beliefs, at least to some degree, in terms of what perception or inquiry is

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166 There is an interesting discussion of this in Chomsky’s “Language and Nature”, p. 3.

167 It is also worth noting that Peirce thought the dominance of mechanism in philosophy since the early modern period was as much due to superior political forces as superior philosophical arguments:

Modern thought has been extravagantly Ockhamistic, owing to the accidental circumstance that, at the revival of learning, the obscurantists, the fogeys, were adherents of Duns, of whom the politician Ockham was the typical opponent. But this had come about because, in those days of precise, if shallow, thinking, the Scotistic doctrine had emerged triumphant from all the scholastic disputations, of which the reformers of learning had but the dimmest idea (6.348).

168 Coincidentally, the author recently came across a striking metaphorical expression of this idea in the film *Hitary and Jackie*. In a defining moment at the start of the film the young Jacqueline du Pré and her sister encounter a mysterious woman on the beach. Jacqueline (but not her sister) runs up to the woman, who whispers something in her ear. As the film develops it becomes apparent that the woman was in fact the adult Jacqueline, a much-feted cellist. Of course this image is not meant to be taken literally, but without some *prima facie* meaning for the notion of final causation, why did it have the power that it did?

169 There has in fact been a recent flowering in philosophical adaptations of Darwinian explanation to language, thereby creating a field known as “teleosemantics”.
tending stably towards, seeing “the reality as the normal product of mental action, and not as the incognizable cause of it.”

The final causation involved in semeiosis is a further dimension of its continuity. For teleology (or tendency) is subject to an indefinite extensibility across individuals (in the example of the mathematician and her talent the individuals will be events across her life-span) – individuals that may be said to “work out” that tendency, but no collection of which can be said to “exhaust” that tendency. That is to say that the inborn genius for abstract thought of, for example, Goedel, would have manifested itself in some way under all manner of different upbringings, educations and other life-experiences, even if one is pessimistic enough to hold that some possible circumstances would have snuffed out that genius. In this way final causation may be understood as a form of antireductionism of the continuous to the individual, or the irreducibility of Thirdness (an idea that will be explored in §6 and §7).

3.6.3 Conclusion
This chapter has concerned itself with meaning in order to explicate Peirce’s version of pragmatism and contrast it to the response-dependent and neo-pragmatist positions presented in the last section. Peirce’s pragmatic maxim, it was shown, was never intended to be a position in metaphysics, nor even a repudiation of a certain (realist) metaphysics – as pragmatism was for Johnston, Putnam and Rorty. Nor even was it a repudiation of metaphysics itself which, we saw in this chapter, logical positivism was for the logical positivists. “Pragmaticism” is not an alternative set of truth-conditions with respect to the application of certain concepts. The pragmatic maxim is merely a logical tool, adapted from the natural sciences, to aid in clarifying the meanings of our concepts, particularly by identifying and setting aside those concepts that – lacking for us in any “effects that might conceivably have practical bearings” – are lacking for us in any meaning.

It was suggested that much of the work of science consists in the a posteriori precisification of scientific terms, and that in order for this to be possible, meanings must be essentially, ‘continually’ indeterminate. (It was noted how different this is from the treatments of meaning by the analytic tradition, where it seems meanings must either consist in some kind of determinate objects – be they physical or abstract – or be repudiated altogether). Peirce’s understanding of meaning was further deepened by introducing some of the basic ideas of his semiotic ‘philosophy of language’. It was noted that each Peircean sign consists in an irreducibly triadic relationship between what he calls representamen, object and interpretant. Within this formal framework, meaning is not some strange, shadowy further object which is picked out by a term or

170 (8.15). This quote is taken from a remark about realism in Kant, but applies to Peirce’s realism generally.
statement over and above its reference. Rather, the interpretant is what plays the
functional role picked out by the concept of meaning in ordinary language – though (as
was noted at the end of §3.5) rather than stating that the claim that Peirce’s notion of
the interpretant defines meaning in the traditional philosophical sense, it is more exact
to say that the interpretant is a pragmatic precisification of the ordinary language
concept of meaning. The role of the interpretant in not just translating but also
developing the sign it is interpreting highlights the way in which, although Peirce’s
account of meaning is similar to Kripke’s in its essentially public character, it differs in
its essentially evolutionary or developmental character.

The two separate explications of meaning offered by this chapter might appear at
first glance to pull against each other. The pragmatic maxim, though only a tool for
clarifying the meanings of our terms, nevertheless seems to imply that the meaning of a
concept consists in the expectations which users of the concept are led to form from
hypotheses containing it. The explication of meaning as interpretant presented from
§3.5 onwards, on the other hand, seems to imply that the meaning of a concept
consists in its development through the community’s usage of it. However, these two
explications may be reconciled by distinguishing between the meaning which a given
concept has for us and the meaning it has simpliciter.171 The pragmatic maxim, then,
pertains to the former (since, naturally, we can only clarify the meanings which
concepts have for us), while Peirce’s theory of meaning proper pertains to the latter.

The fact that these two may be distinguished in fact follows from the a posteriori
clarification of meaning elaborated in §3.2. Meanings aren’t necessarily exactly as we
think they are: genuine surprises exist with respect to what our terms or concepts really
mean. The fact that these two dimensions of meaning may be distinguished also
explains why the “meaning as use” theory (inspired by the later Wittgenstein and
advocated by some forms of pragmatism), though – it was noted in §3.5.1 – it might
appear prima facie similar to Peirce’s view of meaning, is in fact profoundly different.
For within an explication of meaning as use, the distinction between what we
consciously ‘do with’ a sign and the way the sign itself develops is elided. Yet this
distinction is, in a way, the key to Peirce’s realism (and thus, as noted, will be
explored further in later chapters).

It is the hypothesis of synechism that makes possible the claim that the meanings of
our concepts may be essentially indeterminate while continually being precisified – and
it is on this assumption that the pragmatic maxim, and also the dynamic interplay
between Immediate Object, interpretant and Dynamic Object, and thus Peirce’s whole

171 Some of this complexity is dealt with in Peirce’s semeiotic by the fact that he not only
distinguishes two objects but three interpreters, which he calls Immediate, Dynamical and Final (see,
for instance, 4.536, 8.184–5 and 8.314–5). However, space does not permit me to wade this far into
Peirce’s sign-theory. See Misak, p. 19, for a concise account, and Liszka for an extended study of this
particular triadic distinction.
theory of meaning, is predicated. So insofar as the account just presented is a fruitful way to think about meaning, synechism would seem to be vindicated to some small degree. The hypothesis of synechism will be further explored in the next chapter.
Chapter 4.

TRUTH AND THE COMMUNITY OF INQUIRY
This chapter will introduce Peirce’s distinctive explication of the concept of truth in terms of the limit or end of inquiry. The way in which this is an application of Peirce’s concept of continuity will be explored in §4.2. Peirce’s concept of truth will then be defended against two sets of criticisms – §4.3 will consider a complaint (deriving originally from Quine) that his use of the limit concept in explicating truth is pragmatically unsound, and §4.4 will discuss a charge by Johnston that the definitional relationship Peirce sets up between truth and inquiry delivers counterintuitive results with respect to what we should call ‘true’.

This area of Peirce’s thought has received extended discussion in the literature. However, for the purposes of this thesis it is worth revisiting these discussions, as the use which Peirce makes of his synechism in explicating the concept of truth will be drawn on in the discussion of realism in later chapters. First, however, in the following section, I will briefly sketch two popular twentieth century approaches to explicating truth, from which Peirce’s account may be distinguished.

4.1 Recent Influential Conceptions of Truth

4.1.1 “Ontological” vs. “Semantic” Accounts of Truth

Call an account of truth “ontological” if it conceives the explication of truth to be a problem in metaphysics. Such accounts of truth have flourished in recent times under the name of truthmaker theory, though truthmaker theorists have argued that the theory merely develops an idea which has been pervasive in the Western philosophical tradition, going back at least as far as Aristotle. A truthmaker for a true statement \( p \) is defined paradigmatically as something the very existence of which entails \( p \). For example, that the statement “Snow is white” is true is said to be entailed by the existence of white snow (insofar, naturally, as that snow is pervasively white).

The most fundamental reason that those who have embraced truthmakers have done so is that the notion expresses a realist intuition, which might be called ‘the intuition of epistemic humility’. It is thought that our statements must correspond in a determinate manner with ‘bits of the world’, or else we are just engaging in loose talk.

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175 Pettit calls this intuition “epistemic servility” (for example, “Realism and Response-Dependence”, p. 25), but this seems to be overdoing things somewhat.
(or, at best, in some subsidiary language-game which is not truth-apt). Thus John Bigelow has written:

...I have sometimes tried to stop believing in the Truthmaker axiom. Yet, I have never really succeeded. Without some such axiom, I find I have no adequate anchor to hold me from drifting onto the shoals of some sort of pragmatism or idealism.  

(Here Bigelow appears to understand pragmatism as the sort of ‘no right answer’ pluralism which we saw Putnam and Rorty outlining in §2.)

A natural enemy of truthmaker theories, which rejects the necessity of the move made by Bigelow, is deflationary (sometimes alternatively referred to as “semantic”) accounts of truth. Price has defended such a theory of truth which, he claims, is characterised by two claims:

i) That truth is not a substantial property.
ii) The key to our use of the concept of truth lies in its disquotational character: "p" is true iff p.

The theory is often called “semantic” because it claims that truth is nothing to do with what is in the world, but is rather a feature of the language we use to describe that world (for example, a particular relationship between object- and meta-language). Thus, in first introducing the semantic analysis, Alfred Tarski wrote, "...if we wish to say something about a sentence, for example, that it is true, we must use the name of this sentence, and not the sentence itself".  

Whereas Bigelow seems to treat truth as just one property among many, such that there is no difference in kind between a statement that a chair is white and a statement that a given sentence is true, deflationary theories deny that truth is a property in this sense. For in stating ‘p is true’ it appears that we are stating nothing over and above p. This apparent ‘metaphysical transparency’ possessed by truth does seem to make the claim that there is nothing substantive to be said about truth very tempting, and there is now a venerable deflationist tradition stretching from Frege through Ramsey and Quine to a complex present-day discussion.

Armstrong argues that one can have both a truthmaker and a deflationary theory of truth by holding that truthmaker theory provides the “ontology” of truth, while deflationism takes care of the “semantics”. However, deflationism, as noted in Price’s first claim, is usually taken to include the claim that the “disquotational”

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178 Alfred Tarski, “The Semantic Conception of Truth and the Foundations of Semantics”. *Philosophy and Phenomenological Research* 4 (1944), pp. 341-376. It should be noted that Tarski did not see himself as putting forward a *theory* of truth so much as conditions of adequacy which any theory of truth must satisfy. Credit for turning Tarski’s analysis into a theory proper goes to philosophers such as Ramsey.
semantics of truth is not only accurate, but it is all there is to say about truth, including “ontologically”. The dispute between truthmaker and deflationary accounts of truth thus concerns, at bottom, whether metaphysics has anything to say about truth.

Despite the fact that truthmaker theory and deflationism are painted as natural enemies, this chapter will argue that the two positions do not partition the range of possible accounts of truth. Before presenting Peirce’s ‘third way’, however, I will mount a brief critique of the ontological approach to truth exemplified by truthmaker theory, where the focus is (once again) on its fundamentally dyadic structure.

4.1.2 Is Truth a Two-Place Relation?

Truthmaker theorists assume that there exists some two-place relation, definable extensionally, which matches bits of language with bits of the world (though the matching between truthmakers and truth-bearers is not necessarily one-one, as various truthmaker theorists have pointed out). This match is usually referred to as “correspondence”.

Why should we care about this two-place relation? There are many possible two-place relations between bits of language and bits of the world – why should we care about this particular one? For instance, why do we aim for truth and not for T*, which matches every true statement with a particular grain of sand in the Sahara desert? (There will be some overlap in statements per grain, of course, but so there must be with a truthmaker relation and things in the world). Or why don’t we aim for T**, which takes the original truth-relation and matches every truth-bearer with the truthmaker which is next on the list of truths sorted into alphabetical order? This is in fact Putnam’s “model-theoretic” argument against metaphysical realism, which argues that the mysterious “reference-relation R”, on which (Putnam alleges) such realism depends, is radically underdetermined.\(^ {180}\)

Why do we care about truth? That is a difficult question – however such questions are part of philosophy. A plausible if exceedingly general answer goes something like, “True statements give us access to the way things are”. (Note that this answer invokes “the way things are”, not just “the things that are”.) This response points the way to certain features which truth must have which are not reflected in the purely extensional, dyadic correspondence relation invoked by truthmaker theory. First of all, the correspondence relation must be stable, in that it is not possible for the statement “Snow is white” to be truth-made by white snow on Tuesdays and by green cars on Wednesdays. This is not to say that the truthmaker for a given statement can never alter. (For example the truthmaker for “There is someone in the lift” will be different

people as the lift is entered and vacated.\textsuperscript{181} However, within those constraints, there remains a stability which we take for granted. With respect to statements such as "George Bush is very tall", we assume that a particular man will make that statement true, that it will not suddenly start being 'truthmade' by a particularly tall giraffe in Taronga Zoo, for example. But how can we justify that faith under truthmaker theory?

A dyadic relation does not rule out such stability, but neither does it ensure it, render it an essential condition of any 'truthmaking relation' – and this seems somehow unsatisfying. Consider an analogous claim: that gravity is a two-place relation – a relation between falling objects and accelerations (which falling objects receive when they begin to fall). Such a claim is not false, by any means, but one feels that the essence of the matter has been missed. The essence of the matter with respect to gravity is that all such accelerations are describable in a general principle, expressible mathematically, which possesses enormous predictive power.

On the other hand, according to semantic theories of truth there is nothing at all substantive to be said about truth. This response also seems unsatisfying. Thus Wilfrid Sellars has written:

\begin{quote}
...as has often been noted, the formula

'Snow is white' (in our language) is true iff Snow is white

is viewed with the greatest equanimity by pragmatist and coherentist alike. If the "correspondence" of the correspondence theorist amounts to nothing more than is illustrated by such equivalences, then nothing further would remain to be said about "truth and correspondence".\textsuperscript{182}
\end{quote}

We do not have to settle for such a deflationary response, however, if Peirce's explication of truth is to be believed.

\section*{4.2 The Meaning of Truth}

\subsection*{4.2.1 The "End" of Inquiry}

It was noted in the last chapter that semeiosis is an irreducibly teleological process, and that teleology is a tendency towards some end. An important manifestation of Peircean 'sign-action' is inquiry, which pursues as its end the truth:

The opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real (5.407).

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\textsuperscript{181} I'm grateful to Henry Fitzgerald for raising this point, and to Peter Wylie for noting that it does, however, depend on the premise that statements can be types.

In this area of philosophy also, then, Peirce’s synechism plays an important role. The mathematical notion of continuity may be discerned in the background of his explication of truth, via the notion of a limit (of a convergent series):

Inquiry properly carried on will reach some definite and fixed result or approximate indefinitely toward that limit (1.485).

If we work out π, using one of the various algorithms which exist for the purpose, we obtain a number which grows ever longer in terms of decimal places while growing ever closer to π itself. Likewise, truth for Peirce is defined as what we are growing ever closer towards by engaging in scientific inquiry (inquiry which was alluded to in the last chapter in terms of the progress from the Immediate towards the Dynamic Object of any given sign). It should be noted, however, that Peirce is not offering a definition of truth so much as saying that this is what we mean by the truth – in the sense of meaning explicated by the pragmatic maxim. Again, he is operating at the third grade of meaning-clarification, which means that other, ‘nominal’ definitions of truth remain possible, as discussed in §3.1, at the second grade.

The so-called Correspondence Theory of Truth is an example of such a nominal definition. Truthmaker theory, we saw in the last section, takes its inspiration from this theory, giving it an ontological interpretation (although this is not the only interpretation which the theory might receive). Peirce’s explication of truth endorses the insight of the correspondence theory that a statement is true by virtue of its being in some relationship to something other than it (setting aside such problems as semantic paradoxes and analytic truths, which are problems for the correspondence theory of truth generally) – which is arguably an expression of the intuition of epistemic humility (“the very idea of truth is that it is quite independent of what you or I may think it to be” (2.55)). However, the pragmatic explication of truth goes further than the correspondence theory of truth in that it provides expectations from the hypothesis that a certain statement is true – for instance, if a statement is true then no amount of inquiry will be able to overturn the statement. Whereas the correspondence theory of truth on its own is a claim that produces no such expectations. (More exactly, if the statement “The cat is on the mat” is true then according to the correspondence theory this leads us to expect that the cat is on the mat, but this provides no expectations over and above those provided by the statement itself).

This pragmatic explication of truth also makes possible an explication of seeking the truth which forms a clear contrast with other methods of (what Peirce called) “fixing belief” which are widely pursued, such as refusing to consider any evidence contrary to one’s present beliefs (which Peirce calls the “method of tenacity”), looking

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183 For a good extended discussion of this point see Misak, pp. 35-45.
184 Consider, for example, the ‘correspondence’ between object- and meta-language in Tarski’s account of truth, though this interpretation would of course be unusual.
to some authority to deliver one’s beliefs wholesale (the “method of authority”), or believing the things which seem most pleasing or which form the most coherent and beautiful belief-set (the “a priori method”). These are the famous first three methods from Peirce’s early paper, “The Fixation of Belief”, which he contrasts with the “method of science” according to which scientists seek to communally conform their beliefs to that which is independent of those beliefs.

However, just as when we are working out π we may continue adding decimal places indefinitely and in principle can never reach the end of our calculating process, although we are continually drawing closer to π itself, so when we inquire we are indefinitely approximating toward the truth but never reach a point where we have the entire truth and inquiry may cease. Given that we manage to get around the world without too many nasty surprises, we can assume that with respect to some of our beliefs we have reached such a point:

...throwing off as probably erroneous a thousandth or even a hundredth of all the beliefs established beyond present doubt, there must remain a vast multitude in which the final opinion has been reached (8.43).

However, we can never be absolutely sure which of our beliefs are the true ones, and this is Peirce’s commitment to fallibilism, which “requires a man to be at all times ready to dump his whole cart-load of beliefs, the moment experience is against them (1.55)”.

For this reason it is important to address an ambiguity in the phrase, “end of inquiry”, which has entered philosophical parlance. The ‘end’ in “end of inquiry” is not ‘end’ in the sense of ‘finish’, which we have just noted is incompatible with Peirce’s use of the idea of a limit. It is ‘end’ in the teleological sense of ‘aim’ or ‘goal’. Rather than a description of some future time (some epistemological Arcadia) where all questions are settled, Peirce’s pragmatic explication of truth is an idealisation of what scientists are doing now (which is settling questions about which they genuinely doubt).

Such idealised notions might seem prima facie, to the philosopher with little experience in science, to be unscientific daydreams, yet they are one of science’s most useful tools. For example, using the idealised notion of a frictionless plane, natural scientists in the early modern period were able to formulate the laws of motion for a horizontally moving object with a conciseness and power not possible if they had tried to write laws of motion which factored in the vastly heterogeneous frictions to which different horizontally moving objects are subject. This is true despite the fact that every horizontally moving object they ever came across was affected by at least some friction. Thus, Peirce further explicates truth as follows:

Truth is a character which attaches to an abstract proposition, such as a person might utter. It essentially depends upon that proposition’s not professing to be
exactly true. But we hope that in the progress of science its error will indefinitely diminish, just as the error of $3.14159$, the value given for $\pi$, will indefinitely diminish as the calculation is carried to more and more places of decimals. What we call $\pi$ is an ideal limit to which no numerical expression can be perfectly true (5.565).

Such a view of truth – as something we must acknowledge that we necessarily fall short of – has seemed paradoxical to some philosophers (and indeed gave rise to a famously inerudite remark of Bertrand Russell’s that “this would enthrone Epimenides as the only sage”). However, it is quite consonant with the definition of continuity:

**(C1):** A true continuum is something whose possibilities of determination no multitude of individuals can exhaust.

When applied to truth, this statement may be interpreted as meaning that agreement amongst no cardinality of inquirers may constitute or guarantee truth. Rather, the community of inquiry always and in principle retains the potential for further discovery of error. With respect to the notion of truth, then:

The principle of continuity is the idea of fallibilism objectified. For fallibilism is the doctrine that our knowledge is never absolute but always swims, as it were, in a continuum of uncertainty and of indeterminacy (1.171).

Thus, again we have what may usefully be described as a ‘Communitarian Continuity’. Peirce is claiming that insofar as we seek the truth we become part of a ‘truth-seeking entity’ (the community of inquiry) which is indefinitely large, although as individual inquirers we each have decidedly finite epistemic powers. This Communitarian Continuity with respect to truth will emerge in later chapters as an important foundation for Peirce’s distinctive realism.

### 4.2.2 Naturalism and the End of Inquiry

Peirce’s naturalism was presented in §1.1 as the claim that every question will receive an answer, and it might be wondered how this view of truth as an indefinitely forestalled end of inquiry is compatible with such a naturalism. Here what may be referred to as ‘the any/every distinction’ is important. The naturalist commits to *any* question receiving an answer at some point in time, not to *every* question having received an answer at any point in time: just as the fact that every person has a mother who loves them does not entail the fact that there is some particular mother who loves every person. From time to time Peirce rails at the fallacies that can arise from failure to appreciate this scope distinction.

It might be argued that given the nature of inquiry as ‘cumulative’, the inference from *any* question receiving an answer at some point in time to *every* question having

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received an answer at some point in time should nevertheless be straightforward. Consider the case where every mother loves not just the child she has just brought into the world, but (in a burst of new maternal affection) all other children brought into the world previously. In such a case it seems that we may infer: if every child has a mother who loves them, then there is some mother who loves every child – the last mother to give birth. It might be argued that this is analogous to inquiry in that once a question is solved at a particular time \( t \), it remains solved at all future times.

However, this inference only goes through over a finite domain (of mothers and children or of questions and times at which questions are solved), since it depends on there being a last member of the domain. If these domains are even countably infinite the two propositions:

(N1) For every question there is some time at which it receives an answer.

(N2) There is some time at which every question receives an answer.
– are not logically equivalent, just as the propositions:

(1) For every natural number there is some natural number which is its successor.

(2) There is some natural number which is the successor of every natural number.
– are not logically equivalent.\(^{186}\) Given that the set of questions and future times is greater than finite, then, Peirce’s understanding of the truth in terms of an unattainable “end” of inquiry and his naturalism are not incompatible (though further assumptions are of course made by the notion of the end of inquiry, such as that rational inquirers continue to exist and to inquire – more will be said about this in §4.4). It may be objected that this is not a true instance (and therefore vindication) of synechism, as the infinity concerned is merely a countable infinity, not the full-blown, “supermultitudinous” continuity presented in §1.3. However it is an instance of how the mathematical study of infinity may ‘trick down’ into logic, as predicted by Peirce’s hierarchy of the sciences.

4.3 A “Limit Theory of Truth”?

4.3.1 The Limit Concept as Meaningless for Theories
There has been influential criticism of Peirce’s so-called “limit theory of truth”. Quine has objected that although the notion of approximation to a limit is defined for numbers, to try to apply it to theories is meaningless:

\(^{186}\) See 1.405, where Peirce writes:
We must look forward to the explanation, not of all things, but of any given thing whatever. There is no contradiction here, any more than there is in our holding each one of our opinions, while we are ready to admit that it is probable that not all are true; or any more than there is in saying that any future time will sometime be passed, though there never will be a time when all time is past.
Peirce was tempted to define truth outright in terms of scientific method, as the ideal theory which is approached as a limit when the (supposed) canons of scientific method are used unceasingly on continuing experience (5.407). But there is a lot wrong with Peirce's notion...there is a faulty use of numerical analogy in speaking of a limit of theories, since the notion of limit depends on that of "nearer than", which is defined for numbers and not for theories.\(^{157}\)

Robert Almeder has countered that Peirce does not have "a limit theory of truth", for it is important to distinguish between the notion that truth consists in the indefinite approximation of a theory towards an ultimate true theory, and the notion that truth consists in the indefinite approximation of the probability that a proposition is correct towards 1:

...for Peirce, what is approached as a limit is not truth as the product of the final irreversible opinion...rather what is approached as a limit is the probability value of 1 that the proposition is true.\(^{188}\)

Misak on the other hand has argued that it is vital to separate Peirce's theory of truth from his theory of probability (which is part of his theory of induction). She notes that Peirce was ahead of his time in making clear that it makes no sense to speak of the probability of some event or fact without a reference class of relevantly similar events or facts against which the probability of the event or fact in question is defined, and which must be (as Peirce puts it) "capable of being counted (5.169)". Thus, for instance, when we say that we have a 1 in 13 chance of drawing an ace at random from a pack of cards, this probability assignment is predicated on the fact that a deck of playing cards contains 52 cards, 4 of which are aces. However, when Almeder says that scientists are seeking propositions for which there is a probability of 1 that they are true, what is the reference class against which these probability values are to be defined? All possible propositions both true and false? What is the probability that, say, Newton's first law of gravitation is true? Thus Almeder's attempt to rescue Peirce's theory of truth from Quine's objection renders it both nonsensical and in contradiction to Peirce's theory of probability. Misak, though she does not explicitly discuss Almeder's response to Quine, makes the extremely pertinent remark:

A true belief or theory is not one which has a probability of 1. Beliefs and theories do not, on Peirce's account, have probability measures at all, never mind probability measures which converge upon the truth.\(^{189}\)

4.3.2 Doing Without the Limit Concept

Does Misak have an answer to Quine, then? She claims that we must concede to Quine that when it comes to Peirce's theory of truth, "[m]athematical metaphors are out of

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\(^{157}\) Quine, *Word and Object*, p. 23.

Rather, she argues, Peirce’s notion of truth should be explicated solely with respect to his fallibilism and “Critical Common-sensism”. Critical Common-sensism is the view that there is no Archimedean point, such as Descartes sought, from which our theories of the world can be evaluated for verisimilitude, but that we must seek the truth by accepting our particular belief-system for the moment while simultaneously critically appraising whatever parts of it might seem prima facie problematic.

A fatal objection to using a limit metaphor to explicate Peirce’s notion of truth, Misak urges, is that scientists’ approach to the truth is not the steady and gradual “convergence” found in mathematical series where:

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\text{for two parameters with different measures, the difference between the measures gradually diminishes until it is as small as is desired.}\]

Rather, she writes, “[i]nquiry can go very wrong for generations and so a given point in inquiry is not a point in a convergent process.” Rather than convergence, all Peirce requires for his theory of truth is the idea that a “consensus” amongst the community of inquiry will appear once inquiry is pursued sufficiently far, she claims.

However, to disallow any use for the limit notion in Peirce’s account of truth seems to ride roughshod over certain key passages. Perhaps Misak is right and the approach to the truth is not a steady, gradual improvement. Still, it is arguable that the limit notion does pragmatic work in other respects. For example, it signifies that as the community of inquiry acquires truth, its self-correction becomes ever finer with regard to any given question, just as the continued working out of \( \pi \) produces ever more decimal places. Thus (as was noted in §3) any given theory begins with vague concepts (which often possess new and striking predictive power) and gradually precisifies those concepts with the help of the pragmatic maxim. In fact this happens until the diminishing predictive returns available lead scientists to turn their energy to other, more exciting, inquiries, at which point the process begins again. This application of the limit metaphor, then, produces an idea of inquiry over and above a mere ‘gathering of truths’, like apples from a tree. For if the attainment of truth were like the gathering of apples from a tree, it might seem that scientists could go to work and gather a few more every day. However such a metaphor does not capture the way in which scientific inquiry proceeds from the more general to the more specific with respect to any given question.

A further, albeit more metaphorical, use for the limit notion is the idea of a limit as a constraint:

...as to the inkstand being on my table, though I should succeed in persuading myself and all who have seen it that it is a mere optical illusion, yet there will be a

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190 Misak, p. 117.
191 Misak, p. 123.
192 Misak, p. 122.
193 Such as 1.485 and 5.565 cited above. See also 7.110.
limit to this, and by the photographic camera, the balance, new witnesses, etc., it will, at last, I guess, force its recognition upon the world (8.153).

One speaks of being "limited" by something in the sense that it restricts one's freedom in some way. Similarly, the truth is something we cannot avoid dealing with, in some form or other. The truth affects us no matter how much we try to avoid it. In fact it affects us exactly insofar as we seek to avoid it, and moreover (Peirce argues) it always eventually forces us to recognise it anyway. Hence Peirce’s talk of fate or destiny with respect to truth:

This activity of thought by which we are carried, not where we wish, but to a fore-ordained goal, is like the operation of destiny. No modification of the point of view taken, no selection of other facts for study, no natural bent of mind even, can enable a man to escape the predestinate opinion (5.407).

This idea of truth as constraint is of course not contradicted by the idea of truth as consensus amongst scientists following an agreed ‘rational’ method with which Misak wishes to replace the limit notion. However, it does have the virtue of making this feature of truth explicit.

4.3.3 The Limit Concept as Usefully Vague
Peter Skagestad has also pointed out that to disallow the limit metaphor altogether from Peirce’s account of truth seems to leave certain key passages hanging\(^1\). He concedes to Quine only that the idea is vague, not that it is meaningless. He then argues that the vagueness of the limit notion in Peirce’s account of truth is its great strength, for it admits of a variety of interpretations in different truth-seeking contexts. More precisely, it can admit of a clear, quantitative interpretation in the more mature sciences while retaining its useful vagueness in sciences which are less developed:

It is a corollary of Peirce’s pragmatism that the epistemology of imperfect knowledge must elude precise formalisation, since the degree of possible precision is a function of the state of our knowledge. If one believes, with Peirce, Hertz and others, that nature is essentially continuous, it follows that only differential equations have a fighting chance at being true of nature. In that case, there is a straightforward sense in which we get nearer to the truth by substituting differential equations for subject-predicate statements like ‘light is electro-magnetic vibrations’\(^2\).

Skagestad notes that a clear, quantitative interpretation of the limit notion of truth is available in sciences that are well enough developed for statistical methods to be applied to the measurement of key quantities (such as the speed of light, for example). In such contexts, Bernoulli’s Theorem means that enlarging the sample size of

measurements enables scientists to bring the probability that the true value of the quantity will be within any arbitrarily chosen margin of error arbitrarily close to 1. This is a particularly straightforward use of the limit metaphor. Note that these scientists are not claiming to be bringing the probability closer and closer to 1 that any particular statement about the speed of light is true, as Almeder suggested. Rather, they are assuming an inter-relationship between (interestingly) three quantities: the sample-size, the margin of error, and the probability that the quantity in question is within that margin of error. Thus, Skagestad’s answer to Russell might be expressed by pointing out that if to include a statistical margin of error in one’s scientific results is equivalent to the statement that one is lying, then Peirce’s pragmatic explication of truth does have the consequence that Epimenides is the only sage, but not otherwise.

4.3.4 Relative vs. Absolute Nearness to the Truth
These points of Skagestad’s are well taken, but I would add a further reply to Quine’s objection which draws on the pragmatic maxim, as follows. Peirce does accept that it is difficult to gain any pragmatic grasp on the notion of the absolute nearness of a theory to the truth. How on earth is such a quantity to be measured? In what units might it be expressed? The notion would also seem to defeat the purpose of pragmatism insofar as pragmatism seeks to avoid speaking of “things-in-themselves”, for does it not require a comparison between our current best theory of the world and things-in-themselves? However, the notion of a theory being nearer to the truth than one’s present theory, is something scientists work with on a regular basis.

For example, when natural scientists experiment they take a given highly specific corner of a theory (in Peirce’s terms, a hypothesis), bring the hypothesis to a situation with respect to which it is indeterminate and (by framing further hypotheses which make predictions about that situation and testing them) render it more determinate. If two theories are identical except that the former contains a hypothesis which truly predicts something that the latter does not, the former is nearer to the truth than the latter. Therefore, by the pragmatic maxim, since the idea of ‘nearer to the truth’ translates into a projectible (if highly general) pattern of expectations with respect to relative predictive power, it is meaningful. Peirce makes this point (in terms of knowledge rather than truth, but it seems that the point is the same) in his application for a grant from the Carnegie Institute in 1902, in a section entitled “On the Economics of Research”:

195 Although this would, of course, throw new meaning on the phrase, “lies, damned lies and statistics”.
In the economics of research the “laws” are mere general tendencies to which exceptions are frequent. The laws being so indefinite, at best, there is little advantage in very accurate definitions of such terms as ‘amount of knowledge’. It is, however, possible to attach a definite conception to one increment of knowledge being greater than another. To work this out will be the first business of the memoir.\textsuperscript{196}

Thus, although it is indeed impossible for anyone to step outside the ‘continuous’ process of inquiry and make judgements about the veridicality \textit{tout court} of any theory, by using relative judgements the community of inquiry inches, generation by generation, ever closer to the truth.

It might be objected that such an account is unsatisfactory as the new hypothesis which makes true predictions previously unavailable to science may make many false predictions as well – so how can it be said necessarily to bring the overall theory “nearer to the truth”?\textsuperscript{197} Yet what is lost (pragmatically) by saying that the amended theory, despite its false predictions, is \textit{not} nearer to the truth? It might be argued that a new hypothesis is nearer to the truth than its rivals only if it makes \textit{more} true new predictions than false new predictions. However, it was noted in the discussion of Almeder that propositions cannot be counted such that the sort of ratios that would underlie probability claims with respect to their truth might be calculated. Analogously, it is difficult to see how the true and false predictions made by a new hypothesis might be counted such that their ratio might be evaluated.\textsuperscript{198}

Consider the Copernican hypothesis that the Earth revolves around the sun. When it first appeared and challenged the traditional Ptolemaic hypothesis that the Earth is stationary at the centre of the Universe, the Copernican hypothesis made many false predictions. It made so many, in fact, that it might plausibly have been argued at the time that its false predictions outweighed its true predictions. For instance, against the background science of the day, the Copernican hypothesis predicted that Mercury and Venus should change size appreciably during the course of the year, that objects dropped from tall towers should fall some distance from the base of the tower due to the tower’s motion, and that objects should not rest on the surface of the Earth, but be flung, discus-like, away from it.\textsuperscript{199} Nevertheless, it should be uncontroversial that the Copernican hypothesis is nearer to the truth than the Ptolemaic one. As it happened, the Copernican hypothesis was accepted by a growing number of scientists through the 1500s, despite its false predictions, because the true predictions it did make were so novel and suggestive. Eventually the way was shown to removing the false predictions


\textsuperscript{197} Thanks are due to Peter Skagestad for raising this objection (in private correspondence).

\textsuperscript{198} Here Peirce’s claim that, “Predictions are not units; for they may be more or less detailed (7.216)” is relevant.

\textsuperscript{199} Background information to this paragraph comes from Alan Chalmers, \textit{What is This Thing Called Science?} (Brisbane: University of Queensland Press, 1978), pp. 68-70, and certain promptings from Frank Jackson.
made by the Copernican hypothesis, through Galileo’s major advances in optics and mechanics, and Kepler’s insight that planets might follow not a circular but an elliptical motion (of which the circular orbit is a degenerate form).

Genuinely new true predictions are a major scientific achievement. Therefore, if scientists are able to make predictions concerning phenomena which theory was previously silent on, they obviously have some greater understanding, and can only trust that any false predictions which their new hypothesis makes will be ironed out by future inquiry. To embrace Peirce’s view of truth (and, we will see in §6, his realism) is just to say that we cannot diverge from the truth indefinitely whilst continuing to increase in predictive power. Thus the concept of one hypothesis being nearer to the truth than another similar hypothesis can be spelled out in terms of the (pragmatically clear) concept of new predictive power, rather than in terms of the (pragmatically unclear) concept of making more true than false predictions. In this way also, then, it appears that the limit notion itself may be made meaningful, pragmatically speaking, as an explication of the concept of truth.

4.3.5 ‘Nearness to the Truth’ and Scientific Revolutions

A further objection to this answer to Quine, which extends the previous objection, concerns “scientific revolutions”. (This objection was alluded to by Misak’s rejection of “convergence” as an accurate description of scientific progress.) Much has been written about the scientific revolution since the work of Thomas Kuhn and Imre Lakatos as a radically different process of discovery which bursts into science from time to time, shifts paradigms and obeys entirely different laws to “normal science”. How can we distinguish pragmatically between a scientific revolution and a scientific aberration, a ‘divergence’ from the truth? First of all, it should be noted that explaining how the rules for inquiry in a given science might be in any way altered while retaining a coherent and objectivist notion of truth is a difficult problem for every epistemology, not just Peirce’s.\(^{200}\) However, the most important response to this question from the pragmatist perspective is, “Can we, at any given point in time, distinguish with certainty the paradigm-shifting developments in a given science from the dead-ends, and should we try?”.

The right answer to this question is, “No”, on both counts. That is – the attempt to frame a philosophical criterion which makes these distinctions at any given time is an attempt to prejudge matters which are properly scientific. In this way, what may be referred to as the future-directed justification (for our adoption of hypotheses) that pragmatism presents to the philosophical world is one of its most powerful legacies, and the most underappreciated. (It will be discussed further with respect to Peirce’s

\(^{200}\) Thanks are due to Peter Skagestad for making this suggestion to me (in private correspondence).
scholastic realism in §6). It is already implicit in Peirce’s frequent use of the term ‘hypothesis’ in contexts where regular epistemology (which, as noted in §1.1 is a somewhat orthogonal project to Peirce’s methodology of inquiry) steps in and uses such terms as ‘belief’, ‘truth-claim’, and ‘knowledge’. It has already been noted that what future development a hypothesis might make possible is often not at all obvious, due to the a posteriori character of the meaning-precisification which drives science forward. In this way, it is possible to understand scientists as converging upon the truth in general (by making relative judgements with respect to which hypotheses are preferable) while not being obliged to frame criteria which predict at any given time which particular hypotheses will be the ones that survive – that is, which hypotheses are revolutionary and which are merely ‘off the wall’.

Nevertheless, it is arguable that Peirce’s synechism might even make possible a less stark understanding of the scientific revolution than is the present norm in philosophy of science. We have seen how the limit metaphor when applied to truth suggests that ever more exact and specific ‘levels’ of inquiry ensue as science progresses. It might be suggested, then, that the inferences which create scientific revolutions are in fact formally identical to those of normal science (that is, the formation of hypotheses which explain theoretical anomalies), but in response to a theoretical impasse with respect to a previously successful hypothesis, the scientists concerned have abandoned it and ‘hopped up a few levels’ of theoretical resolution in order to search for a new line of inquiry.

The new hypothesis is of a theoretical coarseness such that it cannot readily be appreciated by individuals at the time, and is perceived rather as a changing of the rules of inquiry in their discipline (and resisted as such). However, perhaps the situation is analogous to a stroll across the surface of Mount Rushmore, seeing not a face but a jagged and confused surface, whilst if one were far enough away one could recognise the rough surface as a face in exactly the same way in which one recognises other faces. If such an account of the scientific revolution could be fleshed out, it would mitigate the problem of the unconvincing irrationalism which has dogged “Science Studies” post-Kuhn. However such a fleshing out is beyond the scope of this thesis, so the above must be left as a suggestion.

To conclude this section, then, Peirce’s ‘limit concept of truth’ is a powerful idea which can be defended from various objections. It functions vaguely and metaphorically in many contexts. However, this is not a defect but a strength when it comes to a philosophical concept of such very wide application across such many and varied areas of inquiry. The concept has content over and above Peirce’s fallibilism and Critical Common-sensism in that it indicates that as inquiry progresses our concepts will become ever more precisified. It also alludes to the fact that the truth itself functions to constrain us. Moreover, the limit metaphor anticipates various
quantitative precisifications of the concept of truth that have already occurred in sciences that have become relatively mature, an example of such precisification being the statistical notion of the probability (ever-increasing with increasing measurement sample size) that a measured quantity will lie within a certain margin of error.

However, as Misak has noted, the limit concept is not properly speaking a definition of truth, but a pragmatic precisification of or hypothesis with respect to truth, which teaches us to expect certain things from a statement’s being true. For instance, it teaches us to expect that the community of inquiry will move towards a belief in the statement, if inquiry is pursued seriously enough. Finally, Peirce’s concept of truth is a further example of mathematics providing “principles” to logic, as Peirce envisaged in his hierarchy of the sciences. The principle concerned is that we can make sense of a determinate value (that is, the truth with respect to a particular question) standing at the limit of an endless process (that is, the process of inquiry). From a common-sense perspective this is not at all obvious, which is perhaps part of the reason why nominalism, which in its emphasis on particulars may be conceived as the logic which pertains to a finite Universe\(^{201}\), currently has centre-stage philosophically, as against (the little-known and still terribly exotic-seeming) synechism.

4.4 ‘Internal Realism’ Defended

In the paper already discussed at length in §2.3, Mark Johnston seeks to distinguish his brand of pragmatism from Hilary Putnam’s “Internal Realism” with respect to truth. This account of truth is sufficiently similar to Peirce’s in certain key respects to make it worthwhile to discuss Johnston’s objections to it. During his Internal Realist phase\(^{202}\), Putnam defined truth as an “idealisation of rational acceptability”\(^{203}\). Here “rational acceptability” stands in for the “agreed to by all who investigate” in Peirce’s definition of truth cited above (“The opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth” (5.407)). However, for Peirce the “rational” is otiose insofar as he assumes that whatever is true will come out if inquiry is only pursued far enough. (Another way of putting this point is that, for Peirce, the claim that inquiry is rational is built into the notion of inquiry itself. This, however, is

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\(^{201}\) Murphey argues to this effect on p. 396. See also Peirce’s somewhat fractious remark: “the nominalists tell us that we cannot reason about infinity, or that we cannot reason about it mathematically. Nothing can be more false. Nominalists cannot reason about infinity, because they do not reason logically about anything (1.165).

\(^{202}\) Roughly, from Realism, Truth and History (Cambridge: Cambridge University Press, 1981), to The Many Faces of Realism (La Salle, IL: Open Court, 1987).

\(^{203}\) Putnam, Reason, Truth and History, p. 55.
not a vicious circularity so much as an expression of Peirce’s commitment to the scientific method itself being discovered \textit{a posteriori}, which was noted in §1.1.) Moreover, in Putnam’s definition “idealisation of” stands in for the “ultimately” in Peirce’s “ultimately agreed to by all who investigate...”. Here Putnam makes explicit the idealisation which we have already noted in Peirce’s concept of truth.

Putnam’s removal of the temporal dimension to inquiry implied by Peirce’s “ultimately” does carry some suggestion that we might be able to decide \textit{now} what an idealisation of our present canons of rational acceptability might be. This would conflict pragmatically with fallibilism and be most un-Peircean. However, Putnam never descends to the level of actually making such decisions, and these caveats do not affect the four objections I shall now discuss, which all concern the internal relationship common to Peirce and Putnam between \textit{truth} and \textit{inquiry} (and inquirers).

4.4.1 A Unitary Ideal Theory?

First of all, Johnston takes issue with Internal Realism’s use of the concept of idealisation. He asks what it might mean to conceive of an ideal theory (“T”), and suggests that it might be explicated as a set of sentences from which every true sentence may be deduced. He then objects that, “[a]s a matter of simple metalogic it could not be true that something is true if and only if it follows from the ideal theory T.”\textsuperscript{204} For, he argues, if the language of T is rich enough to express arithmetic it will be rich enough for a Goedel argument to be constructed within it:

T will be rich enough to include the weak arithmetic...which suffices to introduce Goedel’s system of numbering arithmetical sentences so that those sentences can be understood as containing names for themselves.\textsuperscript{205}

From this it will follow that there will be truths expressible in T which are not provable within T (sentences such as the famous “Goedel sentence” which, very roughly, says truly of itself that it is not provable). The best that can be hoped for, Johnston writes, is an ideal hierarchy of theories, each one closer to the truth than the last, each one \textit{proving} to be true statements which were only expressible in the theory directly below it. (“The best we can hope for is an indefinitely extensible hierarchy of theories all of which are \textit{empirically ideal}...”\textsuperscript{206})

This is a clever objection, which it would seem \textit{prima facie} that Peirce’s notion of the “end of inquiry” might be subject to. It seems that what Peirce sometimes referred to as the “final opinion” cannot contain the Goedel sentence – but neither may it omit the Goedel sentence, surely, if the sentence is true. However, it may be inquired which internal realist ever said that every true statement had to be \textit{provable} within the final

\textsuperscript{204} Johnston, “Objectivity Refigured”, p. 88.
\textsuperscript{205} Johnston, “Objectivity Refigured”, p. 89.
\textsuperscript{206} Johnston, “Objectivity Refigured”, p. 89.
opinion? All that is required is that the statement be included in the final opinion. It may be protested that this is to admit that the final opinion is not "complete" (in the logical as well as the ordinary language sense), and this seems to be a strange and troubling failing for such an idealised notion. Again, however, the 'any/every distinction' exposes a fallacy at this point. Just because any true statement (such as the Goedel sentence and its many higher-order equivalents) would be believed if inquiry proceeded indefinitely, this does not mean that there has to be some complete theory in which they are all believed together.\footnote{Just as speculative side-observation, it is interesting that the Goedel sentence has a chain of higher-order equivalents. Peirce's distinction between the object of a sign and its interpretant is in fact very suggestive at this point. He writes: The object of representation can be nothing but a representation of which the first representation is the interpretant. But an endless series of representations, each representing the one behind it, may be conceived to have an absolute object at its limit (1.339). What might lie at the limit of these metalanguages? Of course Peirce was writing before the particular separation of syntax and semantics which made Goedel's result possible, but perhaps interesting work might be done in the area of Goedel's results and Peirce's semiotic.}

Even if we could rest content with an ideal hierarchy of theories, Johnston continues, who is to say that we will get a single best hierarchy? Perhaps different sets of inquirers could converge on radically different and incommensurable theoretical hierarchies which were all equally "empirically ideal"?\footnote{Johnston, "Objectivity Refigured", p. 90.} This objection recapitulates Rorty's point about the contingency of truth, though whereas Rorty is happy to embrace this consequence for his theory of truth (or indeed designed his theory of truth to have this feature), Johnston treats it as a reductio ad absurdam for Internal Realism.

This objection does seem relevant to Peirce's theory of truth. Indeed Quine raised it immediately after his objection to Peirce's use of the "limit notion":

Peirce was tempted to define truth outright in terms of scientific method, as the ideal theory which is approached as a limit when the (supposed) canons of scientific method are used unceasingly on continued experience...[but] there is trouble in the imputation of unique-ness ("the ideal result"). For...we have no reason to suppose that man's surface irritations even unto eternity admit of any one systematization that is scientifically better or simpler than all possible others.\footnote{Quine, Word and Object, p. 23.}

When Peirce says that "[i]nquiry properly carried on will reach some definite and fixed result or approximate indefinitely toward that limit", how can we be sure that there is such a limit to be approximated toward? A considerable (and, for the analytical philosopher, alarming) amount of faith seems presupposed by Peirce's account of the truth in this regard.

The first line of defence for one who wishes to defend Peirce's account of truth from this second objection of Johnston's is to remark that the fact that there is a limit to be approximated towards is just what we mean by the truth.\footnote{Misak makes this point on p. 156.} When we claim to be
seeking the truth we just mean that there is a single answer to a given question which all parties to the investigation wish to converge on ("[t]he opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth...").

However, once this answer is given, Johnston's question immediately reappears in the following form: this 'truth' is an attractive notion, but how do we know that there is any? Just as attempts to argue God into existence by means of His definition using the ontological argument are generally conceded to beg the question in some way, there seems to be something wrong with (as it were) conjuring truth into existence by defining it as a favourable state of belief which we are inexorably approaching. Skagestad has expressed this worry by remarking that within the context of naturalistic epistemology there is a tension between a pragmatic definition of truth, and "epistemological optimism", the view that in some substantive sense science is delivering or converging on the truth. To hold the pragmatic definition of truth is to leach all substantiveness from the claim of epistemological optimism, he urges.

The objection that there might not be a single truth to be converged upon is a challenging one for Peirce, then. His response to it is to point out that the claim that truth exists is a regulative hope, couched in hypothetical form, which underlies all inquiry. In fact this regulative hope is just another name for realism (and will thus be discussed further in later chapters, most notably §6). Skagestad has noted that Peirce shifted in his lifetime from imagining that some sort of inductive proof might be mounted from the history of science that there is a unitary truth, to acknowledging that as finite members of a potentially infinite community of inquiry, hope is all we have to go on:

In 1878 Peirce believed that for any sequence, induction would invariably discover whether the sequence converges towards a limit and, if so, what the limit is...Later in his life, Peirce came to realise that a sequence might not converge towards a limit, and we might never discover the fact, even if induction be continued indefinitely. Thus, in 1908 Peirce could write to Victoria Lady Welby: "I cannot infallibly know that there is any Truth." 213

On the necessity of the regulative hope of a unitary truth if we are to enquire at all, Misak has written:

Peirce’s claim is that if we are to enquire rationally about some particular issue, then we must assume that there is at least a chance of there being an upshot to our inquiry. Otherwise, there really would be no point in inquiring into the matter. 214

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211 For a thoughtful complication of this received wisdom on the ontological argument, however, see Charles Hartshorne’s introduction to St Anselm: Basic Writings (La Salle, IL: Open Court, 1962).
212 Skagestad, "Peirce’s Conception of Truth", p 84.
213 Skagestad, "Peirce’s Conception of Truth", p 84.
214 Misak, p. 141.
Thus, Johnston’s second objection is met at the cost of retreating from proof to faith, while pointing out that just because a certain claim has the logical status of a hope, this does not necessarily mean that we would be able to give the hope up.\textsuperscript{215}

\textbf{4.4.2 Problems Arising from Inaccessible Facts}

A third objection of Johnston’s to Internal Realism concerns facts about the past:

Consider a sentence about an observable state of affairs, for example about the number of cakes on a particular tray at a specific time during a party held years ago. Since, as we may suppose, no one in fact counted the cakes or observed anything which would suffice to determine the number by inference, equally good theories taking into account all the observations which are ever in fact made could differ over this or each leave this undecided. And no improvements of good theories will have enough observations to settle it either.\textsuperscript{216}

It seems that there are certain very specific facts, such as the number of cakes on the tray, which lie beyond any possible observation or inquiry. Johnston concludes that the Internal Realist must say that there is no truth of the matter about the number of cakes on the tray. Yet this seems absurd.

This is a place where Peirce’s account of truth shows some strain.\textsuperscript{217} However, he would see the weak point in Johnston’s argument to be his claim that “no improvements of good theories will have enough observations to settle” the matter of the number of cakes on the tray. How can Johnston know this? Peirce writes:

But I may be asked what I have to say to all the minute facts of history, forgotten never to be recovered....Do these things not really exist because they are hopelessly beyond the reach of our knowledge? And then, after the universe is dead (according to the prediction of some scientists), and all life has ceased forever, will not the shock of atoms continue though there will be no mind to know it? To this I reply that...it is unphilosophical to suppose that, with regard to any given question (which has any clear meaning), investigation would not bring forth a solution of it, if it were carried far enough. Who would have said, a few years ago, that we could ever know of what substances stars are made whose light may have been longer in reaching us than the human race has existed? Who can be sure of what we shall not know in a few hundred years (5.409)?

To state categorically that certain facts cannot ever be discovered is in fact to sin against fallibilism. Such an epistemic sin is much worse, according to Peirce, than cherishing a foolish hope that any given fact may be discovered. Our approach to the truth being a matter of final causation, there are many different possible paths to the truth; so he who launches an inquiry into a crazy hypothesis has a chance of learning something new

\textsuperscript{215} A worry might arise that this use of the concept of hope lends a psychologism to Peirce’s logic which is most uncogent to his hierarchy of the sciences. However there is nothing specifically human (or, as Rorty would put it, “contingent”) about this concept of hope. Peirce would claim that all possible rational beings must have it in order to inquire at all. Moreover, the concept does receive at least some logical analysis in the form of \textit{abduction}. This will be discussed in §6.5.

\textsuperscript{216} Johnston, “Objectivity Refigured”, p. 91.

\textsuperscript{217} The problem is also noted by Hookway, \textit{Peirce}, p. 241, and Misak, pp. 137-142.
(and even of correcting his original hypothesis along the way). However, he who says that a certain hypothesis is beyond discovery does nothing but close his mind. The overwhelmingly important thing is that we keep inquiring:

...there is no positive sin against logic in trying any theory which may come into our heads, so long as it is adopted in such a sense as to permit the investigation to go on unimpeded and undiscouraged. On the other hand, to set up a philosophy which barricades the road of further advance toward the truth is the one unpardonable offence in reasoning....(1.136)

In a further but related objection, Johnston complains that the Internal Realist cannot deal with truth about what he calls “Enigmas”. Enigmas are “entities essentially indetectable by us”.218 It seems that things might be true about these Enigmas which the Internal Realist account of truth could never accommodate:

Notice that it is not analytically false to suppose that there are Enigmas. It cannot be settled a priori whether there are or are not Enigmas. But if there were Enigmas then there could be no reason to think there were and no good theory would say there were.219

This is essentially the same problem as that of truths about the past, though unlike truths about the past, where the claim of inaccessibility, though extremely plausible, may be attacked, truths about Enigmas are inaccessible in principle.

The only recourse against these Enigmas is the pragmatic maxim. What “effects which might conceivably have practical bearings” does the postulation of Enigmas lead us to expect? Absolutely nothing, by definition. Thus, Enigmas are meaningless. As Peirce writes:

The Ding an sich...can neither be indicated nor found. Consequently, no proposition can refer to it, and nothing true or false can be predicated of it. Therefore, all references to it must be thrown out as meaningless surplusage (5.525).

Prima facie, the desire for a theory of truth which makes way for Enigmas might seem somewhat ironic in someone who is so critical of metaphysics conceived as a misguided and outdated (“medieval theological”) attempt to limb things-in-themselves. However this is not an inconsistency in Johnston’s position, merely a symptom of the profound divorce he has effected between the concept of truth and what he calls “practical criticism”. The fact that the Enigma concept has no possible place in “practical criticism” does not mean, for Johnston, that claims about Enigmas might not be true. Peircean pragmatism does not leave the concept of truth out of the scope of pragmatist concern in this way.220

220 It is tempting to further remark, for Peirce and against Johnston, “What is more ‘practical’ than the truth?” For Peirce noted in “The Fixation of Belief” that in the long run nothing removes the irritation of doubt and enables us to negotiate our environment without receiving nasty surprises like being in possession of the truth. But one has to tread extremely carefully here because, somewhat
4.4.3 Conclusion

This brings to a close this chapter on truth. So far the thesis has roughly followed Peirce’s hierarchy of the sciences in a downward direction. The concept of continuity appeared first in mathematics, where some of its distinctive formal properties were presented. It then made its way into phenomenology, and was identified in Peirce’s third category, which manifested itself in phenomena such as our perceiving the world as having certain properties, which leads us to have certain expectations about it. An important dimension of Thirdness therefore, it was noted, was *general predication*, which opened up the science of *logic*. The very possibility of general predication was queried by Kripke, drawing on the later Wittgenstein. No “external” truth-conditions for the proper application of rules such as the plus-function seemed available, so Kripke proposed alternate “internal” truth-conditions (which he felt deserved only the watered-down name, “assertability conditions”).

A similar turn from “external” to “internal” explications of human predication was then explored in the work of response-dependent theorists and neopragmatists of various stripes. We then saw that Peirce’s pragmatism, on the other hand, primarily concerned itself with *meaning*. Peirce urged that the meaning any concept has for us is just the expectations which we would be led to form by hypotheses containing that concept, though the meaning the concept has *simpliciter* is the development which in fact takes place in it the form of its interpretant. In making these claims, Peirce’s explication of meaning drew crucially on his concept of continuity.

This concept also appears in his explication of truth via the infinite community of inquiry across which hypotheses will survive if they are true. This chapter explicated Peirce’s concept of truth by contrast to popular “ontological” and “semantic” accounts of truth, pointed out its consonance with the pragmatic maxim, then defended it from two sets of objections. One set took issue with Peirce’s use of the limit notion as senseless when applied to theories and the truth. Various defences of Peirce’s position were considered, and it was noted that although absolute quantitative judgements of nearness to the truth are impossible (with the possible exception of certain contexts in


However Peirce’s distinction is not the unbridgeable gulf between “right cognitive response” and “truth” that Johnston sets up. The difference between the two merely concerns the *temporal scale of the belief-fixing in question*. It is therefore not a metaphysical but a logical distinction, and whether any particular belief is delivered to us by our (practical, instinctive) “Logica Utens” or by our (theoretical) “Logica Docens” is subject to change over time. This issue will be explored in more detail in §8. For a careful exploration of these issues, see Christopher Hockway, “Belief, Confidence and the Method of Science”, *Transactions of the Charles S. Peirce Society*, vol XXIX (Winter, 1993), pp. 1-32.
certain mature sciences, as noted by Skagestad), relative judgements with respect to competing hypotheses are the bread-and-butter of science. We can never frame criteria which fully systematise or guarantee the rightness of such relative judgements. However, this does not matter as truth is not explicated as what is agreed on now, but as what will be agreed on at inquiry’s ideal limit.

The second set of objections derived from Mark Johnston and concerned the ‘Internal Realism’ of Peirce’s pragmatic explication of truth. It was argued that the very notion of an ideal end product of inquiry was incoherent, for it would have to contain the (true) Goedel sentence, which could not be proven within the theory. To this it was replied that Peirce’s “end of inquiry” is not some deductive system of which every true statement is either axiom or theorem – just the limit of a certain process. Johnston also argued that the internal relation between truth and inquiry made possible two or more different theories which answer equally well to experience. To this it was replied that the claim that there is a single right answer to each question, while it cannot be proven to be true, is a regulative hope which guides inquiry. Johnston then suggested that “Internal Realism” led to unacceptable results with respect to facts about the past and about elusive hypothetical “Enigmas”. The facts about the past were brought into the fold of possible inquiry – again by drawing on the notion of regulative hope – while the allegedly true facts about Enigmas were dispersed in a puff of pragmatism.

The rest of the thesis will be concerned, in one way or another, with the question of realism. The next two chapters will pursue the delicate question of where in the hierarchy of sciences the issue of realism properly belongs. Though, as has been noted, realism has been painted as a wholly “ontological” problem, I will present what I will argue are two logical anti-realisms (or nominalisms). In §5, I will discuss the extensionalism of Quine, whose enormous influence on the analytic tradition is still working itself out. Quine’s view will be found to be problematic in that his refusal to quantify over “meanings” and what he calls “attributes” (for very similar reasons), does not do justice to the complexity of working inference. In §6, I will consider contemporary realism about universals as exemplified by Armstrong. This view might seem to solve the problems uncovered in Quine, for is not a realism about universals precisely a realism about attributes? However, somewhat ironically, here too a form of logical nominalism will be identified, which is presupposed by Armstrong’s assumption that in order to be real, his universals must exist. This, it will be argued, makes it difficult to see why we should care about realism about universals as presented by Armstrong, rendering his view vulnerable to attacks by the more thoroughgoing nominalism of Devitt.

Finally, §7 and §8 will make good on the promise extended in §2 to explain how it might be possible to get the benefits of pragmatism without antirealism. I will return to
the previous discussions of rule-following and response-dependence and suggest that interesting light may now be shed on them, again utilising the hypothesis of synechism. I will argue that, as was the case with Quine and Armstrong, there are 'non-metaphysical realist questions' buried in the rule-following and response-dependence debates. Here, however, it will be necessary to untangle two separate 'non-metaphysical questions' from each other. One, it will be argued, is logical, while the other possesses a character that is most usefully described as 'prelogical' or phenomenological.
Chapter 5.

EXTENSION, INTENSION AND HYPOSTATIC ABSTRACTION

“There was an insolid billowing of the solid. 
Night's moonlight lake was neither water nor air.”

Wallace Stevens (‘Reality is an Activity of the Most August Imagination’).
This chapter will inquire further into the issue of meaning, and in particular, its relationship with reference. One way in which the Scientific Ontology which assumes a single mode of being has found powerful expression in the analytic tradition, it will be argued, has been through extensionalism. This logical doctrine has been closely associated (most notably in the work of Quine) with the maxim “To be is to be the value of a [bound] variable”, with which much of this thesis is concerned. It is of course possible to hold some form of extensionalism without holding “to be...”. (An example is the realism about universals of David Armstrong, who is the subject of the next chapter). However they form a natural partnership, which, I will claim, is a form of nominalism. Whether Quine would be happy with being called a nominalist is open to question. It might be objected that his commitment to classes renders him, by contrast, some form of Platonist. However it will be argued that Quine’s extensionalist distrust of the meanings of terms, which leads him to attempt to make do in logic with reference alone, comprises a ‘logical nominalism’ which runs deeper than these questions concerning particular ontological commitments.

The main business of this chapter, however, is to explore where Peirce stands with respect to these issues. On the way, I will further explicate Peirce’s account of the development of signs. The concept of hypostatic abstraction will play a crucial role in this chapter in both respects. First the concept will be shown to hold the key to opposing the extensionalism of Quine, and then it will be used to explicate the way in which new signs form. Peirce’s realism and its relationship to his categories will be introduced, though these issues will be treated more fully in later chapters.

The question of extensionalism, intensionalism and Peirce has not been treated as a separate question in the literature on Peirce. It has obvious connections to Peirce’s medieval realism, which has been so treated, to his accounts of vagueness and the (semeiotic) object, all of which are highly relevant to my question. However, to focus specifically on my question is to consider Peirce from an analytic perspective, rather than from within the perspective of Peirce scholarship (wherein, as noted in the introduction, there is no shortage of work of a very high quality). Such a focus is worthwhile, however, because Peirce, despite the strangeness of so much of his

221 In FLPV, Quine discusses nominalism, Platonism and “conceptualism” (which he sees as a middle way between the first two) from a detached standpoint, merely pointing out the relative strengths and weaknesses of the three positions. Here he calls nominalism the “heroic or quixotic position”, though his general tone and enthusiastic use of Occam’s Razor throughout the book suggests that his sympathies would lie with nominalism if the position could be sustained. See pp. 14-15, 127-129.

222 See footnote 7.

terminology and approach to analytic ears, has much to offer this keynote problem of the analytic tradition.

The chapter will begin by presenting a rough, impressionistic distinction between extensionalism and intensionalism. §5.2 will follow this up with an examination of the particular extensionalisms of Carnap and Quine. An argument will be presented in §5.3 for viewing Peirce by extensionalist lights insofar as, although he is a scholastic realist, he is not committed to (what he refers to as) "nominalistic Platonism". However, this simple account will be disrupted by an examination of Peirce’s commitment to hypostatic abstraction in §5.4. Following on from this, §5.5 will consider the question of whether Peirce is an intensionalist. It will be argued that he is not, and in conclusion (in §5.6) that his commitment to hypostatic abstraction allows him to transcend the extensionalist-intensionalist distinction itself with interesting results for the relationship between logic and metaphysics.

5.1 Extensionalism vs. Intensionalism.

Basically and intuitively, the distinction between an extensional and an intensional logic concerns whether a full account of the truth of statements can be given in terms of the individuals picked out by its terms (which is the doctrine of extensionalism), or whether some irreducible account must be taken of ideas which those terms convey (which is intensionalism).

A further feature of the distinction between extensionalism and intensionalism, which has been widely taken as a criterion to separate the two positions²²⁴, is that within an extensional logic, substitution is possible salva veritate (that is, without thereby changing the truth-value of the statement concerned) with respect to identical instances of some basic logical form – and in an intensional logic it is not. The variety of different logical forms with respect to which such substitution might take place accounts for some of the variety of different extensionalisms on offer in the current philosophical landscape. First of all, one might frame a version of the criterion where what is substituted is co-referring singular terms. Thus, if the following statement is true:

(S1) Superman was on top of the Empire State Building yesterday at 10 a.m.

and if Superman is identical with Clark Kent, then it seems obvious that the following statement is also true:

(S2) Clark Kent was on top of the Empire State Building yesterday at 10 a.m.

²²⁴ See, for instance, Quine, *FLPV*, p. 30.
This, then, is the sort of inference an extensional logic allows. Consider, however, the statement (also true, let us assume):

(S3) Superman is believed to be the bravest man in the world.

Would this statement remain true if the term ‘Clark Kent’ were substituted in place of ‘Superman’? It appears not. Here lies the motivation for intensional logics, for it seems that in this case the term ‘Superman’ does not pick out a person per se. Rather, it picks out an attribute of that person – a particular way that person is.

Alternatively, the substitutivity criterion may concern predicates which pick out the same class of individuals. Consider, for example, the two predicates, ‘was rescued by Superman’ and ‘was rescued by Clark Kent’. In the world described by the Superman story, these terms arguably pick out the same class of fortunate people. Yet is it truth-preserving to substitute one predicate for the other in statements such as the following?

(S4) All those rescued by Superman remember him with gratitude to the end of their days.

It is not, and so here the extensionalist/intensionalist question arises once again. The criterion has also been extended to cover coextensive classes.

It is worth noting the way in which these two characterisations of extensionalism versus intensionalism (firstly in terms of individuals versus ideas, and secondly in terms of substitutivity salva veritate or the lack thereof) are connected. Our intuitive conception of individuals is that they are relatively discrete, and come with their individuation built in, as it were – such that one can, for example, point to a stuffed elephant in the corner of the room and say, “Look at that thing”, and everyone in the room will know that one means the elephant and not half of the elephant plus a group of air molecules just to the left of it. On the other hand, ideas are not amenable to such neat ostensive individuation. Where does ‘justice’ begin and end, for instance? (This is perhaps why philosophers have so much work to do). These two characterisations might, however, come apart if it could be established that individuals do not necessarily individuate more cleanly than ideas. At any rate, the dispute between extensionalists and intensionalists can be seen to be at bottom about individuation, and the mind-independence thereof.

As Peirce himself pointed out in an early piece entitled “On Comprehension and Extension”225, some such distinction as between the extension and intension of a term may be identified in the work of the medieval logicians, though it was not prominent there. It was with the Port Royal Logic that it began to be accorded some importance. Even in Peirce’s day, an enormous variety of fine differences in meaning of the distinction had accumulated, which Peirce painstakingly catalogued, and this situation

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has only grown worse. For this reason I will focus my discussion of the distinction by presenting the way it is defined by Carnap, who was responsible for giving it its prominence in the analytic tradition, and was then the focus of influential criticism by Quine.

5.2 Influential Extensionalists

5.2.1 Carnap

Carnap identifies extensions with classes and intensions with properties. He writes that two “designators” (his term for ‘term’) have the same extension if they “stand for the same individual” (as do, for instance, ‘Superman’ and ‘Clark Kent’). He refers to such sameness of extension as those designators being equivalent. On the other hand, two designators have the same intension if they possess a stronger form of equivalence which he calls L-equivalence. “L-equivalence” stands for logical equivalence, an equivalence which “follows from the semantical rules alone”, or in other words, is analytically true.

However, Carnap’s “method of extension and intension” allows him to reduce intensions to extensions via the notion of a state-description (which is a complete list of the truth-values of all statements, and thus a proto-possible world, the idea for which he got from Wittgenstein’s *Tractatus*). He analyses (or, as he puts it, explicates) what it is for an equivalence to “follow from the semantical rules alone” by claiming that it is for the statement of that equivalence to be true in all state-descriptions. If we consider all state-descriptions then the equivalence of ‘mother’ and ‘female parent’ survives, as a world where something is a mother and not a female parent is ruled out by the meanings of the terms concerned, and thus there is no corresponding state-description. The equivalence of ‘Superman’ and ‘Clark Kent’ does not survive however. Carnap thus creates a higher-level, metalinguistic extensionalism and, he claims, need have no truck with intensions as ideas, meanings or any sort of entities in their own right:

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228 Carnap, p. 1.

229 It might be protested that Carnap’s state description method reconstructs only *logical truth*, not analyticity for – as Quine has pointed out – for a language with “extra-logical synonym-pairs” such as ‘bachelor’ and ‘unmarried man’, the state description method will assign independent truth-values to statements such as “Fred is a bachelor”, and “Fred is an unmarried man” (Quine, *FLPV*, p. 23). However the fact remains that Carnap himself *did* describe the state-description method as “an explicatum for what Leibniz called necessary truth and Kant analytic truth” (Carnap, p. 8), presumably assuming that an analysis of language which removed all “extra-logical synonym pairs” would be possible somewhere down the track.
The term ‘property’ is to be understood in an objective, physical sense, not in a subjective mental sense; the same holds for terms like ‘concept’, ‘intension’, etc. The use of these and related terms does not involve a hypostatization.

5.2.2 Classic Extensionalism: Quine

Despite Carnap’s disavowal of hypostatising intensions, Carnap’s two-level extensionalism whereby he holds to extensions and intensions, but reduces the latter to the former in the metalanguage, is not yet extensionalist enough for Quine. We will see that he sets out to get a ‘one-level extensionalism’.

Like Carnap, Quine has a distaste for “subjective mental” entities. As was noted in §3.1, the notion of meaning, which he calls “a baffling word” comes in for a particular serve as the sort of entity a properly scientific, or naturalistic philosophy should not work with (though, as he points out, this is not to deny that “words and statements are meaningful”). Quine raises a number of objections against admitting meanings into a properly naturalist philosophy. First of all, there is the issue of meanings being “mental” entities, which for Quine seems already to render them unacceptably occult:

Meanings...purport to be entities of a special sort: the meaning of an expression is the idea expressed. Now there is considerable agreement among modern linguists that the idea of an idea, the idea of the mental counterpart of a linguistic form, is worse than useless for linguistic science.

Secondly, he claims, the term has a dubious history in Aristotelian essentialism (Quine writes, “Meaning is what essence becomes when it is divorced from the object of reference and wedded to the word”). This too is already to render the notion of meaning unacceptable to a properly scientific philosophy, he feels, for was not the Scientific Revolution enabled by Western philosophy escaping from the shackles of an overly a priori scholastic logic to a properly a posteriori naturalism? Thus, Quine argues that the concept of meaning is just not explanatory:

The evil of the idea idea is that its use, like the appeal in Molière to a virtue dormitiva, engenders an illusion of having explained something.

Quine is here referring to the passage in Molière’s Malade Imaginaire, alluded to in §3.6, which satirises scholastic philosophy. As noted, the phrase has entered philosophical folklore as a paradigmatic example of a non-explanation. So Quine’s complaint is that to say (for instance) that the term ‘Superman’ has a different meaning

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230 Carnap, p. 16.
231 Quine, FLPV, p. 48.
232 Quine, FLPV, p. 11.
233 Quine, FLPV, p. 48.
234 Quine, FLPV, p. 22.
235 Quine, FLPV, p. 48.
from the term ‘Clark Kent’, and this is why substitutivity fails in sentences such as (S3), is merely to restate the problem, not solve it.

Quine seeks to further undermine the reality of meanings through his famous attack on the analytic-synthetic distinction, of which one of the main targets is Carnap. This is a distinction between types of truth: truth by virtue of meanings alone (the analytic, Carnap’s “L-truth”) versus truths which are “grounded in fact” (the synthetic, which Carnap sometimes refers to as “F-truth”). Quine attacks this distinction by painstakingly seeking a criterion for analyticity, without success. He finds that “synonymy” is circular, “definition” is unhelpful, substitutivity salva veritate too weak, and that Carnap’s supposed “semantical rules” do not constitute a neat boundary around a set of truths as Carnap claims they do. He concludes that any true statement may be revised, if we are presented with the right evidence:

Carnap, Lewis, and others take a pragmatic stand on the question of choosing between language forms, scientific frameworks; but their pragmatism leaves off at the imagined boundary between the analytic and the synthetic. In repudiating such a boundary I espouse a more thorough pragmatism.

Interestingly, here Quine provides yet another take on pragmatism than those examined so far. Here pragmatism is nothing to do with our worldly goals or what Johnston called “practical purposes”; rather it appears within theoretical inquiry and concerns inquirers’ being able to choose amongst differing “language forms, scientific frameworks” according to their epistemic or theoretical needs. It does, however, resemble Putnam’s pragmatism insofar as it assumes that ‘pragmatism with respect to x’ means ‘no one right answer with respect to x’. (It should be noted, however, that Quine’s self-definition as a pragmatist, always muted, faded fairly quickly after he wrote “Two Dogmas of Empiricism”.)

Having breached the dividing wall between analytic and synthetic truth, Quine hopes that the way is now clear for extensionalism to over-run the entire kingdom of predication. For, unlike meanings, referents are something that the logician, equipped with quantification theory, can really work with. This extensionalism leads him to make certain further logical choices which bear discussion.

5.2.3 Quine: Ostension and Physical Objects
First of all, Quine is utterly against quantifying over attributes, for he notes that they would be “intensional objects”, and thus lack substitutivity salva veritate. Such a lack is too troublesome for him, he feels, with respect to cases such as the following:

The worries introduced by the logical modalities are introduced also by the admission of attributes...The idiom ‘the attribute of being thus and so’ is

236 Quine, FLPV, pp. 20-37.
237 Quine, FLPV, p. 46.
referentially opaque, as may be seen, for example, from the fact that the true statement:

(39) The attribute of exceeding $9 = \text{the attribute of exceeding } 9$
goes over into the falsehood:

The attribute of exceeding the number of the planets = the attribute of exceeding $9$
under substitution according to the true identity... 238

A second choice Quine makes, which may be traced to his extensionalism in a
roundabout way, is that he is suspicious of classes and even physical objects
considered as logical primitives. It might seem that Quine’s distaste for the messy
individuation of meanings would lead him to see both physical objects and classes of
discrete particulars as paradigms of individuatory clean-ness which an extensionalist
should welcome ontological commitment to. However, he reveals himself as more
subtle than this in his interesting paper, “Identity, Ostension and Hypostasis”.

Here he challenges the notion of a physical object as straightforwardly individuated
via ostension. His chosen example is the river Caýster – presumably the river most
likely to have inspired Heraclitus’ famous remark that one cannot step into the same
river twice. He notes that when one points to the Caýster and says, “that river”, one
may be referring to a “river-stage” (which picks out the water enclosed by that
particular set of river-banks at any particular time) or to a “water-stage” (which picks
out a particular set of water-molecules once and for all, that set of water molecules then
proceeding to head downstream forever). Any decision to narrow the range of possible
ostensions and to lay down identity criteria for the Caýster will be, Quine argues, a
choice motivated by considerations of simplicity in our reasoning more than anything.
In this he claims to follow Hume, according to whom the idea of “external objects”
was a useful fiction:

...we gain formal simplicity of subject matter by representing our subject matter as
a single object, Caýster, instead of a multiplicity of objects $a$, $b$, etc., in river
kinship. The expedient is an application, in a local or relative way, of Occam’s
razor: the entities concerned in a particular discourse are reduced from many, $a$, $b$,
etc., to one, the Caýster. Note, however, that from an overall or absolute point of
view the expedient is quite opposite to Occam’s razor, for the multiple entities $a$, $b$,
etc., have not been dropped from the universe; the Caýster has simply been added. 239

As for classes, hypostasis of these is an extra ontological step which must be similarly
acknowledged:

It is clearest, I think, to view this step of hypostasis of abstract entities as an
additional step which follows after the introduction of the corresponding general
terms. A new fundamental operator “class of”, or “-ness” is appealed to in this
step. 240

Quine’s third notable choice concerns the issue of the proper relationship between
logic and metaphysics. He advocated a simple, easy relationship between the two in

239 Quine, *FLPV*, p. 70.
240 Quine, *FLPV*, p. 76.
that once one has one’s logic in order (first-order!), one can read one’s ontology straight from one’s existential quantification. In fact this is one of the broad unifying themes of From a Logical Point of View – that “To be is to be the value of a [bound] variable”. Such a strategy might seem to beg metaphysical questions such as nominalism, but in “Logic and the Reification of Universals” Quine defends his criterion as acceptably neutral. His reasoning runs as follows. Whatever, *qua* metaphysician, your favoured entities are going to turn out to be, presumably you are going to refer to them at some stage. So why shouldn’t you, *qua* logician, analyse that reference by using a bound variable whose ‘value’ is your favoured entity?

He further claims that it is not that he is prejudging the issue over the “existence of abstract entities”, it just makes sense to reduce them where one can. And, he argues, such reductions are often called for:

The bulk of logical reasoning takes place on a level which does not presuppose abstract entities.

On this point we will see Peirce disagreeing crucially. But first I will consider the way in which it might seem initially plausible to consider Peirce by extensionalist lights.

### 5.3 Apparent Extensionalism in Peirce

The instinct of many Peirce scholars is to dismiss the idea that it might be of any use to think of Peirce under an extensionalist rubric precisely because of his synechism. As we have seen, Peirce defined the notion of continuity to which he was committed as follows:

(C1): A true continuum is something whose possibilities of determination no multitude of individuals can exhaust.

Given Peirce’s commitment to true continua, how could he desire an extensionalist logic in which every referring term refers to some individual or determinate multitude of individuals? How could he, for instance, seek to reduce properties to classes of their instantiations as Quine and Carnap do? However, Peirce also wrote:

A collection is whatever stands to a general predicate of single subjects in a certain relation *sui generis*, such that for every such predicate there is a single collection and for every collection there is such a predicate.

“Collection” was Peirce’s term for class. This statement by Peirce might seem to endorse extensionalism insofar as it suggests an interchangeability between predicates and sets of particulars (“single subjects”).

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241 Quine, *FLPV*, p. 117.
5.3.1 Synechistic Realism and Nominalistic Platonism

It might seem that one can reconcile these two statements of Peirce’s by considering the distinction which Peirce makes between his (medieval) realism and what he called nominalistic Platonism. I will present this argument and then show why it is not enough to do justice to the subtlety of Peirce’s realism.

Peirce’s medieval realism (which is often referred to as realism about universals, but, as noted in §2, Peirce preferred to call it realism about the general) distinguishes between the real and the existent. Whereas the existent is defined by its causal efficacy, the defining character of the real is its mind-independence, which Peirce explicates as follows:

...Realism and realitas are not ancient words. They were invented to be terms of philosophy in the thirteenth century, and the meaning they were intended to express is perfectly clear. That is real which has such and such characters, whether anybody thinks it to have these characters or not (5.430).

(This definition will be discussed at greater length in §6 and §8.)

Of course, to do full justice to Peirce’s realism, one has to recognise that the terms ‘reality’ and ‘existence’ are to some degree standing in for his categories (of Thirdness and Secondness respectively), and his most serious work on the realism question was done through these more exact conceptions (Some hint of this will emerge in the next section.) However, even the distinction between the real and the existent has largely been lost in twentieth century philosophy. This has led to those who still wish to defend medieval realism feeling obliged to argue that universals exist. A notable example here is David Armstrong, who begins his landmark work on realism with respect to universals by stating:

Nominalism is defined as the doctrine that everything there is is a particular and nothing but a particular. A Realist is one who denies this proposition, holding that Universals exist.245

In §6, Armstrong’s view will be considered in detail and it will be argued that he has little to say against those who argue that his existent universals add nothing to the debates in which he posits them, for example to explain true predication.

Peirce called a position like Armstrong’s “nominalistic Platonism”246, as it claims to be committed to universals (hence the “Platonism”) but in claiming that those

244 Note, however, that although Peirce states that for every predicate there is a single collection, he does not make the corresponding claim in the reverse direction. (I am indebted to Jim Franklin for raising this point in private correspondence.)


246 Susan Haack has written that Armstrong may more exactly be described as a “nominalistic Aristotelian”, in “Extreme Scholastic Realism: Its Relevance to Philosophy of Science Today”, Transactions of the Charles S. Peirce Society, vol XXVIII (Winter, 1992), p. 36. This is because he
universals exist it treats them as if they were particular things (hence the “nominalistic”). Peirce wrote that this is gravely to distort the medieval debate:

But I ask, can anybody who has seen Westminster Abbey, who had read the Prologue to the Canterbury Tales, and who stops to consider that the metaphysics of the Plantagenet age must have more adequately represented the general intellectual standing of that age, when metaphysics absorbed its greatest heuristic minds, than the metaphysics of our day can represent our general intellectual condition, can any such person believe that the great doctors of that time believed that generals exist? They certainly did not so opiné, but regarded generals as modes of determination of individuals; and such modes were recognised as being of the nature of thought (5.503).

So, the question arises, why not defend Peirce as an extensionalist by noting that his form of medieval realism is not a nominalistic Platonism, and so does not posit extra existent entities (as Quine suggested would be the case if we were to recognise the Caýster as an entity in its own right). Rather, it addresses itself to the general patterns which shape the behaviour of those entities that do exist, and argues that at least some of them are independent of what we might think about them.

Given this, why not argue that, as synectism is at bottom not a metaphysical but a logical hypothesis, Peirce’s quarrel with nominalism is not that it considers generality as made up of nothing but individuals, but that it considers generality as made up of some number of individuals? This number, whatever it might be, is synectically unacceptable just because (C1) claims that no multitude of individuals can exhaust the determination of something truly continuous. In this way, Peirce might be seen to be effecting a profound synthesis between what he referred to as “the great argument for nominalism (5.312)”, the insight that universals cannot float free ontologically from their instantiating individuals (for, nominalists argue, there is no manhood if there are no men), with the realist demand that generality consist in more than just a set of things. He could then be understood as an extensionalist who does justice to real generality. However, to argue this way would be to neglect the vital role played in Peirce’s logic by hypostatic abstraction. And this is the issue I will turn to in the next section.

5.4 Hypostatic Abstraction

5.4.1 “Dormitive Virtue” Productive of Dogmatic Slumber

We saw in Peirce’s phenomenological derivation of the categories that he distinguishes between what he calls “prescissive” and “hypostatic” abstraction, noting that the former is the mere predication of some feature to something, while the latter involves
treatment that feature as an entity in its own right:

The most ordinary fact of perception, such as "it is light", involves precissive abstraction, or prescision. But hypostatic abstraction, the abstraction which transforms "it is light" into "there is light here,"...is a very special mode of thought (4.235).

He claims that the two varieties of abstraction are "entirely disconnected", and complains that most of the logics of his day muddle the two up (though we saw in §5.2 that this was not true of Quine).

Peirce’s favourite argument for illustrating the process of hypostatic abstraction was the traditional butt of ridicule with respect to the hypostases of the scholastic philosophers, already mentioned by Quine, "dormitive virtue". This was no mere perversity on his part, but a desire to shock his readers’ complacency with respect to the importance of this form of abstraction. He wrote:

You remember the old satire which represents one of the old school of medical men,—one of that breed to whom medicine and logic seemed closely allied sciences,—who asked why opium puts people to sleep answers very sapiently "because it has a dormitive virtue." Instead of an explanation he simply transforms the premiss by the introduction of an abstraction, an abstract noun in place of a concrete predicate. It is a poignant satire, because everybody is supposed to know well enough that this transformation from a concrete predicate to an abstract noun in an oblique case, is a mere transformation of language that leaves the thought absolutely untouched. I knew this as well as everybody else until I had arrived at that point in my analysis of the reasoning of mathematics where I found that this despised juggle of abstraction is an essential part of almost every really helpful step in mathematics.247

Thus, Peirce argues, rather than necessarily being an epistemologically irresponsible pseudo-explanation, hypostatic abstraction is an important part of logic. But in what way?

5.4.2 The Hypostatic Abstraction as Ens Rationis

T.L. Short248 has noted that, for Peirce, hypostatic abstraction has two particular distinguishing features. The first is that, as Peirce puts it, it is "a necessary inference whose conclusion refers to a subject not referred to by the premiss (4.463)". How could this be? It is because of the second distinguishing feature of hypostatic abstraction, which is that the hypostatic abstraction is an ens rationis. That is, "its being consists in something else’s being true". In the case of dormitive virtue, we must take it as established that opium-taking and sleepiness possess a relationship of reliable covariance. (That is, the statement "Opium makes people sleepy" already has modal

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247 Peirce, Pragmatism as a Principle and Method of Right Thinking, p. 133.
force.\textsuperscript{249} Now the argument to the conclusion:

\textbf{(DV)} There is something about opium which makes people sleepy.

is a necessary one, for the conclusion must follow given the truth of the premiss. If sleepiness really does track opium across all manner of possible circumstances (including the absence of all other non-opiate soporifics), there must be something about \textit{the opium} which is bringing about this result. Yet the conclusion does mention an object not mentioned in the premiss, namely, ‘something about opium which makes people sleepy’. This object is extremely vague, but no less new for all that.

It might be objected that the inference cannot in fact be necessary, for consider the reliable covariance between rain and the fall of a barometer, such that a statement such as “When the barometer falls, it rains” is true. Can we infer necessarily from that reliable covariance the conclusion:

\textbf{(RV)} There is something about a barometer’s fall which makes it rain\textsuperscript{250}?

This conclusion might appear ridiculous. However there is ‘something about a barometer’s fall’ which is causally efficacious in producing rain – the fall in air pressure which is present within the barometer and which it is the barometer’s entire function to record. This is just to say that in the case of inferences which turn on hypostatic abstraction, the true (or Dynamic) object of inquiry will often need some disentangling as inquiry proceeds. However, the necessary conclusion is really only that there is \textit{something} behind the phenomenon in question, which possesses further properties which are worthy of investigation. (In this sense, Peirce writes, hypostatic abstraction is merely “a fact considered as a substantive”.) Barometers do not fall randomly – the reliable covariance between barometer fall and rain permits of further explanation.

At this point the following query might arise. “An \textit{ens rationis} – what is that, though, metaphysically speaking? It appears to be some sort of idea – what good is that to us?” Short argues that under the right conditions (which he spells out as satisfying an “existence claim” and a “uniqueness claim”), what we hypostatically abstract can be not an \textit{ens rationis} but rather, something real:

...the reality of something that explains the facts from which it is abstracted is not that of an \textit{ens rationis}. For what consists only in a fact about something else cannot also explain that fact...even though the dormitive virtue is defined in terms of its presumed effects, it is not identified with them. It is that which we postulate as \textit{having} those effects. Hence, if it exists at all, then it is not an \textit{ens rationis} or abstraction.\textsuperscript{251}

This, however, is to miss just what is distinctive about Peirce’s realism, which is

\textsuperscript{249} “The soporific virtue of opium is an object whose being consists in the fact not merely that opium has, in sufficient doses, always put people to sleep, but that it always will, and always would unless some other influence counteracted it.” Peirce, \textit{New Elements of Mathematics}, vol. 4, p. 11.

\textsuperscript{250} The ‘something’ in question being perhaps some form of ‘dormitive virtue’...

\textsuperscript{251} Short, “Hypostatic Abstraction in Physical Science”, pp. 54-5.
his commitment to the reality of Thirdness. Peirce makes it clear that all hypostatic abstractions are enits rationis, and that the important question is whether an ens rationis can, at the same time as being an ens rationis, be real. He concedes that many will not be real but contends that it is vital to recognise that some are. To argue for this, he notes that the very definition of a hypostatic abstraction is of something whose being consists in the truth of another fact (in the case of dormitive virtue this is the truth that opium makes people sleepy). For this reason, if opium makes people sleepy then the hypostatic abstraction must be real:

On pragmatistic principles reality can mean nothing except the truth of statements in which the real thing is asserted. To say that opium has a dormitive virtue means nothing and can have no practical consequences except what are involved in the statement that there is some circumstance connected with opium that explains its putting people to sleep. If there truly be such a circumstance, that is all that it can possibly mean...to say that opium really has a dormitive virtue. Indeed, nobody but a metaphysician would dream of denying that opium really has a dormitive virtue.252

Rather than Short’s assertion that “no real general that actually determines behaviour is a mere ens rationis”253, it is closer to the truth to say that “every real general that actually determines behaviour is a mere ens rationis”254. Real generals are ‘mind-like’ in the sense that their being consists in their actual (and potentially) determining behaviour in intelligible ways. This mind-like character that is given to the Universe by real Thirdness is strange at first to those used to railing against idealism as an insouciant embrace of the ‘subjective’ error which inevitably lurks in one’s beliefs. But the ideas invoked by Peirce’s Objective Idealism are not the frail cognitions of individual minds (against which, for example, Frege defined his “Sinn”). Rather, the real idea is a much more general concept of which human mentality is a special case and, though we partake in real ideas when we think truly, insofar as we are in error we do not partake in them.

Such an Objective Idealism is not unsupported by common-sense, as illustrated by the following dialogue Peirce set up between his own view and the view of a contemporary positivist (Karl Pearson) who was as unsympathetic to real Thirdness as many analytic philosophers are today:

“Why,” says Dr. Pearson, “you must not deny that the facts are really concatenated; only there is no rationality about that.” “Dear me,” says the disciple, “then there really is a concatenation that makes all the component accelerations of all the bodies scattered through space conform to the formula that Newton, or Lami, or Varignon, invented?” “Well, the formula is the device of one of those men, and it conforms to the facts.” “To the facts its inventor knew, and also to those he only predicted?” “Yes.” “Then,” says the disciple, “it appears to me that there really is in nature something extremely like action in conformity with a highly general

252 Peirce, Pragmatism as a Principle and Method of Right Thinking, p. 134.
254 One should, however, leave off the derogatory qualification ‘mere’, as Peirce urged in other but related contexts.
intellectual principle." "Perhaps so," I suppose Dr. Pearson would say, "but nothing in the least like rationality." "Oh," says the disciple, "I thought rationality was conformity to a widely general principle" (8.152).

Thus Quine was right, in a way, to fear that hypostatic abstraction somehow led one to embrace "the mental". But I will now argue that he was wrong to feel that by virtue of that it interfered with sound logic.

5.4.3 The Importance of Hypostatic Abstraction
The important role hypostatic abstraction plays in our reasoning is illustrated by Peirce, again using the example of dormitive virtue, where the role may be found in vestigial form:

Something or other...there must be in opium, some peculiarity of it which if it were understood would explain our invariably observing that...this drug is followed by sleep. That much we may assert with confidence; and it seems to me to be precisely this which is asserted in saying that opium has a dormitive virtue which explains its putting people to sleep. It is not an explanation; but it is good sound doctrine, namely that something in opium must explain the facts observed.\(^{255}\)

So, contra Short, the proper role of hypostatic abstraction is not explanatory. Those who have made fun of *virtus dormitiva* are right about that. However, Peirce claims, it is a necessary first step in the process of finding an explanation. If we are to find an explanation of the sleepiness that opium typically produces, we need to identify as an object of thought 'that which gives opium its dormitive powers' before we can inquire into it. This particular operation of thought mostly passes unnoticed, but is logically distinct nonetheless.

As we saw in §3.5.3, Peirce has a sophisticated account of the object which distinguishes between the Immediate Object, or the object as it appears to us, and the Dynamic Object, or the object as it really is. Inquiry, it was claimed, is largely a process of precisifying one's concepts to bring their Immediate Objects closer and closer to the Dynamic Objects to which they correspond. We can see in the case of opium that the Immediate Object can be extraordinarily vague, ("whatever it is in opium that gives it its power to make people sleepy") and yet even here we can conceive of how the progress to a more Dynamic Object might go (for instance, through a chemical analysis of opium and a comparison with the chemical structure of other soporific drugs).

The operation of hypostatic abstraction, then, shows Peirce's realism at work 'on the ground', as it were, in the development of signs. For we have seen that Peirce defines the real as that whose characters are independent of what anyone might think they are. But if we run *that* claim through the pragmatic maxim, inquiring in what way it might impact on our experience, it emerges that the real objects are the ones we can

\(^{255}\) Peirce, *Pragmatism as a Principle and Method of Right Thinking*, p. 133.
continually discover more about. The process of hypostatic abstraction, then, is a means to ‘open up’ previously unattended-to aspects of the objects of our thinking, to make them objects in their own right and inquire as to their characters, at which point, if the objects turn out to be real, the cycle may begin again.\footnote{This point links in interesting ways with Peirce’s discussion of infinitesimals and the way in which they may, in his terms, “burst open”, and this would be a fruitful topic for further study.}

Hypostatic abstraction can thus be seen as a vital ingredient in ‘real-world’, as opposed to syllogistic, logic. Consider the classic inference:

- Socrates is a man.
- All men are mortal.
- Therefore Socrates is mortal.

Here the premises are provided ready-made for the inference in question, and manhood is already set up as the pivot around which the inference turns. However, in the sort of reasoning we perform in everyday life, and which scientists perform both experimentally and theoretically, one often needs to pick out the relevant feature around which inferences may pivot (so much so that to do it well often takes real insight and results in significant steps forward in science). Yet this too is part of logic, according to Peirce.

5.5 Hypostatic Abstractions as Intensional Objects?

A hypostatic abstraction such as dormitive virtue seems to be an intensional object if anything is, for it is present wherever opium is present, and yet is not identical with it. It is not opium \textit{per se} but something about opium – whatever it is that gives opium its tendency to put people to sleep. It therefore fulfils the criteria for one of Quine’s disdained “attributes”. For Quine writes:

Attributes...are individuated by this principle: two open sentences which determine the same class do not determine the same attribute unless they are analytically equivalent.\footnote{It would not be truth-preserving, for instance, to substitute the term, ‘opium’s dormitive virtue’ for ‘opium’ in the true statement, “Opium is a pleasurable and addictive drug”.

So is Peirce, by virtue of his advocacy of hypostatic abstraction an attribute-wielding ‘intensionalist’? Not really. Why this is is best brought out by asking, “What is the paradigm ‘extensional object’ for an extensionalist like Quine?” I began this chapter by citing as an example of an extensional object the person who is both Superman and Clark Kent, but we have seen that there is no necessity that an object (such as a person) which contains numerous parts both spatial and temporal, should be
ostensibly individuated in exactly the form in which we do individuate it, as Quine himself noted with respect to the Caúster. Rather, the individuation of any physical object is a hypostatic abstraction—a gathering of known facts into something which, it is assumed, has sufficient integrity to possess properties which bear further examination. Peirce recognised this, writing in answer to an imaginary interlocutor who questioned the reality of a “filament” (which he defined as “a portion of matter which at any one instant is situated in a line”):

...although all there is is particles yet there really is a filament because to say that the filament exists is simply to say that particles exist. Its mode of being is such that it consists in there being a particle in every point that a moving particle might occupy. 258

It might be objected: what about the ultimate particles of which matter is composed? Surely they cannot be carved in different ways by a perverse and wilful individuator? Why not take them as the ultimate ‘extensional objects’? Even here, however, such atoms will be extended in time, and so will be divisible into (a multitude of) temporal parts. 259 For that reason, to talk about them as individuals persisting across time will also require a hypostatic abstraction. In short — when it comes to the objects of our thought (and so to the values of our bound variables), it is ‘hypostatic abstractions all the way down’. There are no purely ‘extensional objects’ in the sense of objects whose individuation is in no way shaped by the ways in which they are identified, and from this it follows that neither are there any ‘intensional objects’ which fail to make the extensional grade. There are just objects, more or less determinate. Barcan Marcus has made something of the same point against Quine, noting that in complaining of the referential opacity of certain contexts (to the extent where he seeks to banish those contexts from logic proper), he takes for granted a notion of identity that is far from straightforward, and bears much of the responsibility for creating the problem in the first place:

...difficulties revolve about the substitution of equivalences in contexts involving “knows that”, “is aware that”, and in particular “is necessary that”, and “is possible that”...the opacity lies with Quine’s use of such terms as “identity”, “true identity”, “equality”. 260

Quine came halfway to this realisation in “Identity, Ostension and Hypostasis”, insofar as he wished to treat physical objects as logical fictions. However he failed to follow it through to its ultimate undermining of his extensionalism. One can even identify a “Paradox of Extensionalism”, in that the more one carves one’s ontology into

258 Quine, FLPV, p. 157.
259 Peirce, Pragmatism as a Principle and Method of Right Thinking, p. 135.
260 Peirce writes: whatever lasts for any time, however short, is capable of logical division, because in that time, it will undergo some change in its relations. But what does not exist for any time, however short, does not exist at all (3.93n1).
individual ‘chunks’ picked out by bound variables (which chunks are pointed to by definite descriptions but not individuated or in any sense constituted by those definite descriptions), the more those chunks will be found to possess alternative descriptions which militate against the substitutivity salva veritate which the extensionalism was meant to ensure. The more one reduces one’s reference to pure pointing, the more troublesome and irreducible alternate attributes of that which is pointed to will emerge. This is one of the many faces of real Thirdness (a topic about which a great deal more will be said in the next chapter)

Where Quine is committed to a first-order logic, Peirce’s logic is best described as a ‘no-order logic’ (or possibly an ‘infinite-order logic’), in which the distinction between predicates and individuals is context-relative. More exactly, although predicates always appear with individuals (and vice versa) in working inference, whether any given object of thought appears as a predicate or an individual will depend on the inferential needs at the time, and hypostatic abstraction is the logical operation that bridges the transition between the predicate and the individual.\(^1\) The logical power of such abstractive ‘level-hopping’ is perhaps demonstrated most fundamentally in Peirce’s reduction proof that no more than his three categories are required to do justice to all possible logical relations — though, as noted, the validity of this proof is somewhat controversial. (The proof as reconstructed by Robert Burch turns crucially on a putative relation of Fourthness being hypostatically abstracted into an individual, to which its four relata are then related by four interconnecting relations of triadic identity or “teridentity”\(^2\))

Peirce also believed that understanding hypostatic abstraction is particularly important for analysing the logic of mathematics. For mathematics is a form of thought particularly prone to cannibalising itself by taking its own predicates as objects of investigation (performing “operations on operations”, as Peirce puts it). So it is that abstraction reaches heights in mathematics undreamed of in the physical sciences. Quine thought that the only question raised by hypostasis in the philosophy of mathematics was whether one should be ontologically committed to classes.\(^3\) Thus preoccupied by metaphysics, he missed the logical question raised by hypostatic abstraction — namely what is its unique and vital role in working inference — and, moreover, challenging questions such as why such an inference should be so useful.

\(^{260}\) Barcan Marcus, p. 60.

\(^{261}\) This raises the question of whether it is possible to go the other way as well — to transform individuals into predicates. This would be a form of prescissive abstraction (bearing some relationship to the scholastic notion of haecceity, insofar as a haecceity was conceived of as a property).


\(^{263}\) See for instance, Quine, FLPV, pp. 121-127.
5.6 Beyond Extensionalism and Intensionalism.

This chapter began by opposing a crude characterisation of extensionalism as explicating truth in terms of reference to individuals which possessed a mind-independent individuation, and intensionalism as allowing at least some role for ideas which, one would think, surely must possess a ‘mind-dependent’ individuation. Yet it has emerged that things are not nearly so simple. For one thing, ideas (in the form of hypostatic abstractions which are entia rationis) are needed to carve out individuals from the ontological flux. For another thing, such ideas, if real, will possess an individuation that is as mind-independent as one could wish, by virtue of the reality of Thirdness. For once the Immediate Object has been set up, the determination of those features which bring it closer to its Dynamic Object may be a matter of genuine, a posteriori scientific discovery, as §3 explored in detail.

These reflections point the way to at least some of the difference between Quine and Peirce with respect to the proper relationship between logic and metaphysics. We saw that Quine worked with an extensionalist framework so that he could read his ontology straight from the existential quantifier. For Peirce, however, what logic hands to metaphysics is not a set of entities, or even a set of ‘types’ of entities. It is not the job of the logician to legislate on such matters. If he tries to, great confusion may result. For instance, we saw that Quine attacked meanings as something the naturalistically inclined philosopher should eschew, attempting to make do with reference alone. However, the notion of ‘the meaning’ of a term or proposition is a confused reification of a properly logical notion. Quine was right to be suspicious of such a confused reification, but not right to dismiss, through his extensionalism, the phenomena which were wrongly reified in order to create it. We saw in §3 that the hypothesis of synecchism allows for a processual character to signification. This avoids the dichotomy with respect to theoretical commitment, between having to posit a discrete object or holding eliminativism, which was identified in Quine (and which, it has been argued, is also a form of nominalism).

Thus, in Peirce, the reified notions of ‘idea’ and ‘individual’ I began this chapter with are transformed into (very roughly) an invocation of the categories of Firstness/Thirdness and of Secondness respectively. It is for the metaphysician (and these days the natural scientist) to discover and catalogue the many different types of entities there are. Peirce’s categories pertain to the fundamental logical relationships which those entities might bear to one another qua entity alone. Thus, Peirce’s notion of the relationship between logic and metaphysics manages to be at once more minimal.

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264 The reality of Firstness is also implicated here, and this issue will be further developed in §7.
265 Not even in the sense of ‘type-theory’, at least if each ‘type’ is envisaged as categorising entities in some absolute sense.
than Quine’s (for in its avoidance of unnecessary reification it ‘gets out of metaphysics’ way’) and yet more useful – or at least so later chapters will argue.

The next chapter will turn to a move within analytic philosophy which arises from frustration with Quine’s focus on the subject of the sentence as entirely determinative of ontological or theoretical commitment, and attempts by contrast to honour the predicate.
Chapter 6.

PREDICATION AND THE PROBLEM OF UNIVERSALS

"...a realist is simply one who knows no more recondite reality than that which is represented in a true representation."

Charles Peirce (5.312).
6.1 Introduction

This chapter will discuss Peirce’s scholastic realism in detail, with a special concern for how it converges with his discussion of his categories and his hypothesis of synechism. Again, this area of Peirce’s thought has received extensive discussion by Peirce scholars – particularly his debt to medieval realists such as Duns Scotus.\(^{266}\) However, the links between Peirce’s synechism, his realism about the general and his scientific hierarchy can bear further discussion in the context of this thesis. Also, this chapter will diverge from existing discussions of Peirce’s scholastic realism in performing a detailed comparison between the scholastic realisms of Peirce and Armstrong. Such a comparison has not been performed\(^{267}\) yet is most illuminating, for it shows how the doctrine that there is but a single mode of being is a form of nominalism which, ironically, can undermine even an explicit commitment to medieval realism.

A big difference between Armstrong and Peirce, as was noted in the last chapter in a preliminary way, concerns Armstrong’s view that the terms ‘real’ and ‘existent’ are coextensive (which is currently largely taken for granted within analytic philosophy). Armstrong owes an explicit debt here to his teacher John Anderson, to whom the idea of a single mode of being was very important. Peirce, on the other hand, did not see the real as properly opposed to the nonexistent but, we will see, to the fictional (understood as that about which it is not possible for us to err). After outlining Armstrong’s realism in §6.2, in §6.3 I shall examine a recent skirmish in the contemporary debate over universals between Armstrong and Michael Devitt, and suggest that it exhibits a measure of the sterility which the medieval debates over realism have traditionally been accused of, which renders it unclear why we should care about the truth of scholastic realism. In §6.4 and §6.5 I shall argue that if, however, one reexamines the issues discussed by Armstrong in the terms laid down by Peirce, scholastic realism is far from being on the back foot with respect to intuitive appeal, but becomes a claim about the objectivity of certain predications, rather than a claim about whether certain somewhat unusual entities exist.

In §6.6 I will critique the view, which is also prominent in Armstrong, and which I will suggest is deeply connected with the view that the existent exhausts the real, that there is a sharp distinction between “semantic” and “ontological” questions, and that realism is a question located purely within ontology (construed as the question of what exists). I shall suggest that this also has distorted discussion of the problem of universals in favour of nominalism in subtle but profound ways. I will finish by

\(^{266}\) See footnote 7.

\(^{267}\) The only exception known to the author is half a page in Susan Haack’s paper, “‘Extreme Scholastic Realism’: Its Relevance to Philosophy of Science Today” (cited in §5.3.1).
sketching the role which might be played in philosophy by a ‘semantic realism’, which role I will suggest is played by the account of a posteriori meaning-precisification outlined in §3.

6.1.1 The Problem
It is well known that the debate over universals first came to full flower amongst the scholastic philosophers, with Ockham the most famous combatant on the nominalist side, arguing against the subtle “scholastic realism” of Duns Scotus a generation earlier. As scholasticism gave way to new, vigorous strains of philosophy in the early modern period, it was widely assumed that the nominalists had won the debate over universals. The transmutation of Scotus’ name into common parlance as the term ‘dunce’ is a somewhat disturbing symbol of the extent to which scholastic realism became associated with all that was dessicated, useless and inappropriately a priori about scholastic philosophy (the sentiments expressed by Molière’s burlesque of “dormitive virtue”). Today even scholastic realists will admit that scholastic realism struggles with an image-problem as counterintuitive.268

At the most general level, the problem of universals arises out of predication and asks: when we ascribe the same predicate to different things, what exactly are we saying? Thus stated, the problem possesses interesting (and underexplored) resonances with Kripke’s rule-following scepticism, except that where Kripke focuses on us and how we manage to so much as perform the feat of general predication (and the “bizarre sceptic” actually queries the extensions of general predicates), the problem of universals takes successful general predication for granted and focuses on what its worldly correlate might be. Thus the problem has often been put as follows: when we use a general predicate (such as, for example, ‘is a cat’) are we referring to something – ‘cathood’, for example – something which has a strange spread-out character (traditionally referred to as its being “One over Many”)?

The distinctive character of universals is more than just that they are ‘spread out’, however, because it seems not to be the case that there is just a part of cathood in each cat – as is the case for a particular object which is ‘spread out’ over space, such as a tree parts of which extend over the house and other parts of which extend over the garden. Cathood seems to be somehow wholly in each cat, for if a particular cat dies, cathood itself is in no way diminished (as is the case, for instance, with a tree when part of it dies). Recognition of this point goes back at least as far as Plato, who had

268 Thus Armstrong writes with respect to scholastic realism regarding laws of nature, “I believe that the contemporary orthodoxy on laws of nature – that basically they are mere regularities in the four-dimensional scenery – is in a similar position to that enjoyed by the regimes in power in Eastern Europe until a few months ago...”. (His choice of analogy demonstrates recognition of the current repressed status of scholastic realism, tempered by a certain hopefulness about the future.) D.M. Armstrong, “The Causal Theory of Properties”, Philosophical Topics (forthcoming).
Parmenides pose the following dilemma. It does not make sense to say that only part of the universal is in the thing which instantiates it, for the reasons just mentioned. However, if one says that the universal is wholly in the thing which instantiates it, then it seems that, “one and the same thing exists as a whole at the same time in many separate individuals, and will therefore be in a state of separation from itself”. Despite the strangeness of this story, scholastic realists believe they can (or must) make sense of it, while nominalists believe that it may be set aside, as a full account of reality can be given in terms of the “separate individuals” alone.

It should be noted that in the twentieth century an idiosyncratic use of the term ‘nominalism’ has sprung up, deriving originally from Harvard. This usage sees nominalism as denying the reality not of general but of abstract objects, such as sets and propositions. The usage is somewhat confusing as the original nominalism aimed to eliminate or reduce all but the logically particular, yet sets and propositions can in fact be treated as logical particulars. The Harvard usage, in targeting abstraction rather than generality for reduction, seems to run together nominalism with materialism, a position in metaphysics. We saw in the last chapter that Quine wished to telescope together logic and metaphysics insofar as he sought to read ontological commitment directly from the existential quantifier, and that he also saw forsaking abstraction as avoiding “the mental”, and the conjunction of these two philosophical moves is implicated in the Harvard usage. Thus, although the Harvard usage has become influential, this chapter will keep to the original understanding of the problem of universals.

Here are two definitions by Peirce of the problem. The first comes relatively early in his career (1871) and shows affinities with the original medieval debate:

The question, therefore, is whether man, horse, and other names of natural classes, correspond with anything which all men, or all horses, really have in common, independent of our thought, or whether these classes are constituted simply by a likeness in the way in which our minds are affected by individual objects which have in themselves no resemblance or relationship whatsoever (8.12).

Here the problem concerns “natural classes” such as species. Do all cats, for example, share something that differentiates them from pigs? If so, what is it? The other definition of the problem comes a good deal later (1898):

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27 Armstrong deplores Harvard abuses of ‘nominalism’ and ‘abstract’ in *A World of States of Affairs*, pages 120 & 136 respectively.

28 Sets are not treated as logical particulars by (the Harvard philosopher) Nelson Goodman, however, as he regards the notion of set as intensional, and this perhaps helped to facilitate the slide in meaning from medieval to Harvard nominalism. (Thanks to Josh Parsons for discussions on this point.)
Now what was the question of realism and nominalism? I see no objection to defining it as the question of which is the best, the laws or the facts under those laws (4.1).

This more general and, I will argue, more powerful definition will be discussed further. Now, however, it is time to turn to a presentation of the realism of Armstrong.

6.2 Armstrong: Scholastic Realism Australian-Style

6.2.1 Empiricism and the Single Mode of Being

Anderson (a charismatic philosopher who inspired several generations of "Sydney realists") held vigorously to the doctrine of the single mode of being, claiming it followed from empiricism, to which he also held vigorously:

Rationalistic theories of all sorts are distinguished from empiricism by the contention that there are different kinds or degrees of truth and reality. The distinguishing mark of empiricism as a philosophy is that...it maintains that there is only one way of being.  

A case can indeed be made that the idea that there is only one "way of being" is empiricist in origin. Much work in dismantling the variety of medieval distinctions between differing modes of being (most notably, the distinction between existence and essence) was done by the British empiricists. Hume, for example, noted that as every idea must ultimately be derived from some impression(s), so must the idea of a mode of being, if it is to be acceptable by empiricist lights. With respect to the idea of existence, then, he wrote:

the idea of existence must either be deriv'd from a distinct impression, conjoin'd with every perception or object of our thought, or must be the very same with the idea of the perception or object.  

He then argued that it is not possible for there to be a "distinct impression" which is conjoined with every perception, for such a impression would in fact not be distinct:

...I do not think there are any two distinct impressions, which are inseparably conjoin'd. Tho' certain sensations may at one time be united, we quickly find they admit of a separation, and may be presented apart.

Consequently, he observed:

The idea of existence, then, is the very same with the idea of what we conceive to be existent...Any idea we please to form is the idea of a being; and the idea of a being is any idea we please to form.

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Thus Hume concluded that the idea of “being” (which he treated as coextensive with existence) is both univocal and utterly transparent in meaning. This argument might seem entirely convincing. We don’t perceive things plus the modes of being which they have, it might be thought – we just perceive things. Note, however, that the argument only goes through given a certain atomism (what Hume calls “distinctness”) or discontinuity of impressions. It depends crucially on Hume’s claim that there may not be two “distinct impressions” which are always had together, for if truly distinct they “may be presented apart”. Recall, however, Peirce’s phenomenological derivation of his modes of being. He claimed that although any actual thing contains all three of his (“Short List” of) categories, (and in this sense the categories are never “presented apart”) yet we can “prescind” them. In some sense, then, this also is drawing on experience.

Anderson, unlike Hume, held that reality was “propositional” in a way that was somewhat similar to Wittgenstein’s Tractatus. That is, he believed that subject and predicate terms fitted together in something more than a mere concatenation in every true sentence. Anderson thought that the fact that any given term could function as either subject or predicate was sufficient to show that the subject-predicate distinction should not be “hardened into ontology”:

There is admittedly a distinction between subject and predicate, but this is a difference of function, not of kind: and granted that the function of the predicate is to characterize or describe, the very same term can also have the function of indicating, i.e., can be the subject of another proposition...the fact that any one term can function in these two ways is sufficient to dispose of the doctrine of “universals”.274

(Interestingly, this recapitulates Peirce’s argument, presented in the last chapter, that the distinction between ‘idea’ and ‘individual’ is context-relative, with hypostatic abstraction serving as the bridge between the former and the latter.)

Armstrong, while acknowledging that Anderson would not have agreed with everything he said, acknowledges Anderson as his great teacher,275 the main influences being his empiricism and his univocal concept of being, which both think of as coextensive with existence. That the single mode of being should be taken to be existence (rather than other traditional ‘being-terms’ such as ‘reality’, ‘subsistence’, or ‘essence’) can also be seen as a consequence of empiricism. For the empiricist epistemology is characterised by its emphasis on the causal efficacy which the objects of our knowledge have (which we experience through our senses) as the way in which we come to know about them. Existence is distinguished over the other ‘being-terms’, then, by its suggestion of causal efficacy. Thus Anderson claimed that to hold

274 John Anderson, “‘Universals’ and Occurrences”, Australasian Journal of Psychology and Philosophy 7 (June, 1929), pp. 140.
275 Armstrong, A World of States of Affairs, pp. 3-4.
empiricism also meant holding that everything which has being is located in space and time, which would seem to be a necessary requirement for causal efficacy. (Note that in the context of this thesis ‘causal efficacy’ is something of a code for Secondness. This will become significant later in the chapter.)

6.2.2 Particulars and Universals Exist, and only Together (in States of Affairs).
Armstrong therefore characterises the Realist-Nominalist debate as concerning whether universals exist:

Nominalism is defined as the doctrine that everything there is is a particular and nothing but a particular. A Realist is one who denies this proposition, holding that Universals exist.

What does Armstrong mean by the term ‘Universal’? He writes:

Universals are entities that are identical, strictly identical, in different instantiations, and so are the foundations in re for all genuine resemblances between particulars.

While Armstrong rejects Nominalism, he also wishes to separate his own “Immanent Realism” from “Platonic” or “Transcendent Realism”, the view that universals might exist without being instantiated, or might exist out of space and time, or might not be causally efficacious. All of these claims are denied by Armstrong. Though he is a forthright Realist about Universals, this does not downgrade his ontological acceptance of particulars. He sees the inclusion of both particulars and Universals as vital for a healthy ontology. In recognition of this fact, over the course of his philosophical career Armstrong has moved to the view that one needs to commit not just to particulars and Universals but to states of affairs in which the two are combined in a structured way.

6.2.3 A Posteriori Realism.
It is fundamental to Armstrong’s Realism about Universals that it is an a posteriori Realism. By this he means that there is no automatic correlation between predicates and Universals. Universals are not to be read blithely off the shape of our language. Rather, Universals are discovered through the hard empirical work that constitutes science. Thus, there may be predicates in our language to which no Universal corresponds in the world. (Armstrong suggests “accelerates through the speed of

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277 Armstrong, Universals and Scientific Realism, vol. I, 1. A capitalisation of the terms “Realism” and “Universal” is Armstrong’s prefered usage, so when discussing his views I will follow suit.
278 Armstrong, A World of States of Affairs, p. 21.
279 Armstrong calls this mistake, “the Argument from Meaning”, and also “Rationalism” (which label he treats, following Anderson, as already a serious philosophical blow against the view to which it is ascribed).
light" as a possible example here.) There also may be Universals to which none of our predicates correspond, or even to which some of our predicates ever will correspond due to our epistemological limitations. The latter is a hard proposition to establish empirically, but Armstrong claims that Realism and the possibility of long-term human error about the world go hand in hand.

Therefore Armstrong argues that when doing philosophy one must make an in-principle separation between semantic questions, questions of where and when to apply certain predicates, and ontological questions, questions of the existence of various Universals (a distinction which was presented with respect to explications of truth in §4.1). For as there is no automatic correlation between predicates and Universals, who is to say that discussion of either question will throw light on the other? For this reason the initial illustration of the problem of universals using the "natural class" of cathood is somewhat misleading with respect to Armstrong, as Armstrong's Universals are much more spatiotemporally fine-grained and also correspond to much more theoretical predicates than this.280 'Is a cat' for him is precisely the sort of predicate which demonstrates the need to separate semantics from ontology.

6.2.4 The Explanatory Power of Universals.

In 1978, Armstrong set out a landmark taxonomy (intended to be exhaustive) of different varieties of nominalism: Predicate Nominalism, Concept Nominalism, Class Nominalism, Mereological Nominalism, Resemblance Nominalism, and (last and very much least in Armstrong's mind) Ostrich or "Cloak and Dagger" Nominalism281. Armstrong claims that almost all Nominalisms view properties as some form of external relation between the thing that has the properties, and something else (such as class membership, being thought of in a certain way, or being part of a mereological aggregate). This is just not satisfying, he argues, as in all these cases we can imagine the thing not partaking in the external relation, but still having the property.

Armstrong refutes Predicate Nominalism this way:

According to Predicate Nominalism, an object's possession of (say) the property, being white, is completely determined by the fact that the predicate 'white' applies to this object. But now let us make a thought-experiment. Let us imagine that the predicate 'white' does not exist. Is it not obvious that the object might still be white? If so, its whiteness is not constituted by the object's relation to the predicate 'white'.

280 An example of the kind of Universal he does consider likely to exist is the charge on an electron. See for instance, Armstrong, A World of States of Affairs, 26.
281 Armstrong, Universals and Scientific Realism, vol. I, pp. 11-44.
Class and Mereological Nominalism receive a similar send-off. Armstrong claims that Resemblance Nominalism is “by far the most satisfactory version of Nominalism”. But he notes that in claiming to explain properties in terms of “resemblance relations” between things, it appears merely to substitute for the type-term ‘property’ something equally in need of Nominalistic explication.

Even worse than these versions of Nominalism, according to Armstrong, is the philosophically irresponsible Ostrich Nominalism: named for the alleged tendency of its namesake to solve problems by means which are as ridiculous as they are ineffective. He picks out Quine for special criticism here. Such a position is unacceptable because:

[w]hat such a Nominalist is doing is simply refusing to give any account of the type/token distinction, and, in particular, any account of types. But, like anybody else, such a Nominalist will make continual use of the distinction...He therefore owes us an account of the distinction. It is a compulsory question in the examination paper.

In short, realism about Universals is required by Armstrong to explain the fact that when we state that things have properties we often speak truly. Realism performs this explanatory function by claiming that those true statements refer to Universals as well as to particular things. A way of putting this argument which has become prominent in Armstrong’s recent writing on Universals (and was alluded to in §4.1) is to claim that Universals must be present in truthmakers for true statements involving predicates of a general nature (which notion of “truth-making” now plays a prominent role in Australian realism generally)

6.3 Devitt Defends Nominalism

6.3.1 “Ostrich Nominalism” Embraced

Michael Devitt agrees with Armstrong about the need to separate semantic and ontological questions. However he believes he can defend Nominalism against Armstrong’s attacks and, with characteristic forthrightness, positions himself squarely in the Ostrich Nominalist camp:

Ostriches are reputed to ignore problems by putting their heads in the sand. Mirages are another feature of desert life: people see things that aren’t there. An “Ostrich Nominalist” is a person who maintains Nominalism whilst ignoring a problem. A
"Mirage Realist" is a person who adopts Realism because he sees a problem that isn’t there.  

He claims that those who believe that there is a real problem which requires Realism about Universals as its solution have failed to appreciate the "‘new’ metaphysics of W. V. Quine and others". According to Devitt’s version of Quine, one’s ontological commitment is gauged by working out "what must exist for a given sentence to be true". Thus, sentences such as, “My two cats share a property: their species,” seem to require the existence of the property of cathood. However, when we are in the business of tallying up ontological commitment, sentences may be paraphrased in such a way that ontological commitment is reduced, as long as meaning is preserved. Thus, "My two cats share a property: their species", in this context, may be paraphrased as “My two cats are both cats”, which commits only to two individuals, which happen both to possess a certain property.

Devitt acknowledges that at this point Armstrong will protest, “But in virtue of what do these two cats both instantiate this property? Surely it is because they share something real?” Not at all, claims Devitt:

The Quinean sees no problem for Nominalism in the likes of [sentences of the form ‘a is F’] because there is a well-known semantic theory which shows that ['a is F'] can be true without there being any Universals:

[*a is F*] is true if and only if there exists an x such that ‘a’ designates x and ‘F’ applies to x.

Thus, he argues that the only truthmakers our true sentences need are particular objects.

Thus, the dialectic between Armstrong and Devitt takes the following form. Armstrong claims that we need to postulate the existence of Universals that perform a truth-making role with respect to our true predications, thereby explaining them. Devitt suggests that true predication is not in need of such explanation. A certain weariness descends on the debate at this point. One is tempted to ask, what difference does it make here if Devitt is right or Armstrong is right?

6.3.2 Predication and Substantive Disagreement
I shall now argue that in fact Devitt and Armstrong are not engaged in a substantive disagreement. Consider the following principle (SD) as a necessary condition for substantive disagreement:

*(SD):* (X₁,...,Xₙ) have a substantive disagreement if there is some predicate F to which (X₁,...,Xₙ) wish to give differing extensions.

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288 Devitt, “‘Ostrich Nominalism’ or ‘Mirage Realism’?”, p. 435.
Consider a sample disagreement – say over whether a certain animal (Fluffy) is a cat or a pig. Insofar as two people disagree over this question, they will wish to give a different extension to the predicate ‘is a cat’. One person will wish to include Fluffy and the other will wish to exclude her. In this case of straightforward substantive disagreement, then, the principle does provide a necessary condition for the disagreement in question.289

In the disagreement between Devitt and Armstrong, both sides take the extension of any predicate as a given, and are merely quarrelling about the metaphysical apparatus behind it. So, for instance, there is not a single cat which ceases to be called a cat, or gains or loses a (first-order) property if one swaps one’s metaphysical allegiance from Armstrong to Devitt, or vice versa. The only predicate whose extension Armstrong and Devitt are disputing is the technical metaphysical predicate, ‘is a Universal’. The dispute solely concerns whether the extension of this predicate includes an enormous number of ‘second-order objects’, as Armstrong would have us believe, or is empty, as Devitt would have us believe. Isn’t this issue, then, a prime example of what Wittgenstein called, “a wheel which is not connected to any other part of the mechanism”? Isn’t the nominalist justified in querying the point of introducing a predicate into one’s ontology in order to start a dispute which concerns the extension of the new predicate alone? (Compare the dispute over whether Fluffy should be included in the predicate ‘is a cat’, answers to which have a number of flow-on effects with respect to further predicates such as ‘likes milk’ and ‘will miaow’.)

It is precisely the principled separation of semantic from ontological questions, which Devitt and Armstrong both subscribe to, which allows their disagreement to be so completely sealed off from differences in predication (except, as noted, in a degenerate sense solely concerning the predicate ‘is a Universal’) and thus from any substantive character. Rather, it is thought that Universals’ only role is to “truthmake” truths on which realists and nominalists agree. It is an ironic feature of truthmaker accounts that it is the very metaphysical purity of their realism which invites the application of Ockham’s nominalistic razor in this way.

Therefore it appears that if there is to be a substantive disagreement over whether universals are real, realism (contra Armstrong and Devitt) must have a great deal to do with choices concerning predication. Just what this involvement might be will be the subject of the next section.

289 It might be objected that the principle’s focus on predication leads it to ignore any features of the world which are not capturable by human language. Is the principle not unacceptably antirealist, in that sense? However, the principle does not deny being to such features of the world. It merely points out that, as it is not possible for us to refer to such features at all, it is not possible (alas) for us to substantively disagree over them.
6.4 Peirce: Scotistic Pragmati(ci)sm.

Peirce claimed that his particular brand of realism was indebted to the scholastic realists, in particular to Scotus. Like Armstrong, he thought that taking a scholastic realist stance was an important and indeed necessary philosophical choice. Peirce also resembles Armstrong in favouring an \textit{a posteriori} scholastic realism, in that he thought the question of which universals to ascribe reality to should be an \textit{a posteriori} matter. For he, like Armstrong, believed that the true importance of realism lay in explaining our scientific practice. Thus, there is a Peircean analogue of Armstrong’s claim that we must obtain knowledge of Universals through scientific work rather than linguistic or conceptual analysis (which Armstrong expressed by saying that we must separate semantics from ontology). He also thought that, in a sense, realism itself should be held to \textit{a posteriori}:

For the simpler hypothesis which excluded the influence of ideas upon matter had to be tried and persevered in until it was thoroughly exploded. But...henceforward it will be a grave error of scientific philosophy to overlook the universal presence in the phenomenon of this...category (5.64).

(This point will be developed in §6.5.)

However, Peirce’s approach to the Problem of Universals is different to Armstrong’s. The differences take some teasing out, but are profound.

6.4.1 “Universals” vs. “Generals”

Much of philosophical significance is packed into the fact that Peirce’s stated commitment is to “real generals” rather than “existent Universals”. First of all, the term “general”, as noted in §2.1, is fundamentally a \textit{logical} rather than an ontological notion (bearing in mind, as has been noted, that Peirce understood logic in a broad sense which embraced issues in semantics and the methodology of inquiry). Thus, the key to identifying Peircean generals is that the term includes anything \textit{projectible in the way that predicates are}. (“The old definition of a general is \textit{Generale est quod natum aptum est dici de multis}. This recognises that the general is essentially predicative...\textit{(5.102)})”\textsuperscript{290} Thus Peirce’s talk of generals invokes the phenomena discussed by Wittgenstein under the heading of rule-following and, as noted at the start of this chapter, Peirce’s response to the problem of universals will not be without relevance to these discussions by Wittgenstein and Kripke.

This identification of the universal with projectibility makes Peirce’s conception extremely general. Where Armstrong’s Universals are explicitly n-adic properties, and

\textsuperscript{290} It will perhaps be objected that not all predicates are projectible. Consider for instance, “was born at space \textit{s} and time \textit{t}”. However this predicate is at least ‘modally projectible’, insofar as we may make statements such as “If the person born at space \textit{s} and time \textit{t} had been born in hospital \textit{x}, the birth would have been much easier.” Thanks to Neil McKinnon for putting this objection.
he seeks to construct scientific laws out of complex, second-order relations between them\textsuperscript{291}, the Peircean “general” is a blanket term which covers properties, laws of nature, patterns, habits, thoughts and more, insofar as they are projectible in the way that predicates are. It might seem infelicitous to put entities such as properties, on the one hand, and thoughts, on the other, together in the one philosophical category. For are not properties objective and ‘external’ whereas thoughts are subjective and ‘internal’ (in a sense which seems to entail Putnam’s interpretation of ‘internal’ as ‘no right answer’ in §2)? For Peirce, however, the line between subjective and objective does not fall along the (Cartesian) mind/world lines invoked by this use of the terms ‘internal’ and ‘external’. It was noted in the last chapter that ‘ideas’ can partake of objectivity just as much as ‘things’ can, for Peirce, and this insight will be expanded on further.

6.4.2 The Real and the Fictional.

We saw in §5.3 that for his definition of the real, Peirce returns to the term’s source, the thirteenth century, identifying the real with the mind-independent: that “which has such and such characters, whether anybody thinks it to have these characters or not (5.430)”. He defines the real against the fictional, or “fictive”, which is “that whose characters depend upon what characters somebody attributes to it (5.152)”.

A possible objection is that this definition of the real is flawed because it renders unreal certain mental states which we want to count as real. For surely my beliefs, for example, are not independent of how I think about them? And are not my beliefs real?\textsuperscript{292} This objection, however, only has force against a Cartesian view of beliefs as nothing over and above an explicit representation to the mind’s eye. Yet is this plausible? Consider my belief that tigers are dangerous. Is it the case that I can change this belief merely by thinking about it? And if a roaring tiger comes into view will I really not run away? Genuine beliefs are tied to, if not exhausted by, a vast network of dispositions to behave in certain ways, and it is implausible that we may selectively abandon swathes of this behaviour by mere doxastic fiat. This is leaving aside the enormously popular physicalist view that as well as a complicated functional role in our negotiating the world, much of which is not under our control, beliefs also possess a physiological manifestation (such as in states of the brain), the laws governing which may be studied like any other real scientific phenomenon, which is a further argument against the Cartesian position.

“What then of qualia?” the critic will ask. Surely there must be some mental events which are so private or so recondite that they are exactly as we think they are? Is not

\textsuperscript{291} See, for example, Universals and Scientific Realism (Cambridge: Cambridge University Press, 1978), and What is a Law of Nature? (Cambridge: Cambridge University Press, 1983).

\textsuperscript{292} Daniel Nolan and Greg Restall have both pressed this point in private conversation.
my very own taste of pineapple real? Yet isn’t that taste exactly as I think it is? Can’t I decide to have a thought the nature of which is entirely up to me? Here the Peircean will bite the bullet, arguing that if this taste of pineapple is really so epistemologically inaccessible that no-one can disagree with me about it (which seems counterintuitive insofar as people do successfully discuss tastes with each other), what is lost by denying it reality? Moreover, this putative thought is a strange entity if I truly am free to dictate its character by the way I think of it. What is the thought ‘about’?293 (In this way Peirce’s definition of the real resonates not only with Wittgenstein’s account of rule-following, but also with his private language argument, and insistence that if “whatever is going to seem right to me is right”, “that only means that here we can’t talk about ‘right’”294)

For a more straightforward example of the fictional, consider the predicate ‘is humorous’ as applied to, say, a hat. There is no further criterion for whether a given hat is humorous than that a certain group of people find it so. We can give no sense to the idea that everyone who ever came in contact with a given hat might be wrong about its humorousness. Thus, the putative property of humorousness is fictional. (A signal of the potential confusion that lies in this area, however, is that the property, ‘...is believed by the human race to be humorous’ is, on the other hand, real). This issue will be discussed further in §8.2.

Some prima facie differences between Peirce and Armstrong’s scholastic realisms have now been outlined, but the next section will get to the heart of the difference between the two, which is the essential role played by Peirce’s “real generals” in scientific prediction.

6.5 Real Generality and Prediction

6.5.1 Scholastic Realism and Scientific Experimentation

Peirce thought we needed to postulate scholastic realism because only this hypothesis could explain the practice of scientific experimentation. When scientists perform an experiment in order to test a new hypothesis, a key feature of the experiment is prediction of the hypothesis’ consequences, in a manner that is as precise, hypothesis-specific and readily experienced as possible, and then careful observation of how the world does in fact behave. Only if things “really have something in common”, as Peirce puts it, does such behaviour make any sense.

293 In 5.405, Peirce writes:

There are, however, phenomena within our own minds, dependent upon our thought, which are at the same time real in the sense that we really think them. But though their characters depend on how we think, they do not depend on what we think those characters to be.

Peirce notes that we often fail to appreciate what a profound capacity we possess for predicting the behaviour of our surroundings. The public lectures he gave at Harvard in 1903 were mentioned in §1.4.1, at which time the phenomenological derivation of the categories which he offered in his second lecture were presented, and it was remarked that his argument for the reality of the categories would come in later lectures. In the fourth lecture, then, he announced that he would demonstrate that Thirdness was “really operative in nature”. He held a stone in the air in front of his audience, and challenged them to admit that they knew that the stone would fall when he dropped it, rather than flying up in the air:

Suppose we attack the question experimentally. Here is a stone. Now I place that stone where there will be no obstacle between it and the floor, and I will predict with confidence that as soon as I let go my hold upon the stone it will fall to the floor. I will prove that I can make a correct prediction by actual trial if you like. But I can see by your faces that you all think it will be a very silly experiment (5.93).

He then pointed out that the behaviour of the stone was not subject to any influence from what its observers thought might happen to it. He noted that, “It would be quite absurd to say that...I can so peer into the future merely on the strength of any acquaintance with any pure fiction (5.94)”. He concluded that his audience possessed knowledge of an “active general principle”, exerting influence on dropped objects, and that this active general principle answered his definition of the real:

With overwhelming uniformity, in our past experience...stones left free to fall have fallen. Thereupon two hypotheses only are open to us. Either

1. the uniformity with which those stones have fallen has been due to mere chance and affords no ground whatever, not the slightest for any expectation that the next stone that shall be let go will fall: or

2. the uniformity with which stones have fallen has been due to some active general principle, in which case it would be a strange coincidence that it should cease to act at the moment my prediction was based on it...

Of course every sane man will adopt the latter hypothesis. If he could doubt it in the case of the stone – which he can’t – and I may as well drop the stone once for all – I told you so! – if anybody doubts this still, a thousand other such inductive predictions are getting verified every day, and he will have to suppose every one of them to be merely fortuitous in order reasonably to escape the conclusion that general principles are really operative in nature. That is the doctrine of scholastic realism (5.101).

This is the way, then, in which scholastic realism explains scientific practice for Peirce, for without it we can make no distinction between what we think the extension of a predicate ought to be and what that extension really is (that is, between objective and subjective generality). And without that, we can engage in conceptual analysis but not in scientific work.295

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295 This is a point which Scotus appreciated: “The universals are not fictions of the intellect, as in such a case they could not predicate anything about an external object...nor would there be any difference between metaphysics and logic, but indeed every science would be logic dealing with the
6.5.2 Not a ‘Real’ Experiment?

The nominalist will probably wish to have a few things to say at this point. He may protest that this is a very poor refutation of nominalism, as Peirce’s experiment is perfectly compatible with the nominalist hypothesis. So what if the stone falls – nominalism never said it wouldn’t! Nominalists are not committed to lawlessness, their claim is merely that laws are convenient summaries of patterns amongst real particulars, rather than invocations of real general entities in Nature. Surely one needs to be able to create an experimental result incompatible with a given hypothesis in order to be able to refute it?

Skagestad has discussed this objection against Peirce’s stone experiment, arguing against Manley Thompson who has claimed that the argument is confused. Skagestad discusses ways in which one might argue that Peirce’s public use of the stone is not a real experiment. Firstly, the result of the experiment (that the stone will fall) is known beforehand. Scientists experiment because they genuinely don’t know what will happen in a given situation, and wish to find out. Secondly, the result is compatible with both the nominalist and the realist hypotheses, and therefore can hardly be said to discriminate between them. What, then, is going on here?

Skagestad points out that Peirce is basing his argument for realism not on the fall of the stone alone but on the conjunction of the stone’s fall and his (and his audience’s) confident belief that this will occur. Thus, Skagestad calls Peirce’s strategy:

...a genuine thought-experiment on a phoney physical experiment, and the very phoniness of the physical experiment is part of the experimental outcome of the thought-experiment.

He claims that although Peirce’s argument does not prove realism in any deductive sense, it is intended to provide inductive support for it:

The nonfulfilment of an inductive prediction [such as that a particular stone will fall] does not overthrow realism, but the nonfulfilment of all inductive predictions would overthrow it; hence...each fulfilment of an inductive prediction counts as evidence in its favour.

universal.” Cited in Fred Michael, “Two Forms of Scholastic Realism in Peirce’s Philosophy”, p. 109.

296 Patricia Turrisi, in her commentary on the fourth lecture (Pragmatism as a Principle and Method of Right Thinking, p. 60) calls Peirce’s use of the stone “a joke”, which she likens to Hegel’s ‘refutation’ of phrenology which proceeds by bumping the phrenologist on the head. However I will assume that Peirce was in fact quite serious, particularly given the overwhelming importance which the realist/nominalist issue had with respect to his entire philosophical outlook, and the extent to which he believed that nominalism had captured the public imagination.


Nevertheless, Skagestad claims that the hypothesis of realism is not a hypothesis within science. This is because it is not a hypothesis that any particular real law holds, but an overarching hypothesis that there are real laws of some kind. Therefore, the only way the hypothesis can be refuted is by the inductive refutation of all laws of nature. But such a refutation would leave us with no empirical science at all. He therefore suggests that Peirce’s argument was confused in its formulation, as it suggested that one single event (the dropping of his stone) could prove realism, whereas realism’s proper proof is via a vast induction over all law-determining scientific experiments ever performed.299

Considered as an induction in this way, Peirce’s argument seems terribly weak. If he were arguing inductively from a single stone’s falling to a law of gravitational attraction (which has infinite applications) the argument would be weak enough. But it seems that Peirce is arguing from a single stone’s falling to the existence of laws of nature tout court. What could be less conclusive?

6.5.3 Realism and Abduction

However I disagree with this interpretation of Peirce’s stone-experiment. Skagestad is right to point out that Peirce’s argument against the nominalist is not deductively successful. For this to be the case, the result of his experiment would have to be inconsistent with the nominalist hypothesis, and we have seen that this is not so. However, are deduction and induction the only alternatives here? Peirce thought that a complete formal account of inference needed to add a third term, which he called abduction.

The nature and role of these three forms of inference as Peirce conceived them have been well discussed in the literature300 and I will not recapitulate these discussions except to say that abduction bears some resemblance to what nowadays is often (following Gilbert Harman301 and others) called “argument to the best explanation”. However, for Peirce an abduction is specifically an argument to an (not necessarily the best) explanation of something surprising. The necessity of this originating surprise is important in spelling out the role abduction plays in inquiry – it steps in when a theory runs up against some evidential obstacle, and generates new hypotheses which explain the obstacle, and are then tested to see if they hold water. For instance, in 1903 Peirce set out the logical form of abductive inference as follows:

The surprising fact, C, is observed.
But if A were true, C would be a matter of course.
Hence, there is reason to suspect that A is true (5.189).

This account of abduction might seem to conflict with Peirce’s rhetorical use of the stone in the ‘Harvard experiment’. For surely the fact that stones fall when dropped is one of the more unsurprising facts about life on Earth, and it seems that Peirce is in fact drawing on this extreme obviousness to make his rhetorical point that we all know what will happen to the stone, and thus that we are committed to some form of realism whether we know it or not. Yet Peirce’s apparently simple rhetorical gesture can be seen to work on a yet deeper level, if we consider that what he is drawing attention to by waving the stone above the ground so suggestively is the remarkable fact that we are unsurprised when objects that are unsupported fall to the ground, given that there are many other perfectly intelligible future possibilities with respect to what those objects might do that we do not even consider. Given nominalism, this fact about us is surprising, and thus Peirce’s real rhetorical aim is to uncover this surprise, to draw attention to it, and to suggest the abandonment of nominalism as the only escape from it.

It seems therefore that what Peirce is offering us in his stone-experiment is a demonstration that the realist hypothesis is an abduction\textsuperscript{302} which, despite its merely hypothetical status, provides an explanation (and in some sense also a justification) of our scientific practice in some deep sense which nominalism cannot supply. Skagestad is right to note that it is not the falling of the stone per se, but the combination of our belief that it will fall, and the stone’s remarkable conformance to that belief which his argument really rests on. \textit{How do we explain this ability to predict the future?} The nominalist hypothesis that particular things have been noticed by us to fall into certain regular patterns, which we call laws, says nothing about what those particular things will do in the future, as Hume famously noted. The nominalist hypothesis explains and justifies retrodiction but not prediction. The realist hypothesis, on the other hand, by postulating something real (something which Peirce calls “active general principles”) whose very identity stretches into the future, does explain our confident expectation that stones and all other massive objects will fall if unsupported. Therefore, it is the better hypothesis.

Unlike induction, abduction can draw on single cases and yet be quite convincing. According to the legend, it was the falling of a single apple from its tree that prompted Newton to look at it, think of the moon and suddenly conceive a certain very strong hypothesis which explained the moon’s behaviour. It was not the case that Newton lay under the tree waiting for more apples to fall so that he could make sure his hypothesis

\textsuperscript{302} Douglas Anderson has argued similarly, describing Peirce’s response to global scepticism about scientific method as a “transcendental abduction”. Douglas Anderson, \textit{Strands of System: The
was a good one. It is not, however, right to use the term “proof” for an abductive argument (unlike a deductive or strong inductive argument). For the task of abduction is to produce hypotheses rather than proofs. In this regard, it is worth noting that although Skagestad uses the term “proof” for Peirce’s argument, Peirce, although he begins by saying he will attack the problem of scholastic realism “experimentally”, does not use the term himself.\(^{303}\)

I shall also qualify Skagestad’s claim that for Peirce realism is not a hypothesis within science. It is “within science” in the sense that his acceptance of the hypothesis shows the same logical form as scientists’ acceptance of any hypothesis (for instance, the acceptance of Newton’s second law by the scientific community, when that occurred). What is the logical form of the acceptance of hypotheses for Peirce? Inquiry recognises something as needing an explanation. Abductive inference generates hypotheses which would explain the phenomenon if true. The inquirer then tries to discriminate experimentally amongst different hypotheses which explain the phenomenon equally well. Via his stone-“experiment” Peirce seems to be suggesting that realism is an overarching ‘scientific’ abduction, yet to be challenged by any other hypothesis which does the job of explaining our predictive success with respect to the world.

6.5.4 Realism and ‘Future-Directed Justification’

Nevertheless, there is an important sense in which realism is a meta-explanation with respect to science, in the sense that if we are not realists about the general, we have no business framing hypotheses with future consequences and setting out to test them via experiment. And without this, science could not get off the ground. Thus scholastic realism, though it is a hypothesis in terms of its logical structure, is a hypothesis that makes all other hypotheses possible. We saw that this was also the case with the hypothesis of unitary truth in §4.4 in that without the hypothesis that inquiry will eventually converge towards an answer to any given question we can make little sense of inquiring in the first place. The nominalist may protest that this is a blatantly circular analysis, which presupposes the very thing (real generals) which it is meant to be explicating. However, as was also noted in §4, this is not an analysis! This is a scientific hypothesis – a pragmatic explication of the real. (More will be said about the relation between Peirce’s explication of the real and his pragmatism in §8.4). Many of the observations which justify our support of classical mechanics are couched in the very theoretical terms which that theory makes possible (for example, mass, force, velocity and momentum). However, for philosophers to say, “What a circular theory!”

\(^{303}\) Thanks are due to Peter Skagestad for generously pointing this out to me in private correspondence.
would be impertinent, as the theory worked. It provided testable future consequences which, for a long time, were found to be verified. (It still does work in most everyday situations).

Peircean pragmatism sidesteps the demands of the deductivist philosopher by making possible a form of *future-directed justification* (a concept which was introduced briefly in §4.3.5). If one’s view corresponds to the facts, it will be adopted and used eventually (as is presupposed by Peirce’s communitarian explication of the concept of truth). When it comes to hypotheses, Peirce advocated a surprising yet apt usage of the Biblical maxim, “By their fruits shall ye know them”. It is difficult to conceive at first just what a different approach to philosophy is being presented here. It is not possible to send one’s ideas into the future by justifying them oneself, Peirce thought. This is a hangover of Cartesianism. The only thing that can ensure that one’s ideas endure is to submit them to something much greater and more permanent than oneself, first by clarifying and testing one’s ideas against the real as much as possible, and then by trusting to future inquiry, by converging on the real, to converge on one’s ideas. When in §4.4 it was noted that when we inquire we presuppose that there is a unitary truth, it was also noted that this may be understood as a “regulative hope”, and here we can see the same hope approached from a different angle.

As we have seen, Armstrong also argues that Universals are needed to explain the regularities postulated by scientists (by “truth-making” them):

There had better be some ontological way that respectable predicates, ones that yield real regularities, earn their respectability.  

However Armstrong does not explore the logic of *prediction* as the specific reason why the postulation of his Universals cannot be avoided. I shall now argue that such an omission renders him vulnerable to compromising his scholastic realism.

### 6.5.5 Prediction, Universals and Tropes.

Consider the predicate ‘is a cat’ (which is not generally considered to be “respectable”, but which I believe to be so). In order for ‘is a cat’ to earn its respectability, according to Armstrong, we must postulate something “ontological”. Why must we postulate a Universal rather than an infinitely long set of distinct property instances? Instead of a single One Over Many ‘cathood’, why not as many individual cathoods as there are cats? Such a view does exist: *trope theory*.  

[Trope theory holds that properties and](#)
relations have their being as particular “instantiations”, which are distinct existences, though they may share the “property” of resemblance. As Armstrong has set up the debate between realism and Nominalism, he has no real answer to the question why one should prefer his ontology of Universals to trope theory.\textsuperscript{306} It was claimed in §5.3.1 that Armstrong is an instantiation of what Peirce calls (the “strange union” of) “nominalistic Platonism”, and trope theory may perhaps be understood as a form of nominalistic Platonism in this way.

On Peirce’s approach, however, this question can be answered. The answer is that a “real general” \textit{is projectible by us}, and thus testable in scientific experiment, and an infinitely long set of distinct property instances is not. For there is no \textit{a priori} reason why a set containing 1000 cat-instances should not contain a pig-instance for its 1001\textsuperscript{st} member. But there is an \textit{a priori} reason why the Universal ‘is a cat’ should not embrace Babe. (One should bear in mind, of course, Peirce’s fallibilism about meaning, outlined in §3. But the \textit{a priori} survives this fallibilism as a matter of degree.) Thus, only a belief in Universals can make sense of our ability to extend predicates to situations of which we have no direct experience, which just is scientific prediction.

At this point, many trope theorists will protest that the 1000 cat-instances do in fact share something which provides an \textit{a priori} justification for excluding the pig from their number – and that is the “property” of resemblance. Trope theory is now a large and complex field and it would take a great deal more space than is available here to do it proper justice. However for present purposes it is worth pointing out that the counterargument as stated above trades on an ambiguity in the term ‘resemblance’. A resemblance between two tropes may be understood ‘internally’ or ‘externally’, insofar as it is, on the one hand, grasplable \textit{a priori} (as, for instance, when someone tells me that they own two animals which are both cats) or, on the other hand, must be discovered \textit{a posteriori} (as is the case, for instance, with the ‘resemblance’ between two strands of feline DNA). Insofar as internal resemblance is meant, then, the resemblance amongst the 1000 cat-instances \textit{does} provide projectibility of cat-tropes to further cats – but then the trope theorist does nothing but smuggle real generality in the back door, reestablishing full-blooded realism. If, on the other hand, the property of resemblance merely consists in some \textit{a posteriori} scientific fact and does not provide

\textsuperscript{306} He has come some way towards acknowledging this in his latest book, where he writes, “...the view that properties and relations exist yet are particulars, is an important alternative which in many ways respects the spirit of the present enterprise.” Armstrong, \textit{A World of States of Affairs}, p. 22. He does baulk at what he identifies as the trope theorist’s Humean or “Regularity” account of laws of nature (p. 24). However given that for him laws of nature are not universals themselves but only (“second-order”) relations between universals, why is a relation between tropes so much more problematic?
projectibility, then it will not provide the *a priori* justification (for excluding the pig from the collection) which it is alleged to.

It might be objected that what has been offered is a terribly anthropomorphic reason to postulate one ontological entity (a Universal) rather than another (a set of distinct property instances). Just because something is easier for us to grasp and extrapolate, does that mean that it is ‘out there’? Wasn’t this meant to be realism? This objection, however, assumes that if we make ontological commitments based on what we find easy to discover or to believe, we risk unwitting error through substituting the subjective for the objective, or as Peirce would put it, the fictional for the real. The objection may be answered by noting that the Peircean epistemology provides other means for removing the human idiosyncrasies and projections from our beliefs than a distinction between what is ‘in the world’ and what is ‘in the mind’.

We have seen (in §3.2) that Peirce’s pragmatism dismisses as meaningless any discussion by us of ‘things in themselves’, ruling that all we have to work with epistemically is the hypothetical expectations which we draw from the concepts we possess. He therefore draws his real-fictional distinction within the realm of general concepts – between those possessed by us and those (as we saw in §4) which *would* be possessed by us if we were to push inquiry far enough. He then argues that through continual testing of our concepts against the world through prediction and observation, by intelligently identifying and discarding those concepts which lead to false predictions, and trying out new concepts, we can slowly converge on the real. Thus for Peirce that the real is ‘mind-independent’ does not mean that it is ‘not in anybody’s mind’. (Such a definition of the real would be somewhat self-defeating after all.) It just means that its *character* is *not altered* by any person or group of persons having it in mind.

It was noted that when Armstrong argues for Universals as truthmakers for true scientific statements, he does not seek specifically to explain scientific prediction, nor note the fact that we can only make predictions by postulating a coherent and graspable idea rather than an infinitely long set of distinct things. This is just to say that in concentrating on the ontological, truth-making role which Universals play, he loses sight of their *logical* role as real *generals*. Therefore, on his construal of the problem of Universals, Armstrong cannot make a case for his Universals over tropes.

This section has established that the key to Peirce’s scholastic realism, as opposed to Armstrong’s, is the way Peirce’s “real generals” enable prediction. In §6.1, two definitions of the problem of universals by Peirce were put forward and it was remarked that his second formulation:

... Now what was the question of realism and nominalism? I see no objection to defining it as the question of which is the best, the laws or the facts under those laws. (4.1)
was more general and better. The way in which it is better may now be highlighted: it homes in specifically on predictive power, insofar as this is the only way "laws" are distinguished from "the facts under them". The next and final section will show how this construal of scholastic realism undercuts Armstrong's distinction between "semantics" and "ontology", will further discuss the issue of the real versus the existent, and also link Peirce's scholastic realism with his hypothesis of synechism.

6.6 'Semantic Realism'

6.6.1 The Real and the Existent

It should now be apparent that there is nothing in Peirce's definition of the real that renders it analytic that the real must be coextensive with the existent. How one should define the existent is not uncontroversial. It appears to be something of a family-resemblance concept whose 'features' include spatiotemporal location, causal efficacy, complete determinacy and material substance. However for the purposes of this chapter it is not necessary to take a stand on exactly how existence should be defined, merely to argue more broadly that the real and the existent should be distinguished.

For example, someone who thought that numbers did not exist (due to their lack of spatio-temporal location and material substance) could quite well hold that they are real in Peirce's sense. For if by some bizarre mischance the entire mathematical community were to believe that thirteen was not a prime number, in such a possible world thirteen would still be a prime number. Numbers are in fact a paradigmatic case of entities that have their properties independently of what is believed about them. Thus reality need not entail existence. One might think, however, that even if reality is not always a guarantee of existence, at least the reverse must hold. For if something forms part of the causal fabric (such as a chair or a cat), surely this gives it sufficient independence from us that we might be wrong about its characteristics. To answer this question requires attending with some delicacy to the different ways in which the proper relationship between logic and ontology is conceived by Peirce and Armstrong.

Peirce thought that the recognition of both existence and reality was essential to a healthy metaphysics, and that the existent is (logically) particular and the real is (logically) general. This is, then, an analogue of Armstrong's claim that one needs particulars and Universals to do full justice to being. The two claims are different, though, in that Armstrong (due to his commitment to unimodal being - in other words, his 'Scientific Ontology') treats particulars and Universals as different types of thing, like the difference between cats and dogs on a very much more general level. Peirce of course, treats them by contrast as different modes of being. This means that rather than speaking of particulars and Universals as themselves entities, one may speak of
particularity and generality as something all entities partake of.\textsuperscript{307} Consider a cat (Dave). If Dave is deeply affectionate while prone to fits of neurotic miaowing, he will share these projectible characteristics to some degree with all other affectionate and/or neurotic creatures. Dave will thus possess real universality. But Dave is also a unique animal with a unique spatiotemporal trajectory, personality and a set of possible responses to situations not exhausted by a general description of any degree of detail. A degree of particularity is therefore also inherent in Dave.

Thus, the right answer to the question of whether things which are existent must also be real is that it is a ‘category error’. In order to be existent a thing must have real properties – in fact it will probably have a great many. But \textit{qua existent} the thing is neither real nor unreal, any more than \textit{qua coloured object} a thing can be square or not square. We have seen that, at least partly due to Quine’s devastating onslaught on the idea of a non-univocal concept of being, it has come to seem commonsensical that the world just contains a set of things which may be sorted into types of a first-order variety. There is no need to bother with these ‘hyper-types’, it is thought.

However in this context, the idea of particularity and universality as differing modes of being does have theoretical virtues. For instance, giving up Armstrong’s notion that committing to both particularity and Universality means committing to the claim that particulars and Universals exist as entities in their own right sidesteps the problem faced by Armstrong of explaining how such different types of entity might be related, related so intimately in fact that one is never present without the other. As his empiricism leads him to hold Hume’s “no necessary connections between distinct existences”, and it appears to be a necessary truth that particulars and Universals always appear together, he is forced to admit that they are “internally related”. Armstrong has admitted that he has not been able to shed any light on this mystery at the heart of his ontology, and his call in 1978 for work to be done on an “empiricist” account of the relation in retrospect seems best described as hopeful.\textsuperscript{308}

This distinction between reality and existence points the way towards Peirce’s scholastic realism, but the issue may now be probed even more deeply. It is worth noting that Peirce used the terms ‘real and ‘existent’ in part because they were the philosophical ‘folk terms’ of the day. The terms were to some degree standing in for his categories of Thirdness and Secondness respectively, and his most important philosophical work on the realism question was in fact done in terms of those more exact conceptions.\textsuperscript{309} Recall that Peirce claimed that what he was demonstrating with his ‘Harvard stone experiment’ was that “Thirdness is really operative in nature”. This

\textsuperscript{307} That is, all worldly entities, \textit{pace} the notorious conceptual distillations of metaphysics.

\textsuperscript{308} As Hume suggested, if two things are always presented together, it is difficult for the empiricist to make sense of the claim that they are ir any way distinct.

\textsuperscript{309} Thanks are due to Claudine Engel-Tiercelin for influential discussions on this point.
idea (and, through such "operative" Thirdness, Peirce's *synechism*) will be the focus of the next subsection.

6.6.2 *The Real as Representational.*

From his use of prediction to define real generality, Peirce draws the challenging conclusion that the real is of the nature of a *representation:*

When I say that the general proposition as to what will happen, whenever a certain condition may be fulfilled, is of the nature of a representation, I mean that it refers to experiences in futuro, which I do not know are all of them experienced and never can know have been all experienced (5.97).

Peirce expresses this "representational" nature of real generality mathematically, as follows. The medievals defined the general as that which is "predicable of many". Peirce, however, notes that in this context, 'many is not enough':

None of the scholastic logics fails to explain that *sol* is a general term; because although there happens to be but one sun yet the term *sol* *aptum natum est dici de multis.* But that is most inadequately expressed. If *sol* is apt to be predicated of many, it is apt to be predicated of any multitude however great,... In short, the idea of a general involves the idea of possible variations which no multitude of existent things could exhaust (5.103).

This is in fact a quantitative means of expressing the point made against Armstrong that his *Universals* offer nothing not provided by trope theory. The claim is that something is required of a *different logical order* than a mere set of distinct instances of a given property (even if that set is infinitely large), in order to ground prediction. In other words, generality is irreducible to sets of particulars of whatever cardinality. This is just the hypothesis of synechism. In fact, to return to what is now something of a theme of this thesis, Peirce saw synechism as his *scientific precisification* of the problem of universals. Synechism precisifies the traditional scholastic realist question from whether *universals* (understood as the medieval natural class concepts of 'horseness' or 'cathood' which, based as they are on Aristotelian biology, now appear somewhat quaint) are real – to whether there are real continua. Thus, he writes in *Reasoning and the Logic of Things:*

...the continuum is all that is possible, in whatever dimension it be continuous. But the general or universal of ordinary logic also comprises whatever of a certain description is possible. And thus the continuum is that which the Logic of Relatives shows the true universal to be... Thus the question of nominalism and realism has taken this shape: Are any continua real? (p. 160).

It might be inquired: how does this hypothesis that there are real continua make a difference, though? (For we have learned that a pragmatically meaningful hypothesis must make a difference with respect to our expectations.) Recall the discussion of *a posteriori* meaning-precisification presented in §3. There it was noted that such an
account presupposes that our meanings are vague without end – capable of indefinite precisification. For if that were not possible we would not use them at all, given the vital role played by the interpretant in Peircean signification. Scholastic realism, then, may be understood as the hypothesis that this process of meaning-precisification has a point – that it will deliver real cognitive results. But in order for this to be the case, the world must possess sufficient stability for such a testing and refining process to result in something intelligible.

6.6.3 Pragmatism and (Predictive) Predication

The preceding sections argued for the importance of our practice of prediction in grounding our belief in real generality, and pointed out the way in which we use prediction together with a belief in real generality to winnow error from our ideas, which we express through predicates. Such a ‘predictive approach to predication’, is Peircean pragmatism in a nutshell, (which Peirce captured nicely at one point in the phrase, “The Experimentalist’s View of Assertion”).

We have seen that Devitt and Armstrong argued about the truthmakers which are required for general statements antecedently assumed to be true. The way Peirce sets up the problem acknowledges that nominalism and realism both, in their own ways, ascribe extensions to predicates and properties to things. So these are not good places to drive an analytical wedge between them. Rather, given that what distinguishes the two is the mind-independence of the universal or general, the crucial testing-ground for nominalism against realism is precisely where we put our ideas about the world into a new situation where they may or may not hold water. For error (manifested as unsuccessful prediction) is our only experiential link with mind-independence. Peirce’s pragmatic argument for realism from scientific experiment is that if we are faced with a situation containing things over which we have no control, and we find ourselves willing to extend general ideas into that new situation, to dismiss alternative possibilities that are entirely intelligible but which we know will not obtain, that shows that we ascribe reality to those ideas whether we admit it or not.

Thus one can treat the predicate ‘is a cat’ as picking out a real property without being committed to the existence of cathood. One means by this just that the general idea of ‘cat’ possesses predictive power, so that we can extend at least some of the discoveries we make about cats of our acquaintance (such as their love of meat and their unwillingness to have their tails pulled) to cats with which we are not acquainted. In other words, the question is whether ‘is a cat’ is a properly scientific predicate.

It was noted that the debate between Armstrong and Devitt lacked substantive character because the extensions of predicates such as ‘is a cat’ were taken for granted by Armstrong and Devitt while they argued about whether existent objects (‘cathoods’) underpinned that predication in a truth-making capacity. We saw that Armstrong
explicitly acknowledges that the issue has nothing to do with predication when he takes such pains to separate “semantic” questions from “ontological” ones.\(^{310}\) This in fact jars with Armstrong’s strongly held empiricism. If the presence of Universals makes no difference to which predicates we should apply where, how are we to observe Universals at work in the world through scientific inquiry?

By contrast, the problem of realism and nominalism as Peirce conceives it arises precisely in situations where a decision needs to be made about whether to extend a given general predicate to a new particular or set of particulars – that is, whether to use the predicate to make predictions. In such cases we need to decide whether past evidence for its reality was subjective or merely coincidental, or whether it might be relied upon in a new situation. That is precisely the pragmatic difference between realism and nominalism. Far from a dry scholastic argumentative diversion, this is a philosophical choice with profound consequences, for future choices not just in scientific contexts, but in many other areas of life.\(^{311}\)

Thus, the separation of semantic from ontological questions need not be a precondition of realism, as Armstrong takes it to be. The question is rather: which semantics is objective and which subjective? Which real and which only as we think it is? In this way, then, Peirce’s scholastic realist answer to the problem of universals converges with the realism about meanings explored in §3 (where it was remarked that such a realism is largely unexplored in the contemporary philosophical context).

Thus Armstrong, despite his somewhat renegade status on the current philosophical landscape as a realist, is not realist enough. For he is realist about “concrete” things (which he calls “ontology”) and not about meanings (in his terms, “semantics”). To this end, he turns his Universals into concrete, casually efficacious, existent things.\(^{312}\) Thus, the question arises what makes h.s Universals “Universals”, and not just exceptionally large particulars with exceptionally scattered (and unusually homogeneous) parts. Realism about meanings is largely untouched since early modern philosophy hit its stride. Yet ironically, according to Peirce, such semantic realism is the logical lesson implicit in the Scientific Revolution’s greatest discovery of all – the experimental method.

The problem of universals is therefore not an exercise in pure ontology, as Armstrong and Devitt would have one believe. It is arguable that confusion has been created in contemporary analytic philosophy through substituting ontological for

\(^{310}\) See also Devitt’s audacious, “The strictly semantic problem of multiplicity does not have anything to do with Universals,” Devitt, “Ostrich Nominalism” or ‘Mirage Realism’?”, p. 436.

\(^{311}\) Consider, for example, the problem, “Is my love for him real?” considered not as a question of whether some love-ensuring entity(ies) exist, but as a question of whether the feeling in question is one I can rely on.

\(^{312}\) In A World of States of Affairs, p. 30, he claims that, “...I do accept that it is wrong to substantialize universals.” But it is difficult to see what this claim comes to, given that (as noted) he accords them causal efficacy.
epistemological, logical or semantic questions, and that this has been encouraged by a background nominalism in the discipline, for the slide from claims of the form, “X is real,” to, “X exists”, means that any measure of objectivity for a claim seems to need to be backed up by the postulation of some existent entities. It is tempting to argue that this has resulted in the casting of ‘shadows of repressed logic’ across the heavens.\(^{313}\) Ironically, it seems that Armstrong’s teacher Anderson recognised this danger, when he wrote that there may be differences “of function, not of kind” and that this was sufficient to dispose of the “doctrine of universals”. Anderson, however, did not follow this insight through to the ultimate undermining of his single mode of being which might have resulted from it (insofar as modes of being themselves might be “functionally” distinguished). More will be said about differences of function which are not differences of kind in §8.

6.6.4 Conclusion

This chapter presented Armstrong’s Realism about Universals, which he holds against a background empiricist faith that existence is the only mode of being. A dispute between Armstrong and Devitt was presented, in which Devitt claims that all that is required to truthmake a sentence such as “X is red” is X itself (whatever it is). Armstrong provides no answer to this nominalist charge, it was argued, because his Universals are sealed off from our choices with respect to predication (except in a degenerate sense), so that the traditional charge against scholastic realism, that it posits entities which make no difference, seems warranted in this case.

The true answer to Devitt, it was suggested, is that universals make a difference to our predication insofar as they have predictive power\(^{14}\). This insight was presented by Peirce via his ‘Harvard stone experiment’, which was designed to throw into sharp relief the fact that the only difference between the realist and the nominalist is that the realist can account for the fact that we have expectations about the future, whereas to the nominalist this can only be bizarre and inexplicable. For such a realism, however, one does not need to posit entities (such as Universals) which exist. One merely needs predication to possess a certain reliability. This claim of reliability may be unpacked into a claim that we have the capacity to project our concepts into the future and a claim that the world conforms (at least sometimes!) to those projections. In its refusal to postulate existent universals, Peirce’s is not a backward-looking, ‘truthmaker’ account of general predication, but rather consists in a hypothesis of a particularly general (but

\(^{313}\) See for example the discussion by Armstrong of how universals qua concrete building block of the Universe may be “conjunctive” but not “disjunctive” (Armstrong, A World of States of Affairs, p. 26ff). Confusion has also been created through the reading of Frege’s “saturated objects” and “unsaturated concepts” and a “third realm” consisting of true propositions, as ontological rather than logical claims.
powerful) kind. Realism itself is a transcendental abduction. In this way, the idea of future-directed justification, introduced briefly in §4, was revisited, and it was remarked how different it is to what is thought of as justification by much contemporary analytic philosophy.

These last two chapters, in combating what has been referred to as ‘logical nominalism’ (as opposed to the ontological nominalism created by the rejection of Universals as conceived by Armstrong) have been largely concerned with the dangers of inappropriate reification with respect to issues which are, it has been argued, not metaphysical. Thus, when considered against the Aristotelian logical distinction between the subject and predicate possessed by any statement – which has been so lasting in Western philosophy, Quine may be understood (through his “To be is to be the value of a [bound] variable”) as reifying the subject of the statement. Meanwhile Armstrong, unhappy with a perceived Quine-led neglect of the predicate, may be understood as reifying both the subject and the predicate. This, however, only turns universals into particulars (which possess a particularly otiose character, as Devitt noted). It might be objected, however, that without such ‘predicate-makers’, how are we to account for true general predication? To say “because of real Thirdness” might seem merely to create another mystery. How do we “go on”? Answering this question will structure the final two chapters of this thesis.

314 Ironically, this is not too far from the view Devitt himself puts forward in another publication, “Does Realism Explain Success?”, Revue Internationale De Philosophie 160 (1987), pp. 29-43.
"The intellectual life of thought resides in its forms – its patterns."

Charles Peirce (6.320).
We have now reached a stage where the rule-following problem may be readdressed, drawing on what has been learned so far of Peirce’s realism. When the rule-following problem was first introduced, it was noted that we have understandings that reach beyond particular cases, which allow us to project our concepts beyond the finite number of applications of those concepts which we have encountered in the past. This very idea was then found to be problematic, productive of scepticism. A strange irony in the rule-following debate may now be exposed. Kripke and Pettit (and indeed, most of those who have engaged in the recent rule-following debate) can be seen to be arguing that we have realism if either the rule itself or the justification it provides for going on in a certain way can be shown to be somehow reducible to particular things. Thus, Kripke writes that in the face of the sceptic’s demonstration that rules are not reducible to “facts”, we need to give up a realist “picture of language”:

In order for Wittgenstein’s sceptical solution of his paradox to be intelligible, the ‘realistic’ or ‘representational’ picture of language must be undermined by another picture...

Likewise, Pettit seeks to solve the rule-following problem by asking what sort of things rules are. He also argues that the explanation for the responses which constitute our (response-dependent) concepts lies in “things” which lie behind and produce those responses.

Peirce, on the other hand, can be seen to be arguing that we have realism precisely if rules are not reducible to particular things. For the synechist hypothesis with respect to a concept is just the claim that “no multitude of individuals can exhaust” its determination. And yet we have an understanding of general concepts just as we have an understanding of particular things. Yet how are we to argue for the fact that we have such an understanding? And what metaphysics might ground it?

7.1 Normativity as a Moorean Fact

7.1.1 The Phenomenology of Projectibility
I will now explore the possibility that there is no metaphysics to ‘ground’ our ability to project general concepts, because no metaphysics is required. We have seen (in §2.1) that for Kripke the rule-following problem is an apparently insoluble synthesis of metaphysical and epistemological demands. When the Kripkean sceptic is provided with something with good ontological credentials as a solution to the rule-following problem (such as a disposition or an intention), he makes an epistemological demand, such as, “How can this ontological item justify the way in which we go on?” Then,

316 Kripke, Wittgenstein on Rules, p. 85.
when provided with an epistemologically-focussed solution to the problem (such as an account of how we learn to go on in certain ways), he asks for a metaphysical item which somehow ‘corresponds’ to the epistemology he has just been given.

However, if we take seriously Peirce’s hierarchy of the sciences, it follows that we cannot proceed to metaphysics without certain fundamental conceptions first having been established. We would not search amongst the characteristic observations which constitute experimentation in physics for the derivative (that is, \( \frac{dy}{dx} \)), despite the fact that the differential calculus is used in physics with great frequency, and to powerful effect. This would be a hopeless mistake, because the concept of the derivative belongs to mathematics, and mathematics is prior to physics in the scientific hierarchy. Likewise, an entomologist would not search in the field amongst ants and butterflies for the gene, despite the fact that his entire taxonomic work is premised on the fact of genetic variation. So why, then, should we search in metaphysics for normativity? These comparisons might seem somewhat frivolous but – if the three cases are truly analogous in this respect – are they?\(^{317}\)

We saw in §1.4 that Peirce’s derivation of his categories is phenomenological. Recall his derivation of Thirdness. He said:

We open our eyes and look at something. Now if we are not in a sleepwalking state we immediately form a judgement as to what sort of thing it is that we are looking at; and that judgement predicates some general quality of the object of perception.\(^{318}\)

Likewise, we saw in §6.5 that in arguing for scholastic realism Peirce waved a stone in the air in front of his audience, challenging them not to admit that they knew an “active general principle” which would govern the behaviour of the stone if he were to drop it. What is going on in both these cases is a form of mental predication. We project our ideas into new situations as those situations present themselves to us perceptually, and thereby represent the world as being certain ways. Peirce points out that this happens every time we open our eyes. If this basic, undeniable and utterly irrepressible fact conflicts with a particular metaphysical theory framed by philosophers for philosophers (according to which, say, some particular thing or set of things must exist for every descriptive predicate in our language, to ‘ground’ its meaning), which should give way? As Peirce famously remarked, “Let us not pretend to doubt in philosophy what we do not doubt in our hearts (5.265)”.

\(^{317}\) These considerations may equally be raised against a burgeoning sub-field in contemporary metaphysics, which might be termed the ‘ontology of mathematics’. (Major figures include John Bigelow, Penelope Maddy, Hartry Field and Ed Zalta.) This particular corner of inquiry addresses itself to questions such as whether numbers exist. If Peirce is right about the proper hierarchy of the sciences, however, it follows that neither taking up a position for or against this question has any point. Metaphysics, being several layers down from mathematics in the scientific hierarchy, has nothing to offer it in the way of ‘grounding’. (Similar morals are suggested with respect to recent attempts to ground ethics metaphysically.)

\(^{318}\) Peirce, Pragmatism as a Principle and Method of Right Thinking, p. 149.
7.1.2 General Predication Distinguished from True General Predication

To claim that Thirdness is an irreducible ‘mode of being’, which surrounds us on all sides, is not to say that every general predication we make is true, and therefore that there is no distinction between subjective and objective generality (as was noted in the last chapter). In other words, the issue of how to distinguish real from unreal Thirdness is a separate issue from the issue of the irreducibility of Thirdness (as a mode of being). It is tempting to make a grand philosophical gesture by referring to the irreducibility of Thirdness as the issue of real general meaning, and the issue of real and unreal Thirdness as the issue of real general truth. However, the matter is in fact more complex. Ironically, it would accord with the idea of meaning promulgated by Kripke at the beginning of his discussion of rule-following, when he describes the rule-following problem as a scepticism about what I mean, such that “the entire idea of meaning vanishes into thin air”\(^{319}\). Here Kripke seems to be suggesting that the meaning of a general term must consist entirely in its ‘private’ projectibility by an individual rule-follower.

However, to generalise in this way would be to distort the Peircean understanding of meaning outlined in §3\(^{320}\), according to which the meanings of our concepts are not private, incorrigible dispositions to project those concepts in certain directions, but rather consist in the public development which our concepts undergo (in the form of their interpretants) which is often unable to be anticipated a priori. Rather, the irreducibility of Thirdness and the reality of Thirdness correspond to two dimensions of meaning itself on the Peircean picture. The former corresponds to the way in which signs generate interpretants, which requires sign-users to recognise further situations as being, in the relevant sense, ‘the same as’ situations where the sign was used before. The latter corresponds to the way in which the Immediate is refined towards the Dynamic Object. Thus, a better way of contrasting the two issues in grand philosophical fashion (if such be desired) is to call the former ‘the issue of general predication’ (per se) and the latter ‘the issue of true general predication’.

These two questions with respect to Thirdness are run together (and both dismissed) within the nominalist perspective precisely because it assumes that there is only one mode of being – particular things. The question of whether there might be a mode of being that is not reducible to particular things, then, is rendered invisible, while the question of whether there might be real objects which are not reducible to particular things is thereby answered a priori in the negative. However, whereas the nominalist perspective insists on a ‘Scientific Ontology’ in which theoretical commitment is reducible to existential quantification (or, as we saw in the last chapter,

\(^{319}\) Kripke, Wittgenstein on Rules, p. 22.

\(^{320}\) It would also conflict with Kripke’s later “sceptical” account of meaning, as has been noted.
reality is reduced to existence). Peirce’s scientific hierarchy allows him to give separate accounts of the irreducibility and the reality of Thirdness — the former in phenomenology and the latter in logic.

Interestingly, some hint of the separateness of these two questions was already present in the initial explication of rule-hood in §2.1. There it was noted that the claim that rules are essentially normative may usefully be divided into two parts — the claim that understanding a rule (or general predicate) requires one to be able always to project the rule, and the claim that a norm is something which discriminates between alternatives — that is, with respect to which there is an essential possibility of error. These two criteria for normativity come apart insofar as one can have projectibility without the possibility of error. (Consider, for instance, what Wittgenstein called a “private language” — though, as Wittgenstein argued, such a thing is of questionable value and really does not deserve to be described as a ‘language’.) Conversely, one can have the possibility of error without projectibility, which may be understood as definitive of the logically particular. The separateness of the two criteria emerged again at the end of §3, where it was noted that meaning understood as the expectations we form using any given sign (‘meaning for us’) differed from meaning understood as the sign’s interpretant: how the sign itself ends up developing (‘meaning simpliciter’). Insofar as it can be demonstrated that these questions do need to be treated separately, then, the realist view that the results of inquiry are not reducible to a giant existential quantification over entities at a single ‘ontological level’ seems vindicated.

Note the future-directedness of the irreducible Thirdness which phenomenology uncovers. The concepts which we form on being exposed to the world perceptually (and which lead us to represent the world as being certain ways) have, as we have seen, a meaning for us which consists in the possible future experiences we can expect by means of those concepts. So, when Peirce perceives the scene outside his window as a chimney of a particular colour and shape, this just means (for him) that if he were to interact with it further, he would have further experiences. For instance, if he felt the chimney he would experience sharp corners and a certain shape.

In this way, the ability to project concepts is a Moorean fact. If we have no need of metaphysical grounding for the fact that we project concepts in the way that we do, then this goes for response-dependent groundings. Interestingly, Johnston anticipates this criticism, recognising what he calls “metaphysical minimalism” as the greatest

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321 Of course, for Peirce the logically particular is not to be confused with the logically individual, that which is determinate with respect to the application (or not) of every predicate to it. The two are run together in the contemporary context, which assumes that every particular is an individual. However Peirce claims on the contrary that logical individuality can never exist in pure form. (See for example 3.93n, 8.208). Rather, synecism teaches that the process of individuation is neverending. The fact that objects are not vague consists, as noted in §3, in their being infinitely determinable, rather than absolutely determinate.
threat to his Revisionary Protagoreanism. Describing the minimalist position with respect to the concept of *truth*, Johnston says:

...although in using the notion ordinary practitioners are thereby using a response-independent notion, it is nonetheless a metaphysically austere notion. Ordinary practitioners in aiming for truth are never aiming to secure the robust correspondence of the metaphysical picture; nor are they being lax about the real commitments of their practice.

I do not say Minimalism is the last word for all of the concepts of philosophical interest, but it is the position which a Revisionary Protagorean must first overcome.\(^{322}\)

We saw that Johnston, on the contrary, claims that truth is to be understood in metaphysical terms, but that it may be over-ridden as a source of successful or "right" predication in certain circumstances. Johnston’s view will be further discussed in §8.3.

**7.1.3 What to Say to the “Bizarre Sceptic”**

So what exactly is one to say to Kripke’s sceptic? First of all it must be noted that what Kripke calls “the most radical and original sceptical problem that philosophy has seen to date”, is a tightly woven mixture of what are in fact two separate questions. In Kripke’s terms, the first is the question of what makes us able to project rules such as the plus-function beyond the finite particular applications which we have encountered in the past, and the second is the question of the proper “assertability conditions” for rules such as the plus-function. It has been noted that the answer to the second question will be given in the next chapter.

Let us turn to the first question, then. In §2.1, various “straight solutions” to the sceptic, which Kripke considers and rejects, were presented. Among them was the suggestion that the difference between following the ‘plus’ and ‘quus’ rules might consist in some sort of irreducible feeling or quale, “as unique and irreducible as that of seeing yellow or feeling a headache”\(^{323}\). Kripke greets this response to the sceptic with an apparent levity:

suppose I do in fact feel a certain headache with a very special quality whenever I think of the ‘+’ sign. How on earth would this headache help me figure out whether I ought to answer ‘125’ or ‘5’ when asked about ‘68 + 57’?\(^{324}\)

He concludes that Wittgenstein’s whole point is to get away from the idea that meaning something is a “state” of a person – corresponding to some irreducible, infallible, private feeling.

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\(^{322}\) Johnston, “Objectivity Refigured”, p. 111. Price, also, notes that “in rejecting response dependence the metaphysical minimalist need not reject pragmatism”, “Two Paths to Pragmatism”, p. 16n.

\(^{323}\) Kripke, *Wittgenstein on Rules*, p. 41.

However here Kripke is running together two questions. The sceptic was meant to be asking how it is that I can project the plus-function. In his objection to this proffered solution, however, Kripke is complaining that a person’s grasp of the concept of plus does not deliver true propositions containing plus in all possible situations. For the sceptic claims to grasp the function perfectly and yet claims that “68 + 57 = 5". But why should a person’s grasp of a concept deliver infallible insight into the truth or otherwise of all sentences containing it? It is no wonder the rule-following problem seems insuperable. The fact that Kripke has chosen a mathematical example to present his rule-following scepticism is perhaps significant in disguising this slide from projectibility to truth, given the overwhelmingly a priori character of mathematics. This masks the a posteriori dimension of meaning which has been such an important theme in this thesis, making it easier to think that projectibility is all there is to meaning. (Pettit’s solution to the rule-following problem, on the other hand, was in fact on the right track here, insofar as he separated our “inclination” to project concepts in certain directions, and the community’s “correction” of such projections, as two separate stages in his rule-following “genealogy”.)

Thus, at least part of the solution to the rule-following problem was lurking where Kripke least expected. Concepts, insofar as they are distinct for us, each have a special irreducible quality that allows us to reidentify them in applications beyond the finite set of instances with which we have been acquainted. Looked at one way, this capacity can seem almost miraculous. Yet we just do have this capacity. Consider, for example, the phenomenology of reidentifying concepts in philosophy. A concept such as, say, ‘noumenal’ can be recognised across an enormous variety of philosophical discussions where it is never mentioned explicitly.\(^{325}\) It would be foolish (not to mention intellectually debilitating) to deny that we can do this. Again, this is not offered as a proof that we have the capacity to reidentify concepts, but as a candid report of cognitive experience: which experience, however, is so fundamental that to deny it is arguably even worse than denying that I have two hands.

Interestingly, Peirce’s category of Firstness, about which little has been said so far, is salient here. It was noted in §1.4.1 that Firstness pertained to irreducible qualities (such as the taste of pineapple). Insofar as this irreducible qualitative character can be ascribed to concepts as well as to human feelings, then, there is a certain ‘Firstness of Thirdness’. Hookway has made this point with respect to the concept of ‘chair’:

Associated with a notion like chair is a body of laws and generalizations which indicate what patterns of reaction are compatible with our identification of something as a chair...With this is associated a distinctive firstness...we can experience something as an aesthetic unity without intellectually grasping how its elements are mediated in the whole; but, an intellectual understanding of the whole

\(^{325}\) The capacity may perhaps even be called into play by the reading of this thesis.
will require a grasp of these mediating relations. It is suggestive, if obscure, to
describe the felt quality as the 'firstness of a thirdness'.

To sum up this Peircean response to Kripke's sceptic, then: I cannot reduce the
way in which the general concepts 'plus' and 'quus' differ to some "fact", but neither
can I reduce the way in which the general concepts 'red' and 'yellow' differ to some
"fact". This does not mean, however, that the concepts do not differ. Is this a
"straight" or a "sceptical" solution to the rule-following problem? In one sense it is
perfectly straight, for Kripke claimed that to answer the sceptic there only needs to be a
"fact that I meant plus, not quus". This is true insofar as introspection can tell me
that plus and quus just feel different (in some irreducible, intellectual sense), and that if
I were to project them myself in various contexts I would end up with differing
results. But what Kripke really meant was that there needs to be some particular
existent fact to which my 'meaning plus' might be reduced. This is really – in Peircean
terms – the demand that Thirdness and Firsness be reducible to Secondness. What the
Wittgensteinian discussion of rule-following does show is that this is not possible. In
blocking the attempted nominalistic reduction of meaning to Secondness, then,
Peirce's philosophy has in the end more in common with Kripke's sceptical solution.

This view has been labelled "primitivism" about rule-following, which label seems
to denigrate the view somewhat. However, Paul Boghossian has noted that such a
view, which he calls by the more laudatory appellation of "robust realism", is wrongly
overlooked as a possible response to Kripke:

Let robust realism designate the view that judgements about meaning are factual,
irreducible, and judgement-independent. Then...the major alternatives to robust
realism are beset by very serious difficulties...Meaning properties appear to be
neither eliminable, nor reducible. Perhaps it is time that we learned to live with that
fact.

If Peirce is right about the role of phenomenology in philosophy and about the
phenomenology of Thirdness in particular, then one only needs to introspect in order
to roundly endorse this statement. Moreover, I shall now argue that, ironically,
Wittgenstein was never far from such a "robust realism".

7.2 Wittgenstein on Rules: A Further Investigation

The view that Wittgenstein is a sceptic about the proper extensions of rules such as the
'plus function' has gained great currency with Kripke's discussion. Wittgenstein is

326 Hookway, Peirce, p. 174. Peirce also talks about Firstness of Thirdness, but in the sense of
the qualitative character of Thirdness per se (which would be a pure abstract idea of representation
itself), not of individual Thirdnesses. See, for example, 1.530-3.
327 Kripke, Wittgenstein on Rules, p. 11.
notorious for the gnomic nature of his philosophical writings, and for the many utterly conflicting interpretations to which those writings have given rise. Nevertheless, one may search the *Philosophical Investigations* in vain for a passage where Wittgenstein openly makes the sceptical claim with which he is so widely credited. Consider, for example, the passage at §201, which is often cited to establish Wittgenstein’s rule-following scepticism (indeed Kripke places it at the very jumping-off point of his discussion of “the Wittgensteinian Paradox”\(^\text{329}\)):

This was our paradox: no course of action could be determined by a rule, because every course of action can be made out to accord with the rule. The answer was: if everything can be made out to accord with the rule, then it can also be made out to conflict with it. And so there would be neither accord nor conflict here...

What follows the above in §201 is usually ignored, but is in fact crucial:

What this shews is that there is a way of grasping a rule which is *not* an interpretation, but which is exhibited in what we call “obeying the rule” and “going against it” in actual cases.

What kind of a sceptical claim is this?

### 7.2.1 No Rule-Following Intermediary

What Wittgenstein is concerned to emphasise is that in particular cases we “know how to go on” in applying a given rule, *without certain conditions being satisfied that philosophers take for granted*. For instance, as §201 points out, we know how to go on without having to interpret the rule. We also know how to go on without in any sense ‘being told what to do’ by the rule:

> One does not feel that one has always got to wait upon the nod (the whisper) of the rule. On the contrary, we are not on tenterhooks about what it will tell us next...\(^\text{330}\)

In fact, much of Wittgenstein’s discussion of rule-following is concerned with drawing out the fact – surprising when looked at under certain philosophical lights – that we “know how to go on” without any intermediary between us and the rule at all. At various points in his discussion of rule-following he considers a number of possible candidates for such an intermediary, and rejects them for diverse reasons. In §186, he considers “a new insight” in this light:

> “What you are saying, then, comes to this: a new insight–intuition–is needed at every step to carry out the order ‘+n’ correctly.”

This however, he argues, begs the question of what the ‘correct’ answer is. (“–But that is just what is in question: what, at any stage, does follow from that sentence.”\(^\text{331}\))

This passage seems to be the source of Kripke’s demand that, if an ontological ground

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for rule-following be proffered in response to the rule-following sceptic, this ground must somehow justify our going on in the way we do. However, Kripke does not consider the possibility that the lack of justification which Wittgenstein is pointing out is not in fact a condition on successful rule-following that we should be satisfying but are not, and which therefore triggers radical rule-following scepticism. He thus fails to appreciate the possibility that, in pointing out the lack of justification, Wittgenstein might be giving a description of rule-following fact.

In §205, Wittgenstein considers an “intention” as a possible intermediary between rule and application. He notes, however, that an intention is something we can have once only, whereas a rule seems not the sort of thing that can be followed once only:

“But it is just the queer thing about intention, about the mental process, that the existence of a custom, of a technique, is not necessary to it. That, for example, it is imaginable that two people should play chess in a world in which otherwise no games existed; and even that they should begin a game of chess—and then be interrupted.”

But isn’t chess defined by its rules? And how are these rules present in the mind of the person who is intending to play chess?332

In §213, Wittgenstein considers an “intuition”, but remarks that, “if it can guide me right, it can also guide me wrong”, and that it is “an unnecessary shuffle”333. That is, to say that I go on in a certain way because of an intuition that I should go on in that certain way, does not add anything to the brute claim that I just do go on in a certain way.

7.2.2 The Rule and the Machine

Wittgenstein is also keen to highlight the open-ended nature of rules, in that there is no “totality of conditions” that makes the application of any given rule appropriate in any given case. In order to make this point, he draws an amusing analogy with walking:

...here we must be on our guard against thinking that there is some totality of conditions corresponding to the nature of each case (e.g. for a person’s walking) so that, as it were, he could not but walk if they were all fulfilled.334

Here Wittgenstein is resisting a certain picture of rule-following which may usefully be referred to as ‘mechanistic’. I do not explain the fact that I walked in a given context because I had to walk (due to, say, whatever physiological events were occurring in my legs which produced walking movements in them), but because I wanted to walk. I had some end in view and I decided to walk to get there. This is not to say that there were no physiological events taking place in me as I walked, just that there is another, irreducible level of description of my walking. Insofar as efficient cause was identified

in §1.4.1 as another aspect of Secondness, this may perhaps be understood as Wittgenstein resisting the reduction of Thirdness to Secondness.

In a similar vein, in §193, Wittgenstein explicitly points out that following a rule is not like the causal working of a machine, in that “the movement of the machine-as-symbol is predetermined in a different sense from that in which the movement of any given machine is predetermined”. This use of the phrase “machine-as-symbol” is interesting in the present context. Again, Wittgenstein seems to be suggesting that rules consist in something over and above brute efficient causal reaction. The “machine-as-symbol” is irreducible to the finite, fallible instances of its operation (which is illustrated, Wittgenstein suggests, by such facts as that the machine-as-symbol “never breaks down”). Rather, the machine-as-symbol appears to be an idealisation (or generalisation) of finite actual machines. We have already seen (particularly in §4) that such idealisations can have a powerful meaning in scientific contexts.

Again, this passage is read by Kripke as Wittgenstein blocking a possible exit from rule-following scepticism\(^{335}\), and yet it may equally be read as Wittgenstein blocking another mistaken way of understanding rule-following. Wittgenstein further characterises the contrast between rules and causal reactions by saying that with the machine-as-symbol, its future movement seems to be somehow already ‘in’ the machine:

> “But I don’t mean that what I do now (in grasping a sense) determines the future use causally and as a matter of experience, but that in a queer way, the use itself is in some sense present.”\(^ {336}\) Really the only thing wrong with what you say is, ‘in some sense’!

Why does Wittgenstein say that the only thing wrong with what his interlocutor has said is the “in some sense”? His point seems to be that this would indicate that it is not something perfectly ordinary for the future use to be already present. As we have seen, it is also characteristic of Peirce’s view of the development of signs that the future use of a concept is already in some sense present (\textit{albeit} in undeveloped form). For instance, he writes:

Not only will meaning always, more or less, in the long run, mould reactions to itself, but it is only in doing so that its own being consists. For this reason I call this element of the phenomenon or object of thought the element of Thirdness. It is that which is what it is by virtue of imparting a quality to reactions in the future (1.343).

The idealisation which Wittgenstein speaks of with respect to the “machine-as-symbol” (the way in which we can and do understand the machine as it is meant to work, over and above particular cases of machine error) is nothing but (logical)

\(^{335}\) Kripke, \textit{Wittgenstein on Rules}, p. 34.
generality as understood by Peirce. Thus, Wittgenstein's discussion of rule-following is best read not as suggesting that we have no principled way of saying that our terms mean anything at all, as Kripke claims, but as pointing out, like Peirce, that we have understandings which are irreducible to particular present facts, and which just do point into the future.

7.3 Phenomenology, Scepticism and Common-sense

7.3.1 Wittgenstein's Distinctive Philosophical Methodology

There is a sense in which Wittgenstein does raise sceptical worries in his discussion of rule-following. Throughout the *Investigations* he makes unique, teasing and dramatic use of dialogue with a questioning interlocutor who, it must be admitted, frequently expresses incredulity. However Wittgenstein almost always seeks to lay this incredulity to rest for, as he puts it, “Philosophy is a battle against the bewitchment of our intelligence by means of language”\(^337\). His famous remark that philosophy “leaves everything as it is”\(^338\) may be interpreted as meaning that his scepticism, such that it is, is intended to neatly target erroneous philosophical “pictures”, while leaving no ‘collateral damage’ in our non-philosophical lives.

Whether Wittgenstein actually succeeds in this regard has been a matter of some controversy. However, to call Wittgenstein a *rule-following* sceptic is grievously to distort the relevant passages of the *Investigations*. Kripke does acknowledge that Wittgenstein would not wish to call himself a sceptic:

Wittgenstein never avows, and almost surely would not avow, the label ‘sceptic’...Indeed, he has often appeared to be a 'common-sense' philosopher, anxious to defend our ordinary conceptions and dissolve traditional philosophical doubts. Is it not Wittgenstein who held that philosophy only states what everyone admits?\(^339\)

However Kripke then likens Wittgenstein to Berkeley, whose claim to be defending “common-sense” when he categorically denied the existence of all material objects cannot but appear disingenuous, Kripke claims.\(^340\)

Consider, however, Wittgenstein's philosophical methodology in his extended discussion of rule-following. Note the careful, detailed introspection with respect to what one would or would not wish to say in different contexts, and the close attention to our actual practices. Somewhat notoriously, he does not make any truth-claims. (“If one tried to advance theses in philosophy, it would never be possible to debate them,


because everyone would agree to them."³⁴¹) For this reason, Wittgenstein’s discussion of rule-following has been widely interpreted as a form of quietistic metaphysical antirealism, according to which all community-sanctioned use of general predicates is automatically descriptive of some fact about the world.³⁴² But the lack of truth-claims could equally mean that Wittgenstein is not doing metaphysics at all. Rather, he is engaged in some other philosophical project, more fundamental than that of metaphysics. Alternatively, Wittgenstein’s discussion has often been interpreted as a form of quietistic logic (understood in the broader, Peircean sense), whereby all community-sanctioned use of general predicates is automatically true (or “right”, as Johnston puts it). Wittgenstein’s inquiry goes deeper even than this, however.

I will now suggest that what Wittgenstein is offering the philosophical world in the *Investigations* is not a new and highly original form of scepticism, but what may be referred to as the phenomenology of synechism.³⁴³ Like Peirce, he is exploring the way in which Thirdness and Firstness manifests themselves in our thought and lives. Of course, Wittgenstein never prescinds these concepts in the strong, general form in which Peirce does. (Wittgenstein’s relentless drive towards theoretical heterogeneity would most probably have prevented that.) Nevertheless, their outlines are recognisable within Wittgenstein’s philosophical landscape. We have seen that, according to Peirce’s scientific hierarchy, the proper role of phenomenology in philosophy is to produce not truth-claims but useful concepts. It is arguable that what has been most powerful about the later Wittgenstein’s philosophy has been the novel and suggestive concepts (such as ‘form of life’, ‘language-game’ and ‘family-resemblance concept’) which he presented to the world. These concepts have resonated through philosophy, and are what Wittgenstein is remembered for, rather than any particular truth-claims he might have made.

### 7.3.2 Peirce, Wittgenstein, and Critical Common-sensism

Indeed, Wittgenstein thought (and again this is ironic considering the use he is put to by Kripke) that it was very important to limit the use of scepticism within philosophy. He believed that meaningful doubt occurs only in certain well-defined contexts – for instance, meaningful doubt is not necessarily possible just because we can imagine that

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³⁴⁰ Kripke, *Wittgenstein on Rules*, p. 64.
³⁴² This might alternatively be expressed as the view that not meaning but reference is “use”.
³⁴³ In a complex and interesting paper which examines unpublished manuscripts from Wittgenstein's middle period, Robert Alva Noé has also urged that Wittgenstein be considered as engaged in phenomenology. Noé concentrates on Wittgenstein’s discussions of colour, rebutting a claim by Arthur Danto that in discussing colour Wittgenstein was “doing anticipatory science badly”. Robert Alva Noé, “Wittgenstein, Phenomenology and What It Makes Sense to Say”, *Philosophy and Phenomenological Research* 54 (March, 1994), p. 3n.
the belief in question might be false. From this insight that there is only so much that one can doubt and still make sense derives Wittgenstein's famous remark:

"How am I able to obey a rule?"—if this is not a question about causes, then it is about the justification for my following the rule in the way I do.

If I have exhausted the justifications I have reached bedrock, and my spade is turned. Then I am inclined to say: "This is simply what I do." In fact, this remark encapsulates Wittgenstein's approach to rule-following in a nutshell. Note the phenomenological character of Wittgenstein's statement that, when challenged over the proper application of a given rule, his claim that "This is simply what I do" is not 'the right answer', but simply what he is inclined to say. Not only did Wittgenstein believe that there is only so much that one can meaningfully doubt, however, he also believed that the attempt to doubt too much can be corrosive (both intellectually and ethically), and he often despaired of philosophers' tendency to do this.

Peirce took a position on the relationship between philosophical scepticism and common-sense that was similar to Wittgenstein's in many ways. Later in life he liked to describe himself as a "Critical Common-sensist". Critical Common-sensism (which was mentioned briefly in §4.3) holds that inquiry grows out of and is continuous with ordinary language and common-sense and because of this there will always be "indubitable propositions (5.440)" (and also indubitable inferences). Not only can we not doubt these propositions, Peirce thought, it is harmful to try. There is no set list of indubitables, however. As inquiry develops, certain propositions move from the indubitable to the dubtable (and vice versa). Peirce also believed, like Wittgenstein, that meaningful doubt only occurs against a background of belief, specifically targeting Descartes' recommendation to begin inquiry by systematically doubting all one's beliefs.

Peirce's Critical Common-sensism is also implicated in what was said in §3.1 about the process of scientific meaning-precisification. It was noted that inquiry proceeds in large part by the precisification of vague terms, which are, however, always vague without end if the hypothesis of synechism is to be believed. It follows from this that the vagueness of our ordinary language terms and indubitable common-

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344 Wittgenstein, *Investigations*, §84:

But that is not to say that we are in doubt because it is possible for us to imagine a doubt. I can easily imagine someone always doubting before he opened his front door whether an abyss did not yawn behind it, and making sure before he went through the door (and he might on some occasion prove to be right)—but that does not make me doubt in the same case.


346 Interestingly, the belief in a unitary truth, challenged in §4.4 by Johnston, can be seen as one of these indubitables, which raises the possibility of an argument for realism as introducing a greater coherence than nominalism between philosophical theory and the inevitable exigencies of everyday life.

347 See 2.192, 5.265, 5.498 and 5.524.
sense platitudes is a resource for future inquiry which we attempt to undermine at our intellectual peril. Thus, Peirce makes the vagueness of "indubitable propositions" one of the theses of Critical Common-sensism:

By all odds, the most distinctive character of the Critical Common-sensist...lies in his insistence that the acritically indubitable is invariably vague (5.446).

Wittgenstein similarly recognised the importance and irreducibility of vagueness:

One might say that the concept ‘game’ is a concept with blurred edges. — “But is a blurred concept a concept at all?” — Is an indistinct photograph a picture of a person at all? Is it even always an advantage to replace an indistinct picture by a sharp one? Isn’t the indistinct one often exactly what we need?

Frege compares a concept to an area and says that an area with vague boundaries cannot be called an area at all. This presumably means that we cannot do anything with it. — But is it senseless to say “Stand roughly there”? — Is an indistinct photograph a picture of a person at all? Is it even always an advantage to replace an indistinct picture by a sharp one? Isn’t the indistinct one often exactly what we need?

It is not senseless to say "Stand roughly there," Wittgenstein thinks, because it conveys (indeed, conveys with admirable brevity) the meaning that the person may place themself near the position indicated without expending too much energy on exactly matching the position.

Peirce and Wittgenstein even chose the same metaphor to illustrate the irreducibility of vagueness — that of friction. Peirce wrote that "vagueness...is no more to be done away with in the world of logic than friction in mechanics..." (5.512), while Wittgenstein claimed of a putative ideal language, entirely free of vagueness, that it would be for that reason entirely useless:

We have got onto slippery ice where there is no friction and so in a certain sense the conditions are ideal, but also, just because of that, we are unable to walk. We want to walk: so we need friction. Back to the rough ground!

Thus, the great irony of this discussion is that Wittgenstein, far from being the arch-sceptic Kripke imagines, in fact displays a candid and trusting acceptance of an entire aspect of being (irreducible Thirdness, or Firstness) which prevailing realisms doubt so unconsciously that the scepticism in question is difficult even to discuss. Were the consequences of this doubt in philosophical areas such as logic, epistemology and philosophy of mind drawn out as carefully and systematically as Kripke (stung by the strangeness of Wittgenstein’s presentation of rule-following) has done, this ‘Thirdness-’ and ‘Firstness-scepticism’ would be seen to be quite intellectually debilitating. Unfortunately, such a careful sounding of these philosophical issues as Kripke’s is all too rare.


7.3.3 Peirce, Wittgenstein, and Explanatory Ambition

Peirce and Wittgenstein are not in harmony on all issues, however. At times Wittgenstein feels the need to define himself against realism per se, rather than the reductionist or metaphysical version of it which he rightly queries. For example, in §194 he argues that no meaning can be given in our language-game to the notion of a “possibility of movement”:

What is this possibility of movement? It is not the movement, but it does not seem to be the mere physical conditions for moving either—as, that there is play between socket and pin, the pin not fitting too tight in the socket. For while this is the empirical condition for movement, one could imagine it to be otherwise. The possibility of a movement is, rather, supposed to be like a shadow of the movement itself. But do you know of such a shadow?

Here Wittgenstein seems to be attacking realism with respect to physical law, insofar as he wants to restrict the use of the term “possibility of movement” to a set of very particular actual cases. But is this restriction justified? If Newton, for example, had restricted his understanding of the possibility of movement to particular actual cases, such as the famed movement of an apple from a tree above him to the first solid object it encountered below, would he have dared to imagine that the planets themselves might share some of the apple’s behaviour (such that we may now calculate with scientific exactitude ‘possibilities of movement’ for such previously inconceivable situations as solar systems with other planets than our own)? Thus it appears that Wittgenstein does not step entirely cleanly out of the metaphysical and into the phenomenological arena with respect to the issues he discusses.

This eschewal of realism per se also leads Wittgenstein to exhibit a harsh antinaturalism about the mind in passages such as the following:

The confusion and barrenness of psychology is not to be explained by calling it a “young science”; its stage is not comparable with that of physics, for instance, in its beginnings...

The existence of the experimental method makes us think we have the means of solving the problems which trouble us; though problem and method pass one another by.350

Here Wittgenstein is defining his approach to understanding the mind against the experimental method. This has led to the setting up (by Wittgenstein’s disciples in particular) of “reasons” and “causes” as the theoretical equivalent of oil and water, which need to be quarantined from each other in entirely different discourses. On the other hand, Secondness and Thirdness (the Peircean categories which are prescindable with considerable neatness from Wittgenstein’s “causes” and “reasons” respectively) are inextricably mixed within the experimental method (as they are within the development of signs which, as we saw in §3, exhibits the same formal structure in miniature). These are different modes of being: equally important, irreducible to one

another, and compresent in everything conceivable insofar as it is conceivable. Though, as we have seen, for Peirce there is a further, equally important mode of being – the Firstness that gives birth to new concepts and qualitatively characterises each concept in a unique way (without which, it is arguable, inquiry would be impossible to pursue).

Wittgenstein and Peirce also differ over the desirousness of theoretical heterogeneity. Wittgenstein, in countering totalising metaphysical explanations of phenomena such as rule-following, has been moved to give up the idea that large-scale explanations may be found in philosophy. Rather, he holds that, “if the words “language”, “experience”, “world”, have a use, it must be as humble a one as that of the words “table”, “lamp”, “door”.” To that degree he’s arguably nominalistic, for where (as we saw in §6) realism aims to explain particular phenomena in terms of some general idea, nominalism seeks to catalogue or describe particular phenomena in their particularity.

Realism in its deepest sense may thus be understood as explanatory ambition. (As Peirce writes, “True, there may be facts that will never get explained; but that any given fact is of the number, is what experience can never give us reason to think;” (1.405)) While this divergence with respect to explanatory ambition flows directly from nominalism and realism’s respective focus on particulars and generals as constitutive of reality, it should be noted, however, that while nominalism is adamant that there is nothing but particulars, in order to be a realist it is enough merely to admit universals. (As noted, Peirce’s realism, despite the special affinity with Thirdness noted in §6, affirms the reality of all three categories. It does not deny Secondness, just claims that it has been overemphasised. This point will be further expanded in §8.) At any rate, insofar as the categories can play the large-scale theoretical role which Peirce claims they do, then, Peirce’s realistic explanatory optimism seems vindicated over Wittgenstein’s nominalistic explanatory pessimism.

7.3.4 Conclusion
At the first presentation of the rule-following problem it was remarked that the infinite ‘semantic reaching’ which characterises our grasp of general concepts is liable to seem ‘superphysicalistic’, which leads to scepticism about how such a feat might be achieved. This chapter has revealed, however, that rules are not superphysicalistic. It is just that particular, existent (causally efficacious) fact is not the only mode of being. Secondness must be supplemented by Thirdness and Firstness to even begin to do justice to basic undeniable facts about perception and the use of language. No proof is offered for this insight, but none is required. Rather, the fact is made plain by simple

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introspection of the way in which we think and live. With respect to untangling the notoriously knotty rule-following problem, then, Peirce’s decision to separate phenomenology and logic seems vindicated. As Wittgenstein once remarked: “God grant the philosopher insight into what lies in front of everyone’s eyes.”

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Chapter 8.

REALITY AND RESPONSE-DEPENDENCE

"...The particular question—here
The particular answer to the particular question
Is not in point—the question is in point.

If the day writhes, it is not with revelations.
One goes on asking questions. That, then, is one
Of the categories. So said, this placid space

Is changed. It is not so blue as we thought. To be blue
There must be no questions..."

Wallace Stevens ('The Ultimate Poem is Abstract').
The last chapter established that the fact that our concepts project in certain ‘directions’ is basic and irreducible. But this does not mean, it has been noted, that every application of those concepts in every context which ‘feels right’ phenomenologically results in a true proposition. How, then, are we to distinguish what Peirce called “real generals” from the infinite possible erroneous ways of going on? This question, which was identified as the second half of Kripke’s (alleged) “rule-following problem” – has been partially addressed in §6, where it was noted that what characterises the real is its *predictive power* (gravity, for example, is real since even a rudimentary grasp of it allows us to predict the behaviour of a dropped stone without its actually being dropped). But how exactly are we to sort those concepts which have genuine predictive power from those which only appear to?

In order to present Peirce’s answer to this question, this final chapter will bring together the insight of §3 that inquiry consists largely in *a posteriori* meaning-precisification, with the insight of §4 that truth consists in what the community of inquiry comes to believe, with the insight of §5 and §6 that we can consider ‘real Thirdness (be it understood as “meanings”, “attributes” or “universals”) as an essential dimension of logic without reifying it in any ontological sense, with the notion introduced in §6 of (abductive) ‘future-directed justification’ – in a unified realist account of true general predication which distinguishes Peirce’s pragmatism from its latter-day cousins such as response-dependence and the ‘neo-pragmatisms’ of Putnam and Rorty (as was promised in §2).

We have seen that Peirce defined the real as that “which has such and such characters, whether anybody thinks it to have these characters or not (5.430)”, thereby identifying the real with that which we can be wrong about. For this reason, it might seem that the notion of the response-dependent concept lines up neatly with the fictional as conceived by Peirce. For is not a response-dependent concept just a more sophisticated version of a “secondary quality concept” whose extension is given solely by our disposition to react to the world in a given way? If things are red if and only if a particular linguistic community responds to those things as red, how can redness not be whatever that community says it is? In that sense, realism and response-dependence would seem to be in flat contradiction.

On the other hand, one might ask how Peirce’s distinction between the real and the fictional interacts with his pragmatic maxim: We have seen that the maxim states that the meaning a concept has for us is to be understood as whatever expectations we might be led to form by hypotheses containing that concept. Is not *this* a form of response-dependence (which seems further justified by the fact that various response dependence theorists have adopted the ‘pragmatist’ label)? Aren’t response-dependence theorists really saying that the concept of redness is reducible to an expectation of the characteristic red sensation in us, and is this not a straightforward application of the
pragmatic maxim? Peirce claimed to have adapted the pragmatic maxim for philosophy from the methods of the experimental sciences, which have traditionally been viewed as the most realist of discourses. Is, then, following the experimental method automatically to commit oneself to a form of antirealism? (Indeed, there are precedents for such a claim – verificationism being the most notable.)

Against this concern, the first thing that needs to be noted is that response-dependence bases itself on our responses to the world. On the other hand, in the pragmatic maxim the crucial term is expectations. ‘Responses to the world’ and ‘expectations of the world’ are not the same. For one thing, they may be said to ‘point in different directions’ temporally: a response is produced by our experience of the world in some causal sense, whereas an expectation looks forward to future experiences. As might be expected, this distinction will become significant.

The structure of this chapter is as follows. §8.1 considers the relatively straightforward abandonment of realism by Kripke, Putnam and Rorty, and argues that it is unsatisfying. §8.2 and §8.3 consider the more complex attempts to marry “response-dependence” and realism of Pettit and Johnston respectively. Both will be found to be trapped between an unintegrated antirealism and noumenal realism – a dialectic which will be drawn out more generally in §8.4 under the (somewhat portentous, yet descriptively accurate) name ‘Traditional Realist Dialectic’. It will be argued that Peirce resolves this enduring dialectic in an extremely original way through his notion of the community of inquiry. The way in which Peirce’s epistemic communitarianism differs from forms of antirealism such as Kripke’s “sceptical solution” will be found to lie in his hypothesis of synechism, which teaches that although truth is internal to inquiry, no multitude of inquirers can exhaust the development of concepts with real objects. This will make possible a distinction between what I will call Communitarian Nominalism (and explore in §8.5) and Communitarian Realism (the Peircean alternative which I will explore in §8.6). The chapter will conclude (§8.7) with some considerations arising from the attempt to understand realism in ‘logical’ (in Peirce’s broad sense) rather than ontological terms. In particular, I will argue that Peirce’s semeiotic distinction between representamen, object and interpretant may be understood as making possible a triadic analysis of realist signification which provides a further, final vindication of his categories.
8.1 Antirealism and Assertability Conditions

Kripke is explicit about the rule-following problem forcing him to abandon realism.\(^\text{353}\) It might be argued that he dodges full-blown antirealism in that, as has been discussed, his “sceptical” account of rule-following claims not to provide truth-conditions for the proper application of rules (or concepts), only “assertability conditions”. For instance, he remarks:

What follows from these assertability conditions is not that the answer everyone gives to an addition problem is, by definition, the correct one, but rather the platitude that, if everyone agrees upon a certain answer, then no-one will feel justified in calling the answer wrong.\(^\text{354}\)

Nevertheless, under Kripke’s account of rule-following, no sense can be made of the idea that the community as a whole might be ‘wrong about plus’. Even if the community’s essential rightness about ‘plus’ is not a ‘truth-rightness’ but only an ‘assertability-rightness’, what difference does this make in such a global view as Kripke’s, which would seem to apply to every rule capable of extension, and thus to every meaningful concept?\(^\text{355}\)

Let us draw on the pragmatic maxim. What differing expectations flow from the hypothesis that Kripke’s sceptical solution provides communitarian assertability conditions for general predicates, as against the hypothesis that it provides communitarian truth-conditions? None, it seems, for in both cases we can expect that a statement such as “\(2 + 2 = 4\)” will be accepted if it accords with general community usage, and rejected if it does not. (An interesting question for Kripke in this context might be, “What are the assertability conditions for the term ‘true’”?\(\)) If there were a contrast class of genuine truth-conditions against which ‘mere’ assertability conditions might be distinguished – that is, if Kripke did not hold his sceptical solution globally – then the distinction might have some meaning. However this is not the case. It has already been noted that an epistemic conservatism seems to arise from Kripke’s sceptical solution (at least as it stands), whereby it is hard to account for the meanings of our terms developing in any way, for this would mean going against established community usage.\(^\text{356}\) This itself is a form of antirealism. (This claim will be argued for further in §8.5).

\(^{353}\) Kripke, \textit{Wittgenstein on Rules}, p. 85.
\(^{354}\) Kripke, \textit{Wittgenstein on Rules}, p. 112.
\(^{355}\) Interestingly, in a footnote to the passage just cited (on p. 112), Kripke remarks:

\[\text{I feel some uneasiness may remain here. Considerations of time and space, as well as the fact that I might have to abandon the role of advocate in favour of that of critic, have prevented me from carrying out a more extensive discussion of this point}.\]

\(^{356}\) It should be conceded that some account of realist meaning-change might be ‘plugged into’ Kripke’s sceptical solution. Recent work on the “linguistic division of labour” by authors such as Putnam and Tyler Burge is suggested. However this would complicate Kripke’s apparently univocal use of the term “assertability conditions”.

Rorty may also be identified with this form of antirealism insofar as he describes pragmatism as a theory of truth\textsuperscript{356} – a theory which defines truth in terms of "what we do", in explicit contrast to "what there is" (which latter view Rorty denigrates as "Platonism"). In this way he appears to be replacing realist with communitarian truth-conditions. Thus, he writes:

For the pragmatist, true sentences are not true because they correspond to reality, and so there is no need to worry about what sort of reality, if any, a given sentence responds to.\textsuperscript{357}

It might be objected that Rorty in fact holds a more subtle position than this: that he is not trying to replace realist with communitarian truth-conditions so much as arguing that we should abandon the giving of truth-conditions in the first place. (In this, it might be added, he is quite Wittgensteinian.) For example, he writes:

...pragmatists see the Platonic tradition as having outlived its usefulness. This does not mean that they have a new, non-Platonic set of answers to Platonic questions to offer, but rather that they do not think we should ask those questions any more. When they suggest that we not ask questions about the nature of Truth...they do not invoke a theory about the nature of reality or knowledge or man which says that "there is no such thing" as Truth...They would simply like to change the subject.\textsuperscript{358}

This, however, is unsatisfying insofar as we just do ask large questions about truth. Rorty's claim seems untrue to (what may be referred to as) 'philosophical anthropology' – a quick flick through the latest journals is enough to confirm the degree to which philosophers just do discuss truth. Against this, however, Rorty may protest that he is actually issuing a call to change the subject which philosophers should heed. If philosophers do not in fact "change the subject", this will be to their disadvantage, due in particular to the effort they will waste in inquiring into something entirely illusory. (This interpretation seems supported by the fact that much of Rorty's philosophical writing has a powerful rhetorical character, this being one of his great strengths.\textsuperscript{359})

However, how can Rorty be so sure that philosophers should cease talking about truth, that nothing is to be gained from so doing? Possibly only insofar as he has shown that there is no demonstrative proof that there is a useful notion of truth (for instance in the form of a unitary set of beliefs on which inquiry is converging, the lack of a deductive justification for which was acknowledged in §4.4 and §6.5). But if so, this means that his scepticism is parasitic on the deductivism he so compellingly

\textsuperscript{356} Rorty, Consequences of Pragmatism, p. xiii.

\textsuperscript{357} Rorty, Consequences of Pragmatism, p. xvi.

\textsuperscript{358} Rorty, Consequences of Pragmatism, p. xiv.

\textsuperscript{359} Consider, for example, his remark in his closing essay, "Philosophy in America Today":

One may expect that, by the end of the century, philosophy in America will have gotten over the ambiguities which have marked the last thirty years, and will begin to develop, once again, a clear self-image (p. 228).
repudiates, for it assumes that the only justification that might be given is a deductive one and, failing that, that there is no justification to be had. It is open to philosophers to forestall Rorty’s scepticism by avoiding such a deductivism. This, arguably, is just what Peirce shows how to do with the hypothetical or abductive structure he gives to signification, to truth-claims, and to the claim of realism itself. As noted in §6.5, realism may not be proven, but it is the best explanation around for certain phenomena. Why can we not hold it as a hypothesis (instead of “changing the subject”) and see what results from doing so? So once again, in the case of Rorty, it may be noted that the avoidance of metaphysical realism is only achieved at the cost of an excessive epistemic conservatism.

It seems that the same charge may be levelled at Putnam insofar as, in explicitly repudiating metaphysical realism, he writes that truth is “internal” rather than “external” to any given language-game. In this sense it seems that, like Kripke, he seeks to replace the concept of truth with the concept of “assertability conditions” (which would make sense given their common use of the later Wittgenstein’s writings). But it seems to follow from this that there can be no sense in which different language-games might discuss the same questions. Different sciences such as physics and chemistry seem to be different “language-games” insofar as they possess different vocabularies and sets of researchers: is Putnam saying that intertheoretic reductions between such sciences are ruled out a priori (that TRUTH_{\text{physics}}, TRUTH_{\text{chemistry}} and TRUTH_{\text{physics}} are necessarily different in kind)? If so, what is he to say about the reductions which manifestly have been effected? What the three views of Kripke, Rorty and Putnam have in common is that (roughly speaking) they assume that the way to avoid metaphysical realism is to hold that the discourse in question does not need to refer to any object(s) at all. Our practices (including our epistemic practices) are sui generis. It will be argued in §8.6 that Peirce’s account of signification shows how to avoid this dichotomy.

I will now turn to a discussion of the realism question with respect to the response-dependence theorists. In this discussion it will be helpful to break down the question of realism and response-dependence into a consideration of ‘partial’ and ‘global’ response-dependence. Global response-dependence (which is held to by Pettit) holds that all of our concepts either possess a direct analysis in terms of human responses or are somehow built from terms which do, whereas partial response-dependence theorists (of whom Johnston is an example) hold that only some of our concepts have this character.

360 Just one example here is the reduction of many features of chemical bonding to theories in physics which followed the identification of protons, neutrons and electrons.
8.2 Pettit: Realism and Global Response-Dependence

8.2.1 Descriptivism, Objectivism, Cosmocentrism

Pettit investigates the compatibility of his version of response-dependence with realism in detail in his article “Realism and Response-Dependence”. He distinguishes realism into three separate claims, “Descriptivism”, “Objectivism” and “Cosmocentrism”. He then acknowledges that not all of these claims may be satisfied by a global response-dependence theory, but argues that enough of them can for him to describe himself as a realist with a good conscience.

He treats the term ‘realism’ as properly applied to a discourse. Descriptivism, he states, is the claim that a discourse posits distinctive entities:

Participants in the discourse necessarily posit the existence of distinctive items, believing and asserting things about them. They purport to describe how things are in the world and their descriptions posit certain entities: that is to say, the descriptions fail in the absence of such entities.\(^{362}\)

Thus, for example, the ‘discourse of particle physics’ (if that is not too odd a phrase) posits the existence of electrons, the discourse of literary criticism posits the existence of literary works, and both discourses are ‘descriptively realist’ to that degree. On the other hand, someone who thinks (for instance) that “mental discourse reduces to talk about the purely behavioural level”, will hold that that mental discourse does not answer to Descriptivism, according to Pettit.

By contrast to the ontological flavour of Descriptivism, Objectivism is more of an epistemological claim, according to which:

The objects posited exist and have their character fixed independently of the dispositions of participants in the discourse to assert and believe things about them.\(^{363}\)

An Objectivist discourse not only has to posit distinctive objects, but those objects must have their characters independently of what is believed about them. This sounds very like Peirce’s definition of realism. Pettit argues, however, that realism as currently conceived is not complete without Cosmocentrism, the claim that:

In order to avoid error and ignorance with regard to the substantive propositions of the discourse—in order to get at the truth—participants have to make suitable contact with the objects of the discourse and there is no guarantee that they will succeed in doing so.\(^{364}\)

This is also a more epistemological claim, a claim about the possibility of large-scale error in a discourse. The claim is rendered rather vague by Pettit’s use of the qualification “suitable” in “suitable contact”. If “suitable” contact with an object means

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362 Pettit, “Realism and Response-Dependence”, p. 3.
363 Pettit, “Realism and Response-Dependence”, p. 4.
contact not conducive to forming erroneous beliefs about that object, then the Cosmocentric claim is in danger of being vacuous. However, Cosmocentrism may be made clearer by noting that it is defined against “Anthropocentrism”, the claim that within a given discourse, “there is no possibility that specified individuals or groups could be in ignorance or error”. Thus Cosmocentrism would fail for a verificationism which, for example, translated talk of a certain entity – cats, for example – into talk about our experiences of that entity. Talk of cats may be mistaken, there might be no cats ‘out there’, but the fact that we feel fur and whiskers, hear the sound of miaowing, and see smallish objects dashing across our field of vision is something we cannot be in error about. Thus ‘Cat-verificationism’ would be an anthropocentric discourse.

How is this claim about the mind-independence of a discourse’s posits different from Pettit’s second claim of Objectivism? Pettit argues that the two claims may come apart as follows:

Consistently with thinking that a discourse introduces distinctive posits, and that the posited objects are suitably independent of people’s epistemic states, we can hold that the posited objects are fixed—constitutively, not just heuristically fixed—in such a way that error or ignorance is impossible at a certain limit. Pettit suggests as an example of such fixing a discourse whose referents “are those entities which it is most flattering to the discourse to take as referents”. This is a puzzling description of a discourse and it is difficult to imagine an actual case. (How can something be “flattering to a discourse”?)

However, for another possible example of Objectivism without Cosmocentrism, consider English grammar as a discourse – a structured account of what is and is not grammatically well-formed (as found in the grammatical textbooks which used to be standard issue to secondary school students). The grammar of the English language is certainly something about which we can be in error. If I offer the sentence “If I had’ve had that job I would’ve gotten rich!” as a grammatically well-formed English sentence, then I will be wrong, no matter how strong is my belief that the sentence is well-formed. Thus, Objectivism holds of English grammar. However, Cosmocentrism does not hold of this discourse, as it is not possible to make sense of the possibility that English speakers might discover one day that the rules for English grammar had always been radically different to what anyone thought they were. It is not possible that, unbeknownst to editors and English teachers worldwide, the group of English words, “Had he; go they had not very” have always made a grammatically well-formed

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366 Just as ‘Person-verificationism’ – a view which is widely, but I feel unfairly, attributed to cats – would be ‘felicentric’.
sentence. Grammatical rules just do not seem to be the sort of objects one can make such radical discoveries about.

The same point applies, interestingly, to the ‘plus’ function. We cannot so much as imagine a situation where we could be said to have discovered that, unbeknownst to mathematicians worldwide, the function ‘add 2’ actually delivers the answer ‘1004’ from an input of ‘1000’. This is true despite our inability to prove to the sceptic who claims that he understands the function ‘add 2’ in precisely that way that he is wrong. As Kripke has noted, adding is a practice which requires a certain amount of agreement in order for it to function in the first place. It seems that Wittgenstein’s liberal use of the word “grammar” in the Philosophical Investigations may be understood precisely as indicating those contexts where Objectivism holds without Cosmocentrism, which possibility is so well demonstrated by English grammar.

Though one can have Objectivism without Cosmocentrism, it does seem that if Cosmocentrism is satisfied by a discourse then so must be Objectivism. For if there is a possibility of radical error about the set of objects described by the discourse, then it seems this must already guarantee that those objects “have their character fixed independently of the dispositions of participants in the discourse to assert and believe things about them”. For how could we be in radical error about objects whose characters were dependent on our epistemic responses? So Cosmocentrism may be understood as a “Strong Objectivism”, in this sense.

Now, Pettit claims that a realist global response-dependence theorist can honour Descriptivism and Objectivism, but not Cosmocentrism. He can honour Descriptivism because statements which receive a response-dependent analysis do not lose their assertoric force for that reason (which is just as well, really, given that this is a global position). Moreover, neither is a response-dependent analysis any sort of reductivism. When the concept ‘red’ is analysed response-dependently in terms of the tendency of certain subjects to have certain sensations, this is not to reduce redness to those sensations, he claims.

Pettit’s argument that the global response-dependence theorist can honour Objectivism proceeds by denying that he is committed to Objectivism’s natural enemies, which Pettit identifies as an error theory and idealism. It is fairly obvious that response-dependence about redness does not constitute ‘an error theory of redness’ – it is not to say that there really is no such thing as redness, or that we are wrong to call things red. Idealism, however, is a possible consequence of his view that Pettit spends more time refuting, for it might easily seem as though “redness and the other colours posited in colour discourse are properties which depend for their...existence, on the epistemic responses of human beings.” To refute idealism, Pettit draws a distinction

\[368\] Pettit, “Realism and Response-Dependence”, p. 21.
\[369\] Pettit, “Realism and Response-Dependence”, p. 22.
between our epistemic responses' "shaping things" and "shaping concepts". Response-dependence, he claims, shapes only concepts. It:

represents the things as independent, given entities; the role of our responses is merely to determine which of them will fall within the extension of the concept of redness.\(^{370}\)

This leaves room in Pettit's ontology for a categorical ground of things, which underlie the dispositions to respond in certain ways which constitute our concepts. In fact, he claims that "things" produce "concepts" in a straightforwardly causal sense, whether by directly (efficiently) producing the response in question, or by "programming for" it (a higher-level causal relevance, whereby it is the case that if the red thing had not been present, I would not have had the red response, whether or not a direct causal relation can be found between thing and response).\(^{371}\)

It is worth noting how much depends for Pettit on this very sharp dichotomy between "things" and "concepts". However, he provides the reader with no instructions as to the drawing of this distinction. Does it, for instance, track the logical distinction between predicates and their subjects, so that if I say, "This cherry is red", the cherry is the "thing" and redness is the "concept"? However, what about when we wish to treat a predicate as a logical subject – to talk about redness itself? Does redness then also become a "thing" and lose its response-dependent analysis? Similar worries attend a possible, more metaphysical, distinction between properties and objects, whereby objects are "things" and their properties (mediated somehow in predicate form) are "concepts". However, I will set aside these worries for now, as they will be explored in detail in §8.5 and §8.6.

Pettit concedes, however, that he must give up Cosmocentrism. For, as noted, Anthropocentrism with respect to a concept is the very premise of response-dependence with respect to that concept. If everyone (at least, everyone who is "suitably situated") says that something is red, there can be no further question about that thing's being red. The concept depends on our responses in this way. However, Pettit argues that this abandonment of Cosmocentrism does not conflict irreconcilably with the realist spirit. To this end, Pettit introduces a discussion of the predicate \(U\), which is used by an exclusive girls' social set (the "Sloane Square set") as a marker of their exclusivity. U-ness has an extension which changes regularly upon the girls' whim, in order that those who are not in the inner circle might not know how to apply the predicate correctly:

To speak of lavatories is U, of bathrooms non-U; to lay cloth napkins at table is U, to lay paper napkins non-U; and so on through a myriad of equally trivial examples....[W]ether something is U or not is a matter of the say-so of those in

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\(^{370}\) Pettit, "Realism and Response-Dependence", p. 23.

\(^{371}\) Pettit, "Realism and Response-Dependence", p. 28.
the appropriate set; the members of that set have an authoritative, dictating role in regard to the concept. That they have this role is borne out by the fact that as the regular bourgeoisie try to get in on the game, Sloanes are notorious...for shifting the extension of the U-concept.\footnote{Pettit, “Realism and Response-Dependence”, p. 25.}

This is actually a nice example of pure fictiveness by Peirce’s lights, since U-ness is \textit{exactly} as a particular group of people says it is. Lamp-posts, cats, songs and politicians can all be U, if the Sloanes decide they are, and then lose the property at a moment’s notice. Pettit concedes that it would be ludicrous to be realist about U-ness. So the question arises: why are not all response-dependent concepts like this?

8.2.2 “U-ness” \textit{vs.} Redness

Pettit argues that concepts such as redness, though “subject-involving”, are still real. The difference between redness and U-ness, he says, is the need to be attuned to “an independent authority” if one is to apply the concept correctly. He writes:

Given that red-sensations determine the referent of the redness concept, U-responses the referent of the concept of U-ness, the only place for a systematic difference between the two cases is in the things that in turn determine those responses...U-responses are determined, under my characterisation of the case, by the efforts of Sloanes to keep in step with one another in their classification of things. But clearly red sensations do not generally spring from such collusive machinations, even if people sometimes succumb inappropriately to group pressure.\footnote{Pettit, “Realism and Response-Dependence”, p. 27.}

So the difference between redness and U-ness, according to Pettit, is that those who apply the red concept are determined by the world, whereas those who apply the U concept are determined by each other. However it is not clear that this sharp distinction can be sustained (That this should be so is perhaps not surprising given that one’s community are in fact part of one’s “world”\footnote{Thanks are due to Frank Jackson for putting this point.}). For instance, Pettit noted that, “to speak of lavatories is U, of bathrooms non-U...”. Applying the concept of U-ness, then, does presuppose that one be ‘determined by the world’ at least insofar as one recognises the presence of a toilet. For the Sloane to call, say, a drinking fountain a ‘bathroom’ would not produce the desired effect on her peers.

Similarly, it may be argued that, as U-ness is ‘determined by’ the linguistic community who apply the concept, so is redness. In the initial exposition of Pettit’s response-dependence in §2.2, it was noted that his response-dependent solution of the rule-following problem had two parts, the first being our inclinations to respond in certain ways, and the second being the corrections which the community offers those who follow their inclinations. These corrections train the inclinations in certain directions, and render hostage to their linguistic community those who apply the concepts which result from this training, with respect to the correctness of future
applications of the concepts. So, for example, redness inclinations have to be trained with respect to where red shades off into orange (which is notoriously lacking in a clear, objective cut-off point), and applications of the concept in the red-orange borderzone remain corrigeble (notwithstanding a certain vagueness). Moreover, judgements of redness are hostage to community correction in that if I insist in making judgements which are utterly at odds with my community – for instance if I consistently claim that bananas are red – I will be wrong, according to Pettit.

Pettit can only draw the sharp distinction he seeks to draw between redness and U-ness – on the basis of the former’s being determined by the world and the latter’s being determined by the linguistic community – by removing altogether the community’s ability to correct red judgements. But this would just be to make red response-independent. Since Pettit wants a global response-dependence account, this is not an option for him. To maintain a role for community correction in determining redness, then, means that the difference between redness and U-ness is merely a difference in degree (the degree of arbitrariness with which the girls’ community shapes their natural inclinations – in this case judgements of taste) rather than a difference in kind of concept-determination.

Without a principled difference between redness and U-ness, then, it appears that global response-dependence might be in danger of antirealism. Price has made substantially this point. He explicates Pettit’s “content-based” global response-dependence as committed to the following biconditional:

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(7) \text{X is F iff X is disposed to evoke...the ‘Seeing as relevantly similar to paradigm F’s’ response in us.}\]

He then points out:

What are the consequences of taking (7) seriously, however? In considering this question, let us pretend for the moment that the response-theorist’s biconditionals are to be taken as outright content specifications: if not as reductive analyses, then at least as indications of conceptual equivalence, or common content on both sides of the biconditional. Apparently, then, the consequence of (7) is that we cannot talk about the world as such, but only about its effect on us. All content becomes relational and anthropocentric in this way.

This is one of the arguments Price makes for his usage- rather than content-based approach to pragmatism. He diagnoses the problem with content-based approaches such as Pettit’s to be that they are “automatically truth-conditional”. That is, the extension of the concept of redness is irrevocably determined by how the community as a whole is disposed to respond under suitable conditions. (As we have seen, he

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prefers a different account of the meaning of terms such as ‘red’, in terms of the functional role the use of such terms plays in our lives.)

A different twist on the interaction between Pettit’s global response-dependence and realism has been provided by Michael Smith and Daniel Stoljar. Like Price, they highlight the fact that response-dependence is a dispositional theory, which analyses concepts as the dispositions of “suitably situated” subjects to respond to the things in the world in certain systematisable ways. They then argue that every disposition presupposes the existence of some categorical ground which produces the disposition in question – a claim they call “Grounds”\(^{379}\). (This ground, it has been noted, Pettit refers to as “things”). However this categorical ground cannot itself be known or reached by our concepts in any way, they claim, due to the global character of Pettit’s response-dependence. For according to Pettit, every concept we have refers only to our responses to the world. (All qualities are secondary qualities, to put the point in Berkeleian terms). Thus we cannot get behind our responses to talk about the “things” which produce those responses. This, they argue, commits Pettit to a “noumenal realism”, which they suggest is problematic\(^{380}\):

According to Global Response-Dependence, the only claims we can ever make about the world are claims about the dispositions it possesses to elicit certain responses in us. On the other hand, however, it follows from Grounds that...they cannot be the only truths about the world....it follows that the world must be a certain way in and of itself—that is, non-dispositionally–quite irrespective of the fact that we are in no position to make claims about this way that it is. But the idea that the world is a certain way in and of itself, even though we are in no position to make claims about the way it is, is, of course, simply the central and defining idea behind Noumenal Realism.\(^{381}\)

The dialectic might seem to have become a bit confusing at this point, in that Pettit’s global response-dependence has just been accused of antirealism, and now it seems that he is too realist. These two complaints against global response-dependence can be reconciled, however. In fact, the antirealist complaint and the noumenal realist complaint both arise from Pettit’s sharp metaphysical distinction between “concepts”, which are response-dependent, and “things”, which lie behind and cause the concepts. The antirealist complaint focuses on the way in which concepts are so divorced from things, which suggests that our epistemic practices might float free of the world to

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379 Smith and Stoljar present another, longer, argument to the same conclusion via two different premises they call “Weak Compleatability” and “Weak Grounds”. However considerations of space prevent an examination of this second argument.
380 It’s worth noting that in a reply in the same issue of *The Monist*, Pettit attempts to answer Smith and Stoljar (“Noumenalism and Response-Dependence” *The Monist* 81, no. 1 (1998), pp 112-132). However his argumentative strategy, distinguishing between “role” and “realiser” properties, largely recapitulates the “thing”-“concept” distinction already discussed.
381 Smith and Stoljar, p. 87.
which they are meant to be referring. The noumenal realist complaint focuses on the way in which things are so divorced from concepts, which suggests that our epistemic practices might, for all we know, never reach “things” at all.

It should be noted, however, that in this case Smith and Stoljar are not taking a stand on the realism question themselves. They are merely pointing out that Pettit is trapped by the Traditional Realist Dialectic. In this way their paper is merely a negative exercise in pointing out that if one holds global response-dependence then one is unfortunately forced to hold noumenal realism also. They do not provide any alternative position themselves. Yet this is the hard task, which nevertheless manifestly needs to be accomplished after centuries of philosophical oscillation between antirealism and noumenal realism in various guises.

How is the realist hypothesis to be brought into the fold of hypotheses which are meaningful according to the pragmatic maxim (that is, avoiding the postulation of noumena), without losing the very general (apparently transcendental) character it requires to do its work? Pettit fails to achieve this because his distinction between “things” and “concepts” is a metaphysical one – the two are seen as separate objects. One is “out there” in the world, and the other is (somehow) “in us”. This means that, for any given interaction with the world, if Pettit identifies reality with the things, our epistemic access to those things is no part of the realist hypothesis and he ends up with noumenal realism. If on the other hand reality is identified with the concepts themselves, he compromises his objectivity and ends up with antirealism. It might be protested that Pettit may escape this dilemma by identifying reality somehow with the relationship between his things and concepts. But is this relationship itself a “thing” or a “concept”? It seems that Pettit must choose. Peirce’s approach to this question will be engaged with shortly, in §8.4. First, however, I will examine how Johnston’s brand of response-dependence fares with respect to this many-faceted and vexed issue of realism.

8.3 Johnston: Realism and Partial Protagoreanism

Johnston does not attempt Pettit’s ambitious global account of concepts, which leaves him without the problem of sealing off the categorical ground of his ‘response-dispositions’ from all referential (and thus epistemic) access. However, in its place he has the problem of providing a principled account of what distinguishes response-dependent from response-independent concepts.
8.3.1 Descriptive Protagoreanism

As noted in §2.3, Johnston makes a distinction between Descriptive Protagoreanism, which holds that our concepts are response-dependent as they currently stand, and Revisionary Protagoreanism, which holds that certain concepts falsely purport to be response-independent, and the Progressive Pragmatist should seek to replace them with honest response-dependent substitutes. He first argues that the Descriptive Protagorean can be a realist. To this end he mainly argues, like Pettit, by showing that the Descriptive Protagorean is not committed to ‘-isms’ which fall on the antirealist side of the debate. Most crucially, he seeks to distinguish Descriptive Protagoreanism from the Internal Realism that his paper attacks at length, by denying that truth is a “response-dispositional” concept. What is true is not what we are in any sense disposed to call true, he claims. There is no internal connection between truth and the results of inquiry (as we saw with respect to the possibility of truths about Enigmas).

Like Pettit, Johnston sees Idealism as a danger the Descriptive Protagorean might fall into, and takes pains to avoid it. He therefore denies that he is committed to (the teasingly qualified) “Empirical Idealism”. This is the view that, “Fs would not exist or be the way they are but for our responses as they actually are”382, and his argument against it is that although our dispositions are invoked by the response-dependence theorist, they may be rigidified upon. Consider the claim that:

The concept of being red = the concept of the disposition to look red to standard perceivers under standard conditions.383

Now consider a possible world (W*) where things are disposed to look red to that world’s inhabitants which in the actual world would be regarded as yellow. It might seem that the whole idea of response-depencecence is to say that, in W*, yellow things are red. For it is to say that the extension of a concept depends on our responses. However, an alternative possibility may be opened up if we ask: who exactly is the “us”, referred to by “our responses”? To say that, in W*, yellow things are red is to assume that the “us” includes W*’s inhabitants, and that, naturally enough, it is their responses in W* that the extension of ‘red’ depends on in that context. However, we might equally say that whatever is red in W* is what we would call red, if we were there. The yellow things would then not be red in W*, as we would be disposed to call those things ‘yellow’, not ‘red’. This is to rigidify our this-worldly responses to coloured objects. It thus appears that a claim of Anthropocentrism is in need of further specification with respect to whether it is intra- or inter-world in this respect.

How exactly does this refute Empirical Idealism? Johnston moves very quickly here, but it seems that his point is that in W* the possibility is opened up that things might not be exactly the way the inhabitants think they are. Thus, presumably, a

similar independence is made possible with respect to the actual world and us, its inhabitants. Such use of rigid designation by the response-dependence theorist does open a Pandora’s Box of logico-epistemic issues, though. Who is to say what responses we would have in another possible world? At least with respect to this world we can do some (limited) field-work with respect to our responses. The reference-externalism introduced by Johnston’s use of rigidification therefore exposes him also to the complaint of noumenal realism, in that we never know for sure what our terms (or, in this instance, our concepts) rigidly designate. (The fact that water ‘is’ H₂O was completely unknown until a couple of hundred years ago, for instance).

It might be objected that this is precisely the a posteriori meaning-precisification which §3 went to such pains to approve. It was noted in §3.1 that temperature is a scientific precisification of the older secondary quality concept of heat. However recall that Peirce, while fallibilist about meanings, provides instructions for “how to make our ideas clear” – that is – how to work out what is really signified by our concepts (or, in other words, what are our concepts’ Dynamic Objects). One derives hypothetical expectations from those concepts and then tests those expectations against the world’s Secondness. Where the expectations fail, one adjusts one’s concepts and tries again. (Note the way in which this process integrates real Thirdness around the brute dyadic pointing from concept to ‘natural kind’ which is how rigid designation is usually conceived, thereby rendering the object of such a concept in principle epistemically accessible.) These instructions – which are no less than the experimental method very generally conceived – are both vague and general, but no less pragmatically meaningful for that. Johnston’s pragmatism, in common with most contemporary invocations of rigid designation, does not provide any such logico-epistemic aid.

At any rate, having dispatched Empirical Idealism, Johnston then swiftly demolishes two further antirealisms – Noncognitivism and Eliminativism.

As against Non-Cognitivism concerning apparent statements about Fs, Protagoreanism generates straightforward truth-conditions for statements about Fs. And since it is evident how these disposition-involving truth-conditions can be satisfied, we here have a foil to Eliminativist denials that there are Fs. 383

8.3.2 Revisionary Protagoreanism

However, this defence of Descriptive Protagoreanism as compatible with realism is somewhat otiose, for it is not Johnston’s considered position. Rather, he claims that Descriptive Protagoreanism must be “severely qualified to be at all plausible”, as most of our concepts are not in fact response-dependent. Therefore he turns to Revisionary

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Protagoreanism which, he thinks, promises certain “strategically-placed successes”\(^\text{385}\). He thinks that these will occur not within science, which mostly consists of “natural kind concepts” which resist response-dependent analysis, but within the “complex cluster concepts” which predominate in philosophy. He proposes that a good place to start is with the concept of value, most notably (and of particular interest to the pragmatist) with the concept of epistemic value. We have seen that he holds the concept of truth to be response-independent, and to presuppose a single best theory of the Universe. However, he notes that this ‘Truth Monism’ is not incompatible with what he calls *Theoretical Pluralism*, the view that:

...for most purposes to which theories are put there are several equally good (or roughly equally good) theories, each with their own schemes of description of the relevant subject matter.\(^\text{386}\)

We have seen that for Johnston the concept of truth and the concept of “the rightness of a cognitive response” are separated in principle. He writes:

...the rightness of a cognitive response, such as accepting a theory, is not simply determined by the way nature is anyway, but is conceptually connected with certain facts about our capacity to recognise that the response is right.\(^\text{387}\)

This claim is still rather vague. With what “facts” is the notion of the rightness of a cognitive response conceptually connected? And how might these “facts” make a difference to our cognitive responses? Johnston does not say. However, at any rate, this separation between truth and “the rightness of cognitive response” seems (once again) to render Johnston a noumenal realist of some form, insofar as it posits at least some truths which are in principle beyond our epistemic reach. Indeed, Progressive Pragmatism is explicit about the fact that response-dependence is a metaphysical thesis about certain concepts inhering in dispositions of ours, investigation of the categorical base of which should be blocked as “metaphysics in the pejorative sense”. In short – it seems that Johnston, like Pettit, has a problem with only being able to avoid antirealism at the cost of noumenal realism.

We thus appear to be at something of an impasse. The rule-following problem highlighted the impossibility of “grounding” general predication in the existence of logically particular things (or “facts”) – for there are not “things” out there sufficient to do the job of grounding the infinite normativity which general predicates appear to possess. For this reason, Kripke’s sceptical solution and the response-dependence theorists turn to us and our dispositions to perform this grounding function. For Kripke the relevant dispositions consist in the community’s “assertability conditions” for its general rules (despite his denial that he is providing dispositional truth-


conditions), and for the response-dependence theorists they consist in our tendency to respond to the world in certain reliable ways. However this argumentative move arguably creates as many problems as it solves. For if the truth-conditions for general predications are identified with the categorical ground of these dispositions, this produces a form of noumenal realism. If however they are identified with the dispositions themselves, a form of antirealism is apparently created.

I will now present a certain argumentative dialectic which, I will argue, may be prescinded from much of the previous discussion of realism (and, indeed, has been very influential in philosophy since the early modern period). I will then present Peirce’s resolution of the dialectic, which is both distinctive and synechistic.

8.4 The Meaning of Reality

8.4.1 The ‘Traditional Realist Dialectic’

It is fair to say that the last few centuries of philosophy have seen much wrangling over the issue of realism, with no clear resolution of the issue having emerged. Presupposed by these disputes, I shall now argue, lies a basic distinction at the metaphysical level between items playing two distinct functional roles. The first may be referred to as the ‘world-role’, and the second as the ‘us-role’. Alternatively, the basic distinction may be characterised as holding between things (which are ‘in’ the world, and also referred to as facts, states of affairs and events, among other ontological categories) and representations (which are ‘of’ the world, and also referred to as ideas, beliefs, concepts and propositions). Such a distinction might seem presupposed by the claim that anything is true at all, for (as noted in §4.1) the notion of truth has often been taken straightforwardly to consist in some sort of two-place relation between ‘truth-bearer’ and ‘truth-maker’.

What I wish to call ‘the Traditional Realist Dialectic’, then, goes as follows. The realist claims as a fundamental philosophical insight that the truth of our true statements is not determined by us and our representations of the world but by the world, which is independent of those representations. This is the intuition of epistemic humility. Yet, as long as realists have been advocating this insight, they have been unsuccessfully fending off the demand by antirealists to acknowledge that although what we call true purports to be about an entirely external world, all we have epistemic access to is our representations of the world. Why, then, the antirealist asks, cannot the hypothesis

388 Antirealists of many different stripes of course – ‘antirealism’ is here being used as an umbrella term.
of an entirely independent ‘Reality’ which lies behind those representations be shaved off by Ockham’s Razor?

The dialectic found possibly its most stark expression in the early modern period. Somewhat notoriously, Berkeley attacked Locke’s hypothesis of “external objects” which play the ‘world-role’ in both causing and resembling our ideas (which play the ‘us-role’) with respect to what is true and false. Berkeley asked, why can we not restrict our hypothesis about the external world to ideas – since these are all we can know or inquire into? Few seriously believe Berkeley’s infamous conclusion that “to be is to be perceived”, but those who take the trouble to closely examine Berkeley’s arguments usually concede that Locke’s position lacks the resources to refute Berkeley.

In the twentieth century this realist-antirealist debate has largely moved from the mental arena (where the vexed issue is whether some Reality grounds our ideas) to a more ‘semantic’ arena (where the vexed issue is whether some Reality grounds our true statements). Thus Putnam (in his Internal Realist phase) and David Lewis have gone head-to-head over the need to postulate a Reality defined as a determinate “reference-relation” between the individual terms in true statements such as “The cherries are on the tree”, and individual things in the world such as cherries and trees. Lewis has argued that such a realist hypothesis is necessary, Putnam that it is not necessary, and moreover is an unverifiable faith in a “magical” relation between words and things.

Note the picture of realism which emerges from this dialectic. The problem of realism is seen as essentially ontological – the problem of searching for some existent particular thing(s) to ‘ground’ the truth of every representation which we wish to call true. This approach to realism may therefore be referred to as ‘the Truthmaker Impulse’ (and its rejection revealed to be one of the major themes of this thesis). In §2, this understanding of realism emerged in the discussion of the rule-following problem, in that Kripke took the sceptic to have demonstrated that realism with respect to rules (and therefore “meanings”) was impossible due to a lack of “facts” which might somehow correspond to and justify the ways in which we go on (leaving us to make

389 (n)the reader need only reflect, and try to separate in his thoughts the being of a sensible thing from its being perceived.” [at which point, Berkeley urges, the reader will realise that such a feat is impossible]. George Berkeley, “Of the Principles of Human Knowledge”, Selections from Berkeley, ed. A. C. Fraser (Oxford: Clarendon Press, 1884), §6.
390 This shift of ‘arenas’ in which the realist question is battled out (from “the heyday of ideas” to “the heyday of sentences”) over the last 300 years in philosophy, is engagingly presented by Ian Hacking in his Why Does Language Matter to Philosophy? (Cambridge: Cambridge University Press, 1975).
do with "assertability conditions", which spring from features of us and the language-games we play).

This dialectic between ‘world and us’ likewise emerged in the discussion of response-dependence, whereby concepts such as redness were defined in terms of our responses to the world, but to avoid antirealism Pettit felt obliged to posit worldly ‘response-makers’ – namely “things”. The dialectic also emerged in the neopragmatists insofar as they define themselves against “metaphysical realism”, seeking to validate our ‘linguistic practices’, purely in terms of their serving our ends (Rorty’s “what we do” – in contradistinction to “what there is”), which may be understood as an explicit blocking of the search for truthmakers. These issues were in the background in §3 where the move to a triadic, processual account of signification was explicitly contrasted with a dyadic model of meaning which was suggestively if vaguely described as ‘conflating meaning and reference’. In §4, truthmaker theory appeared briefly on its ‘home turf’, the analysis of truth (and the dyadic nature of this analysis was argued to be problematic).

Similarly, §5 was structured around a discussion of extensionalism and intensionalism, the basic dispute behind which, it was suggested, concerned whether an adequate logic might be framed quantifying only over (worldly) ‘individuals’, or whether some irreducible account needed to be taken of (mental) ‘ideas’. In positioning himself on the extensionalist side of the dichotomy and stalwartly rejecting any logical recognition of things’ attributes, Quine claimed that to do so would constitute an antinaturalistic embrace of “the mental”. Finally, in §6 a ‘truthmaking dialectic’ appeared in Armstrong and Devitt’s dispute over the need to postulate things in the world which correspond to true predication, and in the background division (assumed by both Armstrong and Devitt) between “semantics” and “ontology”, conceived as a distinction between what words mean and what exists.

8.4.2 Peirce’s Resolution of the Traditional Realist Dialectic
Here, as in many areas where two philosophical approaches stand at loggerheads, Peirce takes the best of both supposedly opposing views and synthesises in a new and surprising way. He admits that all we have direct access to is our beliefs (which

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391 As Rorty puts it:
When the realist [states]
The truth about the world consists in a relation of “correspondence” between certain sentences...and the world itself
the pragmatist can only fall back on saying, once again, that many centuries of attempts to explain what “correspondence” is have failed (p. xxvi).

392 Peirce scholars may complain that this remark does not do justice to Peirce’s direct realism, as expressed in his doctrine of Immediate Perception (for example, in 5.56 and 8.16). But the two are not incompatible, for Peirce does not have a representational theory of mind. 'Only' having access to our beliefs, for Peirce, is only having access to part of the world’s real generals.
represent the world as being various ways), but he rewrites the realist criterion that our beliefs answer to something greater than ourselves through his notion of the community of inquiry. Peirce writes:

Reality is independent, not necessarily of thought in general, but only of what you or I or any finite number of men may think about it... (5.408).

Realism thus enters the scene in the sense that no matter how widely believed an error may be, the community of inquiry retains the potential for further individuals to detect and correct that error (and the error must be detectable or, according to the pragmatic maxim, it would be meaningless to call it an error). This use of the continuity of the community of inquiry to provide objectivity was noted with respect to truth, which highlights the way in which Peirce thought that the two notions of ‘reality’ and ‘truth’ were interdefinable. Joel Weinsheimer summarises Peirce’s explication of reality in terms of the community of inquiry thus:

One man’s opinion is always false, not insofar as it is opinion but insofar as it can only be one man’s. Discovery of the real, therefore, is discovery of the actually or potentially public; discovery of error is discovery of the self in its isolation.

Again, this identification of reality with the potential experience of error and isolation within the community of inquiry may be seen not as a rival ‘pragmatist’ metaphysical position with respect to reality, so much as the concept of reality run through the pragmatic maxim and thereby brought to the third grade of clarity. It is not necessarily in conflict with traditional, more ‘nominal’ definitions of reality such as ‘that which is independent of us’. It merely points out some of what we may expect experientially from that which is independent of us. For error is a definite, recognisable experience. One expects to perceive something, and the world delivers a different perception. This then produces a spectrum of characteristic reactions in us – from mild surprise to the sort of rude shock which led Peirce to write:

In all the works on pedagogy that ever I read – and they have been many, big, and heavy – I don’t remember that any one has advocated a system of teaching by practical jokes, mostly cruel. That, however, describes the method of our great teacher, Experience. She says,

Open your mouth and shut your eyes
And I’ll give you something to make you wise (5.51)

Such lessons from experience “highlight the self in its isolation” (as Weinsheimer puts it), in that one would not be conscious of any boundary or distinction between one’s self and the world if one never erred. If every prediction one ever made came true, the world would appear to be as much under the control of one’s will as, say, one’s hand when one raises it. More exactly – no concept of one’s having a will at all

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394 As is stated, for instance, in 5.407.
could be formed if one never erred, as a meaningful contrast to willed actions (that is, events which frustrated one’s expectations) would be absent. Moreover, insofar as one errs one is isolated within the community of inquiry – not necessarily at the particular time at which one errs, but ultimately. This does not mean that one is necessarily wrong if one is the only person with a particular belief within one’s current community of inquiry, of course. But it does mean that the hypothesis that one is right just is the hypothesis that the rest of the community would come round to one’s belief if inquiry were pushed far enough.

Note that when we experience error, it is always with respect to some object which survives the correction we are forced to make in our beliefs, though this object will often be very vague. For example, when I believe that my cat is in a relaxed mood and he suddenly scratches me, the object about which I am in error is my cat (or his mood). When I believe that the capital of California is Los Angeles, and discover that it is in fact Sacramento, the object is ‘the capital of California’. (Formally speaking, this is the movement from the Immediate towards the Dynamic Object presented in §3.5.3.) It is important to note that to experience error is a sign that one is dealing with something real, rather than with something unreal. For consider the situation where I devise a fantasy centring around what, if I won the lottery, I would spend the money on. I sit and daydream, “I would buy clothes, shoes, outrageous house-plants, nights in expensive hotels...” There is no possibility of my receiving a nasty epistemic surprise with respect to this scenario, for my fantasy is exactly (gloriously) as I say it is. For this very reason (sadly) it is not real.

This apparent paradox, that error informs us about the presence of the real rather than the unreal, links with the aspect of Peirce’s account of truth – that a truth-claim somehow contains a confession of its own inaccuracy – that inspired Russell’s somewhat scornful remark that it “would enthrone Epimenides as the only sage” (discussed in §4.3). This essential confession of inaccuracy with respect to the real shows that a commitment to realism cannot be reduced to a commitment to the truth or falsity of a set of statements at any given time. Rather, it is a commitment to the persistence of certain (real) objects over time. In this way, then, Peirce’s realism combines an ‘Object-Oriented’ referential simplicity with the idea (explored in §3) that epistemic contact with the real is essentially a process, extended over time. (As Peirce puts it, “The reality of things consists in their persistent forcing themselves upon our recognition (1.175)”.)

8.4.3 Real Generality and Final Causation

It was noted in §3.6 that the way in which our concepts (or, as Peirce puts it more generally, signs) develop is best explicated not as a species of efficient causation but as a species of “final causation”. As has been noted, the two may be distinguished in
terms of their different temporal directions. Where efficient causal explanation looks to the immediate past of the thing caused, final causation is:

.....that mode of bringing facts about according to which a [result of some] general description...is made to come about, quite irrespective of any compulsion for it to come about in this or that particular way (1.211);

Hookway has expressed some scepticism about Peirce’s blithe, broad-brush identification between Thirdness, representation and final cause\textsuperscript{395}. However, consider the emergence of true belief within the community of inquiry. A given fact may be discovered by many different people in many different ways, and in some sense compels its own discovery. Consider, for example, the fact that earth is round, not flat. This fact could have been discovered by any number of people other than those who discovered it, and in any number of different ways. For example, if rocket technology had far outstripped ship-building technology, the discovery could have been made not by circumnavigating the earth but by travelling into space and looking down. Yet it would have been the same general fact for all that – the fact that the earth is round. It makes sense to say that this fact was bound to be discovered sooner or later: the human race could not continue to grow indefinitely in scientific sophistication while failing to make this profound realisation.

In §8.4.1 it was noted that the picture of realism that emerges from the Traditional Realist Dialectic may be understood in terms of an impulse which has lately been called “truthmaking”. The use of the term ‘\textit{make}’ in the term truthmaking may now be understood as significant in indicating a background mechanism according to which efficient cause is the only way things come about. Interestingly, in a later paper Mark Johnston notes the suppression of final causation on mistaken metaphysical grounds since the early modern period:

The world-view to which the long arc of modern philosophy since Descartes bends is Materialism With A Bad Conscience, a Materialism continually bedevilled by the need to deal with apparently irreducible mental items. I believe this world-view to be the offspring of an \textit{introjective} error; in effect, the mentalization of sensible form, finality and value.\textsuperscript{396}

“Sensible form, finality and value”: these are all prime aspects of Thirdness. The first is the sort of perceptual representation of objects as having certain features which we saw in §1.4.1 with respect to Peirce and the chimney. “Finality” and “value” are further, less specifically perceptual, dimensions of normativity. Johnston is complaining that since the early modern period all Thirdness has been wrongly identified with “the mental” conceived in narrow Cartesian terms – the private and subjective contents of individual minds. This is precisely Peirce’s complaint against

\textsuperscript{395} Hookway, \textit{Peirce}, p. 143.

\textsuperscript{396} Johnston, “Are Manifest Qualities Response-Dependent!?”, p. 3.
nominalism – that it conceives that the only generality (or, speaking more exactly, Thirdness) in the entire Universe is provided by the human mind:

For although nominalism is not credited with any extraordinarily lofty appreciation of the powers of the human soul, yet it attributes to it a power of originating a kind of ideas the like of which Omnipotence has failed to create as real objects, and those general conceptions which men will never cease to consider the glory of the human intellect must, according to any consisent nominalism, be entirely wanting in the mind of Deity (5.42).

The Traditional Realist Dialectic supposed that a two-way distinction between ‘things’ and ‘concepts’ (or representations) is implicit in the claim that anything is true at all, and those who cleave to a Scientific Ontology assume that this distinction must be metaphysical – a distinction between distinct things playing differing functional roles. For instance Pettit distinguished between things and concepts (which latter he sought to identify with certain dispositions in us). However, it has emerged that a three-way distinction is in fact required. Contra nominalism, we do not just point to chunks of the world when we speak truly, we describe the world as being certain ways (from which expectations arise). In order to perform such a feat we need more than just a sign and its object. Peirce’s addition of the interpretant allows for a processual character in reference whereby a given object is referred to by a community of inquiry with – if all goes well – a gradually reducing error.

The necessity of drawing this distinction between sign, object and interpretant not within ontology but within logic – as a distinction not between different types of thing but between different modes of signification – will emerge in the remainder of this discussion of realism and response-dependence.

8.5 Communitarian Nominalism

Pettit claimed that the only place for a systematic difference between redness and Unness with respect to their reality “is in the things that in turn determine those responses”. But was he right about this? He does not argue for the claim. It should now be apparent, however, that Peirce’s third mode of being opens up another dimension along which a systematic difference between the real and the unreal might be located, within a view which posits an internal link between truth and inquiry. By defining the real as that which no multitude of inquirers can refute, the Peircean pragmatist satisfies the realist criterion that our beliefs must always be answerable in principle to something greater than ourselves, while avoiding the need to compare our beliefs with things-in-themselves, which the antirealist rightly notes is impossible. In
this way, truth is simultaneously internal to inquiry and external to what any particular group of inquirers might believe.

Consider, by contrast to such a realism, the idea that a certain concept’s correct application is determined by the responses of a particular (finite) group of people, and may be said to be ‘merely nominal’ for that reason. U-ness is a merely nominal concept in this sense, for it depends on the responses of a particular group of girls – the Sloanes. Redness, on the other hand, appears not to be merely nominal, as any number of people may recognise the characteristic sensory quality and apply the concept. Communitarian Nominalism simpliciter, then, is the idea that all of our concepts have this nominal character.

Redness might turn out to be nominal, of course. For instance, the colours might be scientifically reduced to some (more primary) qualities with such explanatory effect that people abandon the old imprecise concepts in favour of the new scientific terms. A similar thing has happened with advances in medicine over the last few hundred years, where medieval concepts pertaining to the derangement of certain ‘humours’ have been entirely superseded by concepts such as high blood pressure, or diabetes. Alternatively, (somewhat fancifully) we might make intellectual contact with other sentient beings who, it turns out, are physiologically incapable of having ‘the red response’, so that after a certain amount of shared community with these new beings we end up just dropping the concept of redness.

Concepts from the natural sciences such as ‘electron’ seem likely to survive, however, due to their great explanatory power – if only in the attenuated form in which the ancient Greek concept of ‘star’ survives inside the modern one. We can never be certain which of our general concepts will survive and which will fall, finite, by the wayside of inquiry (nor indeed if any of our concepts will survive). Nevertheless, to hold Communitarian Nominalism is problematic in that it negates the possibility that concepts may develop in the manner required for them to be real – in ways that are unanticipated by an entire community at any given time. It therefore commits Peirce’s cardinal epistemic sin – it blocks the road of inquiry.

Kripke argues that the rule-following sceptic forces us to abandon realism with respect to rules. He tries to avoid Communitarian Nominalism insofar as he denies that he is providing truth-conditions for the correct application of predicates. However, as noted in §8.1, his term “assertability conditions” appears in the functional role where the term ‘truth-conditions’ usually appears. In the absence of any further account of realist meaning-change, this bars the way to any full-blooded account of truth with respect to, say, our application of the plus-function. This is serious enough when applied to adding. (Is Kripke really saying that mathematical claims are neither true nor false?). However, applied to all general predication it is surely unacceptable. Also, as has been noted, it bars the way to any account of development with respect to
mathematical concepts (so that it is hard to see, for example, why Kripke is not on the side of those who rejected Cantor’s seminal development of the concept of infinity on analytic grounds).

It was noted that Pettit made an explicit claim of Anthropocentrism with respect to response-dependent concepts:

The anthropocentric says that with substantive propositions within the discourse in question...there is no possibility that specified individuals or groups could be in ignorance or error.\textsuperscript{398}

Pettit does allow some vagueness in practice about who these “specified individuals or groups” might be, distinguishing no less than six possible claims of Cosmocentrism – each with its corresponding anthropocentric counter-claim – depending on whether it is an individual or a group which is immune from error, and whether that individual or group cannot err in actual, normal or ideal conditions.\textsuperscript{399} Perhaps he senses the risk of exposing himself to a criticism of Communitarian Nominalism, for he does not come down definitively in favour of any one of the six in particular. He even claims that, “even normally functioning or ideally positioned subjects have to be seen as getting things right in virtue of their access to an independent realm”.\textsuperscript{400} However, as already noted, under a global response-dependence how can the concept of “an independent realm” be given any content without destroying the response-dependence itself? Rather, to the degree to which a concept is entirely “independent” of our responses, to that degree for Pettit the concept must be entirely content-free or noumenal. Thus, Pettit’s vagueness about exactly which anthropocentric hypothesis he holds cannot hide the fact that he must be a Communitarian Nominalist of some form.

Johnston also steers into Communitarian Nominalist waters with his claim that:

...more antipathetic to the spirit of Pragmatism might be the idea that a set of truths could be privileged or especially worth knowing independently of any capacity of ours to come to recognise what is in our cognitive interest, the idea of the cognitive task being determined independently of such capacities.\textsuperscript{401}

If this is to be a claim with any content at all, Johnston must be arguing that our particular epistemic capacities make a difference to what we end up believing, such that a different ‘us’ with a different set of capacities might end up with different beliefs (this forming of beliefs being the most plausible interpretation of Johnston’s somewhat gnomic phrase “the cognitive task”). Though Johnston is not claiming that our epistemic capacities make a difference to what is true, when it comes to what Peirce referred to as “the fixation of belief” (what we should treat as true, for surely his “right

\textsuperscript{398} Pettit, “Realism and Response-Dependence”, p. 6.
\textsuperscript{399} For the full six-way chart, see Pettit, “Realism and Response-Dependence”, p. 8.
\textsuperscript{400} Pettit, “Realism and Response-Dependence”, p. 25.
\textsuperscript{401} Johnston, “Objectivity Refigured”, p. 113.
cognitive response” must play that functional role) his claim seems no different to Rorty’s flat-out “contingency” claim.

Again, the pragmatic maxim can be put to good use here. Johnston’s and Rorty’s claims about the way our capacities determine “the cognitive task” only differ over the existence of a response-independent truth ‘underneath’ our responses. But what expectations derive from the existence of this noumenal response-independent truth? Johnston does not present any, and it is difficult to see how he might, since to leave open the possibility of Enigmas he has distinguished truth from “right cognitive response”. Therefore, pragmatically speaking, Johnston’s claim arguably has no meaning over and above Rorty’s. It is interesting to note the way in which, in order to avoid the sort of “metaphysical realism” which leads to problems such as rule-following scepticism, both Kripke and Johnston feel obliged to put a pale metaphysical substitute (“assertability conditions” and “the right cognitive response” respectively) in the functional role usually accorded to truth conditions. We will see in the next section how Peirce, by contrast, shows how to keep a full-blooded concept of truth for predicates of irreducible generality, while avoiding such “metaphysical” realism.

Possibly the most subtle treatment of these issues is to be found in Price, who urges that his usage-based pragmatism is preferable to content-based response-dependence theories in that, “unlike the response-dependent account, the usage-based alternative is not committed to the a priori impossibility of global error.” Such objectivity as a discourse possesses is actually attained, he claims:

...not by relativising its claims to the standards of the community, but by exploiting the fact that the similarity within the community makes possible some degree of rational agreement on unrelativised claims.

This seems to suggest something like the Peircean community of inquiry. However, much hangs on what is meant by “similarity within the community”, which Price does not explicate further than to say that it consists in the existence of “like-minded responders” within a community. If by “similarity within the community” Price means similarity in human epistemic capacities, his point seems reduced to Johnston’s point that our epistemic capacities somehow determine the rightness of our cognitive responses, with the problems of contingency attendant on this claim. On the other hand, if he means by “like-minded” only that members of the community are interacting epistemically with the same “things”, Price’s point collapses into Pettit’s, with its attendant problems of noumenal realism.

The best reading in the current context, of course, would be that objectivity is obtained through a similarity in the community with respect to the methodology of inquiry, which leads the members of the community to align their concepts with real

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objects, and this idea will be further explored in the next section. (This is not to say that Price would necessarily endorse this interpretation, however.)

To sum up this discussion of Communitarian Nominalism, then: due to the problems that arise for what has been referred to as ‘the truthmaker impulse’ with respect to framing truth-conditions for general concepts in terms of things in the world, it is tempting to frame truth-conditions for those concepts in terms of features of the community. However if this community consists in some particular group of individuals, such truth-conditions prove problematic. Peirce’s response-involving yet ‘continuous’ account of true general predication, by contrast, will be further explored in the next section.

It is time to note that although I have been acceding so far to the conventional use of the term ‘truth-conditions’, the term itself is philosophically problematic in the present context. In fact it presupposes the nominalist picture according to which the important question with respect to the correct application of our concepts is how those applications have been ‘determined’. The understanding of concept-application appropriate to realism about the general is, on the other hand, forward-looking and teleological. No multitude of individual things can exhaust the ‘determination’ of real general concepts. Using it, we can have a theory (or, better, an explication) of truth, without a theory of truth-conditions. This also will be the subject of the next section.

### 8.6 Communitarian Realism

#### 8.6.1 Grammar and Inquiry

It was noted by Kripke in his sceptical solution of the rule-following problem that the community corrects the rule-follower with respect to rules’ proper application such that claims such as “68 + 57 = 5” will be over-ruled, blocked from the proper extension of the plus-function. This is true, he claimed, despite our illusions of rule-following self-sufficiency which lead us to postulate a “fact” about each individual which determines which rule he is following in any particular instance. This power to correct seemed to render the community as a whole authoritative with respect to concepts’ proper application. For if I extend a concept in some idiosyncratic way (for instance, by saying that bananas are red), I will just be wrong, no matter how right I might seem to myself.

This seemed to create an Objectivism without Cosmocentrism whereby we can apply our concepts wrongly, but not by virtue of their failing to correspond to any ultimately independent facts. (This, it was suggested, was coextensive with Wittgenstein’s idiosyncratic use of the term “grammar”, according to which, at some
ultimate level, “This is simply what I do”). This idea was also identified in response
dependence theory. Pettit claimed that people have primitive inclinations to extend rules
in various ways and that the community corrects and trains those inclinations to
produce concepts proper – and that some Anthropocentrism was therefore inevitable.
Johnston, meanwhile, claimed that, for at least some concepts, their correct application
is a matter of “practical criticism” as opposed to truth.

The question arose, however, how one is to reconcile such a ‘response-dependence’
with realism. Attempts by Pettit and Johnston to effect such a reconciliation were tried
and found problematic. Pettit tried to render a layer of “things” causally productive of
his response-dependent concepts. Price noted that this was in conflict with the global
character of Pettit’s response-dependence, while Smith and Stoljar noted that even if it
were to succeed it would create a realism which is unacceptably noumenal. Johnston,
on the other hand, proceeded to defend the realism of his Revisionary Protagoreanism
by effecting such a radical divorce between truth and the concept of epistemic value
that he also may be accused of noumenal realism.

A distinction is therefore needed between the power of the community to correct the
application of a concept and the power of the community to determine the application
of a concept. A certain amount of agreement and mutual policing with respect to the
correct application of our terms is required to begin inquiring at all. Peirce was very
cognisant of this, going so far as to recommend an “ethics of terminology”, to all who
wish to inquire seriously. He thought that what sets the natural sciences apart from
more immature sciences, (such as philosophy, alas), is the tendency of those
communities of inquiry to use words only in certain precise and publicly defined ways:

If philosophy is ever to become a sound science, its students must submit
themselves to that same ethics of terminology that students of chemistry and
taxonomic biology observe; and when a word has been invented for the declared
purpose of conveying a precisely defined meaning, they must give up their habit of
using it for every other purpose that may happen to hit their fancy at the moment
(8.191).

However, to hold that inquiry is only possible against a background of indubitable
rules for the application of certain concepts, is not to say that once concepts are in use,
these rules might not become subject to critical appraisal – and the meanings of the
concepts concerned thereby come to transcend those initial explicit rules for
application. Even with respect to Kripke’s initial example of the plus function, we have
seen how the rule has been extended to embrace such previously unanticipated
applications as the addings of complex numbers, higher orders of infinity and
matrices. Peirce even acknowledges the bare possibility that we might discover that we
were wrong about such paradigmatic cases as basic arithmetic (though he notes that we
must consider the probability of this to be infinitesimally small. Note that such critiquing of the rules of application for a concept is not the comparison of that concept with a "thing", but the evolution of 'meaning for us' towards 'meaning simpliciter'.

Thus (as noted in §7.3) the Wittgensteinian notion of "grammar" is an approximation of Peirce's Critical Common-sensism, which urges that doubt occurs only against a background of indubitable beliefs. However it is only an approximation for, unlike Wittgenstein, Peirce notes that the background of indubitable beliefs shifts very gradually as progress is made in fixing belief. In this way the more conservative nature of the concept of 'grammar' reflects the difference between Peirce and Wittgenstein in explanatory ambition noted in §7.4. For the concept of 'grammar' lacks the temporal dimension which is essential to Peirce's model of our use of concepts, whereby those concepts are undergoing a continual process of evolutionary development, via a "finality" (to use Johnston's term) which is not confined to "the mental".

It is hard to get the balance right between 'response-involving' and 'response-privileging' accounts of our use of concepts. How are we to draw a principled line between the two – to determine which corrections offered by the community to those who use its concepts are enabling and which are blocking inquiry? Relatedly, how are we to determine which of our concepts are finite and exhausted by the present community's rules for their application, and which concepts are continuous and transcend their "assertability conditions"? It seems that this would be an exercise in Herculean epistemology. A deeper question, however, is whether such a line might be drawable at all, at any particular time, and moreover (challengingly) whether we need to draw it. It was noted in §4.3 that the vagueness of Peirce's concept of truth is one of its great strengths. This vagueness means in practice that it is incumbent on the inquirer to trust the process of inquiry. Truth (in the form of concepts with real objects) is what the community will settle on if inquiry is only pursued long enough. Inquirers do not need to anticipate or control this process. As was pointed out in §6.5, this trust is itself realism, at its deepest level.

In short, then, a distinction exists between what may be referred to as 'Communitarian concept-correction' and 'Communitarian concept-determination'. Response-dependence theorists, insofar as they understand response-dependence in terms of concept-determination, block the possibility of this distinction. It is vital to leave the distinction open, however, despite the fact that we can never state where exactly it lies, in order to leave room for our concepts to develop. This, then, is all

402 "Absolute infallibility may belong to the pope and the ecumenical councils; it is outside my province to discuss that question. But I am quite confident it does not belong to the multiplication table. (2.75)"
Peirce meant by his statement that he is committed to “real generals” (by contrast to more problematically reified notions of scholastic realism such as Armstrong’s).

8.6.2 The Mathematics of Normativity
If we say that something is \( F \) if we are disposed to respond to it as \( F \), the multitude of the ‘we’ might seem to be a question without logical importance, a mere difference of degree. However, the hypothesis of synechism has made possible a substantive distinction here – between the dispositions of a finite and a continuous community (whether this is the static “linguistic community” of Pettit or, to use Peirce’s preferred terminology, the “community of inquiry”). As noted, normativity proper has two dimensions. The community projects concepts (which may be understood in categorial terms as the Firstness of Thirdness) and corrects the application of those concepts (which corresponds to real Thirdness\(^{403}\)), and if such a process can continue indefinitely with respect to a given concept or sign, the object of the sign is real.

The thesis began with Peirce’s hierarchy of the sciences, which is crowned by mathematics. It was observed that the concept of continuity appears in mathematics in the ‘geometric’ line which cannot be reduced to a collection of points of any multitude whatsoever. From this was taken the idea that there might be something which, though discrete parts may be detached from it, is somehow, strangely, of a higher logical order than any possible set of those discrete parts, however numerous the set. This idea appeared in phenomenology insofar as our past experiences naturally extrapolate onto individuals not yet encountered, and thus we are irrepressibly inclined to form expectations from our perception of the world as embodying certain properties. In this sense, it was recognised, our concepts themselves exhibit continuity.

This idea then filtered down to logic, where it appeared in the form of general predication. General predication presupposes the ability to extend a rule beyond the finite number of particular cases with which the rule-user has been acquainted in the past, into situations previously unencountered. It was then noted that, for Peirce, the concept of continuity is also crucial to an understanding of the meaning of our concepts for, according to the pragmatic maxim, we clarify meanings by discerning (and testing) the expectations about the future which derive from hypotheses which contain those concepts.

This, it was noted, is in sharp contrast to ‘metaphysical’ approaches to general predication which seek to justify our projection of our concepts based on some logically particular fact(s) or things. For the right answer to the question, “What grounds our projection of our general concepts in the direction in which we do project them?” is in fact, “Nothing”. The truth of statements which we frame using those

\(^{403}\) ‘The Thirdness of Thirdness’ might not be an inappropriate description here.
general concepts is, however, a further question. Peirce’s pragmatic explication of truth drew crucially on the concept of the community of inquiry, and in this sense the concept of truth was seen to be internal to the notion that inquirers, located within the world, frame concepts based on their experiences there. It is undeniable that our responses to the world are an integral part of inquiry, but what exactly does this claim come to? Not the framing of response-dependent "truth-conditions" (or even "assertability conditions") for statements containing general terms, for truth, though internal to inquiry, is external to the responses of any possible multitude of inquirers.

The forward-looking approach to meaning via the pragmatic maxim abandons the understanding of meaning as “truth-conditions” which, we have seen, has been very influential. Rather, from Peirce’s identification of the meaning a concept has for any sign-user with the expectations which the user may derive from hypotheses containing it, it follows, strikingly, that all claims are of the nature of hypotheses about possible future experience. Indeed, Peirce claims that such is “the rational purport of every concept (5.432).”

8.7 Realism and Reification.

8.7.1 Two Semeiotic Nominalisms

The Traditional Realist Dialectic, it was noted, depends on a profound distinction between two sets of things which play two distinct functional roles: a ‘representing’ and a ‘represented’ role. Although this distinction has been invoked using various pairs of terms, it has frequently been referred to as a distinction between things and concepts. According to this picture of realism, “things” are understood as what is referred to by us insofar as we speak truly. They are independent of us and we can be wrong about them – not just in an Objectivist but in a Cosmocentric sense. They are also understood as logically particular (as the potential values of bound variables). On the other hand, “concepts” are understood as our representations of “things”, which mediate our relationship with them. They have an anthropocentric character (whether the incorrigibility concerned is of a private, Cartesian or a public, Kripke-Wittgensteinian character). There is an interesting isomorphism here with Peirce’s distinction between the object of a sign and its interpretant, insofar as the object is understood as what any given sign refers to and the interpretant is understood as the community’s understanding of the sign, as reflected in the way in which the sign develops within the community. What if the “thing” and the “concept” is a reification of something not properly metaphysical?
Having the interpretant and object integrated within a triadic account of signification allows the best of both sides of the Traditional Realist Dialectic. The interpretant allows for the *prima facie* obvious role which one’s community plays in determining the meaning of one’s terms – and for all the functional or ‘usage’ aspects of meaning that Wittgenstein describes using such terms as “form of life”, and that Kripke, Pettit, Johnston and Price all acknowledge also in various ways. Its processual character allows for the continuity exemplified by meaning (discussed in §3) such that the meaning of any given sign is not a further object referred to by that sign, but consists in the development that that sign undergoes. Furthermore, it allows for the internal relationship between truth and the community of inquiry discussed in §4. The interpretant may thus be usefully understood as the dimension of Thirdness in signification.

On the other hand, the object allows for signification as contact with something which is *external* to the community’s determination of the meaning of any given sign, and thus potentially surprising to that community. It thereby formalises what is true about metaphysical realism: the intuition of epistemic humility. This, then, is the dimension of Secondness in signification, which – by contrast with the continuity of the interpretant – provides signification with a dimension of *discontinuity*. Speaking in formal semiotic terms, such discontinuity corresponds to the abandonment of features of the Immediate Object in the sign-users’ progress towards the Dynamic Object (such as the abandonment of the idea that water was one of the chemical elements, discussed previously). Without such discontinuity, semeiosis would be as impossible as it would be without continuity, for without it signs could never develop.

From this essential interplay between both object and interpretant it follows that there are two possible ‘logical nominalisms’. (To be more exact, these nominalisms are semiotic, semeiosis being the first of the three branches of logic as Peirce understands it – the other two roughly corresponding, as noted in §1.1, to formal logic and scientific methodology). One may omit the object from one’s account of signification and try to make do solely with the interpretant – or in other words, with the features of signification which Peirce gathers under the name “interpretant”. This, we have seen, is often presented as a worthy philosophical move for the sake of avoiding metaphysical realism, or “metaphysics in the pejorative sense”. However we have also seen it produces a *Communitarian Nominalism* whereby the responses of some particular group of people determine the proper application of any given sign without any possibility that those responses may be revealed to be erroneous by the recalcitrance of aspects of the world. As has been demonstrated, this produces a problematic epistemic conservatism which is, at bottom, a form of antirealism.

To avoid such an antirealism, one may omit the interpretant and try to make do with the object alone. In this case signification becomes a brute dyadic relationship between
“word and object” (which relationship is often, though not always, conceived in terms of efficient causation). This produces what may be referred to as a *Truthmaker Nominalism*. The problems with such a view are evident, namely noumenal realism and its attendant epistemological mystery. For signification is thereby reduced to a brute pointing of words to particular things – but how can such a model explicate our concepts’ predictive power? How can it account for our understanding of the way our general terms project? As Peirce puts it, “the form alone under which anything can be understood is the form of generality...”.

Communitarian Nominalism was identified in Kripke insofar as he argues that the only criteria for the proper application of rules such as the plus-function are the community’s stable language-games with respect to the rule in question. It was also identified in Putnam and Rorty insofar as they claim to explicate truth in terms of “what we do” by explicit contrast to “what there is”. Pettit and Johnston were also found to exhibit Communitarian Nominalism, though in a more fractured form. As we saw, both Pettit and Johnston understand that they need to incorporate some Secondness into their positions to avoid their response-dependent concepts becoming idealistic (or, as Peirce would term it, “fictive”). Thus, Pettit argues that the responses into which concepts are analysed are actually (efficiently) caused by things, while Johnston invokes a form of rigid designation by our responses themselves, introducing a reference-externalism into his view.

However, due to the unidimensional account of signification (the ‘Scientific Ontology’) which Pettit and Johnston both take for granted, they are forced to make their distinctions in the realm of metaphysics, for this is the only realm they recognise. “Things” and “concepts” are thus conceived of as distinct objects. Once distinct objects are posited, the temptation is to identify reality with one or other side of this ontological divide, which dooms the views of both Pettit and Johnston to an unintegrated dichotomy between antirealism and noumenal realism. Thus Pettit draws a charge of noumenal realism from Smith and Stoljar while at the same time being accused of antirealism by Price, both of which charges he seems unable to answer, while Johnston it appears is equally guilty of noumenal realism’s epistemological mystery.

If these issues are envisaged as belonging to logic rather than to metaphysics, however, one does not have to choose between antirealism and noumenal realism, between commitment to signs’ having objects and to their having interpretants! Rather, these warring ‘isms’ become modes of signification which are entirely complementary. These ‘modes of signification’ derive from Peirce’s modes of being or categories, and thus provide a further example of the way in which “principles” descend through Peirce’s hierarchy of the sciences.
8.7.2 “Modes of Being” Vindicated

The Scientific Ontologist (of which Quine and Jackson were offered as examples) argues that the old medieval/Kantian notion of differing modes of being, or categories, is outdated and can now be replaced with a single mode of being. “Things exist”, it is claimed and we (or, more usually these days, scientists) discover and then quantify over those things – what could be simpler or more straightforward than this? However, what if this is not the true logic of inquiry? Nominalism, as Peirce acknowledged, is a healthy intellectual impulse as long as it does not ride roughshod over the facts.

In §1.1 it was noted that I would work with Peirce’s ‘Scientific Hierarchy’ and see what results emerged. It has emerged that Peirce’s different modes of being are useful in understanding the essentially triadic structure of meaning and reference, in untangling the notoriously fraught rule-following problem and in framing a realism of great flexibility and power. By contrast, it has emerged that much damage may be done in philosophy by the reifications which the ‘truthmaking impulse’ encourages, if left unchecked. In particular, the impulse encourages a profound scepticism in contexts, (not just the rule-following debate discussed in §2 and §7, but also debates concerning truth, meaning, and universals) where the demand for truthmakers cannot be supplied.

It is somewhat ironic that Truthmaker Nominalism encourages reification, since the traditional motivation for nominalism is precisely to avoid unnecessary reification. Underneath this desire to avoid unnecessary reification, however, is an even deeper motivation for nominalism: to obtain the simplest theory possible. This is a laudable aim, and holding to a single mode of being might seem bound to simplify matters but does it? To banish a priori all possibility of real generality by allowing oneself to be intimidated by Kripke’s “bizarre sceptic” – is that the simplest approach to explicating our concepts? Is it simpler to define the plus-function as a list of true statements “1 + 1 = 2”, “1 + 2 = 3”, “1 + 3 = 4”….etc. ad infinitum’, or just to teach someone to add? Quine himself was not unaware of these issues, of course, writing in “On What There Is” that, “…simplicity, as a guiding principle in constructing conceptual schemes, is not a clear and unambiguous idea…”\(^1\)

Much of Peirce’s talent as a philosopher in fact springs from his ability to creatively synthesize an apparent dichotomy into a hypothesis which combines elements of both and also produces a clear and original body of expectations. We saw this with respect to his use of the mathematical concept of continuity to resolve the ‘Traditional Realist Dialectic’ through understanding truth as the limit of a process, and thus as simultaneously internal to inquiry itself and external to what any multitude of inquirers might think to be true. Such synthesising efforts are themselves an expression of synechism, not as a position in metaphysics, but as a tool or technique within the

\(^1\) Quine, \textit{FLPV}, p. 17.
methodology of inquiry (and in the study of the methodology of inquiry, it was noted in §1.1, it is incumbent on the inquirer to “do what she says”). For one of synechism’s most powerful logical lessons is to replace judgements of ‘yes or no’ by judgements of ‘more or less’. Thus Peirce writes:

There is a famous saying of Parmenides...“being is, and not-being is nothing.” This sounds plausible; yet synechism flatly denies it, declaring that being is a matter of more or less, so as to merge insensibly into nothing (7.568).

Much of this thesis has been concerned to give this view expression.
Conclusion

This thesis has been concerned with Peirce’s categories and how they shape his consideration of the realism question. However, the thesis has been perhaps unusual in its creation and weaving together of a number of narrative threads, concerning some rather diverse philosophical issues. These threads have at times undergone separate development, but have also been brought together at crucial points where it has been thought that this would prove mutually illuminating. Although this has resulted in an ambitious project, the technique was found necessary in order to do justice to what was referred to as the ‘holographic’ nature of Peirce’s thinking, which means that to some degree one needs to understand the whole of his philosophy in order to understand any part.

Here, then, is a summary of some of the major threads.

The first thread, arising directly from the fact that Peirce’s categories are three, has concerned the need for triadic as opposed to dyadic analyses of such traditional philosophical notions as meaning, truth, and reality. This thread originated in §1.4, where Peirce’s phenomenological derivation of his three “modes of being” was presented. Firstness, it was noted, may be prescinded from any experience of irreducible, qualitative feeling (such as the taste of pineapple) and Secondness from the experience of (efficient causal) resistance which things with a robust existence provide. Thirdness, on the other hand, arises from the fact that we perceive (indeed, cannot help perceiving) the world as having general properties. It was claimed that this derivation is ‘prelogical’: thus the right questions to ask with respect to Peirce’s categories in the first instance are not, are they real?” “Is it true to say they exist?”, but, “Are they irreducible?” and “Are they useful?” (in framing hypotheses that may themselves be true or false). Much of the rest of the thesis may then be understood as an attempt to show that Peirce’s categories are indeed useful in this way.

First of all, §2 raised some of the problems to which triadic solutions would be offered in later chapters. In particular, the rule-following problem asked how to account for the fact that we, who are finite and fallible, manage to project general predicates. For it seems that we cannot give any principled answer to the sceptic who says that our term ‘plus’ should be extended in a bizarre manner. It was noted that to some degree the problem arose from a tendency to ‘conflate meaning with reference’, insofar as the sceptic demands some fact to both stand for and “justify” what we mean. This, of course, raises the question of how meaning should be understood, if not in this excessively referential manner. It might be thought that the solution lies in replacing in the demand for an object to somehow ‘justify’ our practices by making the
practices themselves *sui generis*. Thus Kripke’s “sceptical solution” to the problem argued that all that is required to ground a statement that someone means something is “assertability conditions”, which correspond to the way in which we correct each other in practical rule-following situations. Similar themes were discerned in the response-dependence theorists Pettit and Johnston, and in the ‘neo-pragmatists’ Putnam and Rorty.

Chapter 3 turned by contrast to Peirce’s treatment of meaning. The chapter began with a discussion of the pragmatic maxim, in which it was noted that there is a “third grade” of meaning-clarification over and above mere knowledge of where a term is to be applied, and the ability to frame a verbal definition of it, which consists in the ability to derive future *expectations* from hypotheses containing the term. These expectations, it was noted, are clarified *a posteriori*. After this initial triadic analysis Peirce’s explicitly triadic “semeiotic” or theory of signs was presented. Instead of a brute, dyadic relationship between ‘signifier’ and ‘signified’, Peirce posits an irreducibly triadic relationship between ‘representamen’, ‘object’ and ‘interpretant’, the last just consisting in future uses of the sign which develop it in various ways. It was then noted that Peirce identifies the meaning of any given sign with its interpretant. Such a triadic analysis, it was noted, models a real teleology governing our practices of signification, as opposed to the reliance on efficient cause alone which is more usual in naturalistic approaches to language.

Chapter 4 introduced the idea of the ‘truth-maker’, or ontological analysis of truth which, it was noted, is increasingly influential in analytic philosophy. Such an analysis assumes that truth is fundamentally a two-place relation between a worldly item (the *truth-maker*) and a linguistic or conceptual item (the *truth-bearer*). The problem with such an analysis of truth, it was claimed, is not that it is *false* so much as that it misses the essence of the matter. Truth seems somehow to consist in more than a pure ‘pointing’ of particular statements to particular pieces of the world. Rather, true beliefs are sought because they give rise to certain stable expectations. How is this fact to be explicated? The rest of the chapter, then, explored Peirce’s distinctive concept of the (*continuous*) community of inquiry as an attempt to capture just what more there is to truth than the truthmaker model suggests.

Despite the fact that the truthmaker idea is not false, in later chapters it was argued that the sharp dichotomy it suggests between representers and representeds (which is actually a hangover of Cartesianism) has led to certain philosophical problems and distortions. In §5, the distinction was found to have coalesced into a divorce between ‘individuals’ and ‘ideas’, an intuition which, it was argued, underpins the extensionalist-intensionalist debate in philosophical logic. Quine, as a responsible naturalist, sought to quantify over what is real, but interpreted that as meaning that meanings and attributes had to be eliminated in favour of reference to individuals
alone. Peirce’s claim about the importance of hypostatic abstraction (against Molière’s influential burlesque of it) was used to undermine Quine’s approach, and moreover, suggest a more complex analysis of the individuation of objects (even the most ‘natural’), in which ‘ideas’ (or to be more exact, real Thirdness) play a crucial role.

The dyadic truthmaker idea was again confronted in §6. Armstrong, it was noted, claims to be a scholastic realist precisely in order to provide ‘predicate-makers’ for general predications (such as “Electrons have negative charge”). This understanding of scholastic realism, however, was shown to be vulnerable to attack from less complicated forms of the nominalism of which it is a disguised variant. Peirce’s scholastic realism by contrast, was found to spring (once again) from his commitment to his third category, understood as real patterns which govern and make intelligible that which exists and is causally efficacious (characteristics which correspond by contrast to his second category). The fact that we are able to make predictions which we know will come true (for example that unsupported stones will fall to the ground), Peirce argued, shows that such Thirdness is “really operative in nature”.

These various arguments against dyadic analyses scattered through the thesis were brought together in §8.4 in an overarching discussion of what was dubbed the ‘Traditional Realist Dialectic’. Talk of truthmakers (often referred to as “things” or “the world”) and truthbearers (often referred to as “concepts” or “us”) could be understood, it was argued, as reifications of phenomena not properly metaphysical: namely the object and interpretant of the sign respectively. This has led, it was claimed, to a tendency for philosophy to swing back and forth between antirealism and noumenal realism in various guises, insofar as philosophers seek to do justice to the intuition of epistemic humility and to the obvious communitarian dimension possessed by the meanings of our terms respectively. If, however, these phenomena are integrated within a triadic analysis of the sign, where object and interpretant play interlocking and equally vital roles, one does not have to choose between epistemic humility and communitarian sensitivity. Attempts to so choose, it was noted, have created either a ‘Communitarian Nominalism’, if the object is omitted and an attempt is made to make do with the interpretant alone, or a ‘Truthmaker Nominalism’, if the interpretant is omitted and signification thereby reduced to a brute pointing of representation to world. In this way, if it might be permissible to paraphrase Kant, the object without the interpretant may be seen to be “blind”, while the interpretant without the object is “empty”.

The second important thread in the thesis concerns Peirce’s distinctive hierarchy of the sciences, which may be understood as an approach from a different angle to the issue of whether being is univocal. (Indeed – although this hasn’t been discussed explicitly in the thesis – Peirce used his categories to generate his hierarchy of the
sciences in a manner reminiscent of “self-similar” mathematical procedures such as fractals.) In §1.1, the hierarchy was introduced and some of its levels briefly described. It was remarked that for Peirce sciences receive “principles” from sciences which are above them in the hierarchy, and “phenomena” from sciences below. In §1.2, the hierarchy was contrasted with the now much more prevalent view of a ‘Scientific Ontology’, according to which successful inquiry can be understood as one’s quantifying over as many of the world’s ‘things’ as possible. It was remarked that the thesis would explore Peirce’s hierarchy and see what results emerged.

Issues pertaining to Peirce’s hierarchy have arisen throughout the thesis. In §2, it was claimed that generality may be understood as a concept in logic rather than metaphysics. In §4, as noted, attempts to understand truth ontologically were resisted. Chapters 5 and 6 each in their own way attempted to rescue medieval realism from its current unpopularity by arguing for it as a ‘logical’ rather than an ontological position, properly understood. Thus §5 rode to the rescue of hypostatic abstraction which, though it has been lampooned as a pointless creation of useless entities, yet, it was argued, it is an important logical step in the finding of an explanation, giving birth to a new sign and thereby enabling new properties to be investigated. Quine, in proceeding straight to the ‘metaphysics of meaning’, missed this logical issue, it was claimed. Similarly in §6 we saw that Armstrong assumes that his scholastic realism is a position in ontology, and therefore that his Universals exist. This, it was argued, obscures the way in which commitment to what Peirce called “real generals” is a commitment to the possibility of predictions with respect to events over which we have no causal control (such as the fall of a stone). Thus a ‘semantic realism’ was suggested, which presupposes “no more recondite reality than that which is represented in a true representation (5.312)”.

Attention to Peirce’s hierarchy of the sciences was particularly marked in §7, which returned to the rule-following problem. Here it emerged that logic and ontology not only had to be separated from each other, but from phenomenology, where the solution to Kripke’s problem was argued to lie in what may be termed ‘the Firstness of Thirdness’. This in turn shed an interesting methodological light on the later Wittgenstein who, it was argued, may usefully be read as engaged neither in metaphysics nor logic, but in an altogether deeper inquiry.

According to the ‘Scientific Ontology’, all that can really be said about realism is, in effect, that ‘things exist’ (things which, we hope, correspond in some measure to the terms of our best scientific theory). By contrast, from the Peircean perspective realism may be unpacked into at least three separate claims. The first (discussed in §7) is that our general predicates possess an irreducible projectibility onto further cases – an intriguing and (looked at under some lights) amazing fact. The second claim (discussed in §6) is that at least some of our general predicates possess genuine predictive power,
so that we can say that the world does conform in certain measure to certain general representations. The third claim is that true general predication consists in the community’s tendency to align itself epistemically with real objects, particularly if it is a community of inquiry.405

The third thread which has been woven through this thesis has concerned the hypothesis of synechism, or commitment to real continuity. Peirce’s mathematical understanding of continuity was introduced in §1.3, and it was noted that it possesses some suggestive formal features. First, although individual points may be discerned on any continuous line, no multitude of discrete points can exhaust or be said to constitute it. Secondly, at least to some degree we can discuss the properties of the line without mentioning its points.

This first feature of mathematical continuity flowed through into Peirce’s Thirdness. Peirce’s definition of a true continuum as “something whose possibilities of determination no multitude of individuals can exhaust (6.170)” was drawn on crucially in explicating meaning in §3, insofar as, it was argued, no multitude of expectations (in the form of hypothetical conditionals) can exhaust the meanings of terms such as ‘hard’. Moreover, no multitude of inquirers can bring terms or concepts to utter determinacy. The definition was drawn on again in §4 in explicating truth. The community of inquiry is indefinitely large406, it was pointed out, and this allows Peirce to hold simultaneously to the claim that there is a unitary truth which consists in what these inquirers are working towards, while holding to a stringent fallibilism according to which at any time any group of people might be proven wrong (no matter how large the group). This definition of truth then fed into Peirce’s realism, allowing him to synthesise Internal Realism and the intuition of epistemic humility, insofar as the Dynamic Object of any given sign is understood not as a ding an sich, but as the limit which a certain process is tending towards. (In this way, though many philosophers have attempted to talk about “the limits of language”, Peirce can be seen, in a sense, to have actually managed it.)

The second feature of continuity as it appears in mathematics, the fact that we can talk or think about the line without necessarily talking or thinking about its points, flowed through into Peirce’s distinctive category of Firstness. Firstness was presented

405 Interestingly, for those with a taste for categorical iteration, these three claims might be described as the ‘Firstness of Thirdness’, the ‘Secondness of Thirdness’ and the ‘Thirdness of Thirdness’ respectively.

406 An issue which has been elided by the thesis to some degree has been the issue of whether Peirccean 'supermultitudinous' continuity is needed to explicate the community of inquiry, rather than regular infinity, as surely the community of inquiry can consist in at most a countable infinity of inquirers? However such an objection assumes that a human being is some kind of ultimate 'semeiotic unit' (a claim Peirce wished to complicate). Also, in an important sense Peirccean supermultitudinous
phenomenologically as irreducible feelings such as tastes. However things other than feelings may be said to possess some overall irreducible quality which may be grasped *sui generis*. As noted, this category came into its own in §7, where, to the Kripkean sceptic’s request for some *fact* to which my meaning plus rather than quas might be reduced, it was replied, “I am not able to provide some *fact* to which the difference between, say, red and yellow may be reduced, but this does not mean that the concepts do not differ”. Finally, it was noted that synecchism understood as the replacement in philosophy of differences in *kind* by differences in *degree* (and, as Anderson put it, by differences in “function”) is deeply implicated in §8’s final synthesis of traditional ‘-isms’ (antirealism and noumenal realism) into complementary features of an understanding of signification and thereby of realism.

Thus the key to getting beyond Secondness to (what Boghossian called) a “robust realism” is an appreciation of continuity. Continuity, however, manifests in what may be termed ‘diachronic’, developmental, and ‘public’, aspects and in ‘synchronic’, qualitative or ‘private’ aspects – in other words – ‘meaning simpliciter’ and ‘meaning for us’, or, even more generally, Thirdness and Firstness respectively. In 1893, in an advertisement for a comprehensive treatise on “The Principles of Philosophy” that he planned and never carried out, Peirce described continuity as “the great idea which has been working itself out”, and claimed, “Modern science [is] due to it exclusively.”

What does this mean? In the end Peirce’s explications of meaning, truth, and reality are not separate branches of his philosophy, but aspects of the one phenomenon, best understood in semeiotic terms. This is the breath-taking generality of Peirce’s philosophy, rooted ultimately in his categories, which led him to suggest that it might resemble Aristotle’s in its bimillenial paradigm-shifting character.

It was part of Peirce’s realism that he thought that signs themselves are developing towards the truth according to their own logic. As individuals, however, we can choose to hasten the development of signs or to postpone it. (We cannot stop it due to the continuity of the community of inquiry). We can hasten the process by making the meanings of our concepts more clear (*via* the pragmatic maxim) and by forming communities of inquiry that generate hypotheses then subject them to testing and winnow the true from the false. This insight that we may consciously help along the evolution of signs was in fact what triggered the seventeenth century epistemic

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continuity is the *simpler* and therefore more *general* hypothesis. But to spell this out properly would require another thesis.


408 “The undertaking which this volume inaugurates is to make a philosophy like that of Aristotle, that is to say, to outline a theory so comprehensive that, for a long time to come, the entire work of human reason, in philosophy of every school and kind, in mathematics, in psychology, in physical science, in history, in sociology, and in whatever other department there may be, shall appear as the filling up of its details (1.1).”
revolution (what Peirce called “modern science” above). Continuing the ‘trickle-down’ of concepts from mathematics which has proved fruitful in understanding Peirce’s philosophical system, such an increase in the inevitable developmental progress of signs may be described as an ‘intellectual acceleration’. Such a process is the true meaning of the realist hypothesis (if meaning there be).

Peirce’s non-univocal approach to being has therefore been vindicated in some small way. Realist discourse is more than just a vast existential quantification, some of which manages to hook onto “things” and some of which dangles uselessly in the epistemic void. Realist discourse is future-directed hypothesis – and, moreover, it is continuity with other inquirers. And the two are not unconnected.
Appendix: Peirce's Hierarchy of the Sciences

- mathematics
- phenomenology
- aesthetics (norms)
- ethics (norms concerning action)
- logic (norms concerning mental action (i.e reasoning))
  - theory of signs ('philosophy of language')
  - formal logic
  - methodology of inquiry
- metaphysics
- natural sciences, psychology... etc.  

410 Adapted and simplified from Peirce, MS L75.
PEIRCE : PRIMARY SOURCES


PEIRCE : SECONDARY SOURCES


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ANALYTIC PHILOSOPHY


**OTHER**


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