

The Pragmatic Maxim: Essays on Peirce and pragmatism

Christopher Hookway

Print publication date: 2012
Print ISBN-13: 9780199588381
Published to Oxford Scholarship Online: Jan-13
DOI: 10.1093/acprof:oso/9780199588381.001.0001

Introduction: The Pragmatist Maxim, the Method of Science, and Representation

Christopher Hookway

DOI: 10.1093/acprof:oso/9780199588381.003.0001

Abstract and Keywords

Peirce was the founder of pragmatism, which he presented as a maxim of logic that enables us to obtain complete clarity about the contents of concepts and propositions and to reject empty metaphysical claims. This maxim was taken up by William James and others. The maxim formed part of the epistemological framework which Peirce defended in 'The fixation of belief'. He rejected Cartesian foundationalist approaches to epistemology, holding that there was no reason to take familiar sceptical challenges seriously, favouring a fallibilist standpoint compatible with realism. In later work, he gave more detailed formulations of the maxim, attempting to show how his version of pragmatism was superior to that defended by William James—one respect being that his version could receive a strict proof. He also held that pragmatism required an account of perception which emphasized the richness of perceptual experience.

Keywords: pragmatism, Cartesianism, realism, nominalism, belief, judgement, assertion

Charles Sanders Peirce (1839–1914) is recognized as an innovative logician and systematic philosopher, whose contributions, both to the philosophy of his own times and in the development of contemporary philosophy can be approached from a number of different starting points. First, he was the founder of pragmatism and he defended a version of this position which is distinct from those favoured by William James, John Dewey, and others. Second, from his earliest writings he developed a powerful critique of Cartesian approaches to philosophy and laid the foundations for a

philosophical framework that replaced Descartes' foundationalism by a fallibilist approach to epistemology and the logic of inquiry. This involved both an original defence of the 'method of science' and the defence of a sophisticated and clearly formulated account of what this method of inquiry involves. Third, he introduced innovative accounts of *truth* and *reality* that have had lasting importance for philosophy (see Chapter 3 and Misak 1991). Fourth, he insisted that the study of logical norms should make no use of information from psychology, biology, and other natural sciences,¹ and he contributed to some fundamental developments in the logic and philosophy of the late nineteenth and early twentieth centuries.² And, fifth, Peirce constructed a systematic, formal account of representation and sign interpretation, the subject matter of his *semeiotic*. All of these issues are discussed in the chapters of this volume, and this introduction identifies some of the most important issues they involve and the relations between them.

Peirce acknowledged the influence of Kant upon nearly all of his work. He could not be described as a 'Kantian'; pragmatism involved the rejection of the possibility of a (p.2) priori metaphysics; and he was not, by any means, a transcendental philosopher. However, it is easy to understand why Peirce saw his position as 'but a modification of Kantism' (CP 5.452). He explains that a Kantian 'has only to abjure from the bottom of his heart the position that a thing-in-itself can, however indirectly, be conceived' for him only to have to make appropriate corrections to Kant's position for him to adopt Peirce's position of critical common-sensism (*ibid.*; and see Hookway 1985: 230, 2000: 215–19).

As early as 1865, he credited 'the Kantians' with demonstrating that we should adopt a non-psychological account of logic (W1: 164). And in the 1860s, he argued that logic should provide foundations for metaphysics. Thirty-five years later, this anti-psychologism was linked to the need of a system of philosophical *architectonic* (Kant 1787: passim; Short 2007: 60ff) and to the development a system of categories. Moreover, the rejection of Cartesianism undermined many of the problems faced by traditional philosophy, concluding that the only issues that can be discussed are those that can be evaluated using the empirical method of science. Peirce's philosophy of mathematics also rejected a priori sources of knowledge: mathematicians study abstract structures by (empirical) experiments upon diagrams.

This introduction begins from Peirce's understanding of pragmatism (Section 1). We explore both why Peirce insisted that pragmatism was, simply, a maxim of logic, and also why he said that it involved 'a whole system of philosophy'. This enables us to trace connections between some of the characteristically Peircean views described above. We then build on this by examining his critique of Cartesianism and the importance of his views about *truth*, *reality*, and the related concept of an object or state of affairs being *mind-independent* (Section 2). We shall then raise some questions about how the logical maxim of pragmatism should be formulated and applied (Section 3), and discuss the bearings of anti-psychologism upon Peirce's logical maxim of pragmatism. This involves tracing the development of Peirce's views about the kinds of representations that are fundamental to cognition and to the defence of pragmatism (Section 4). In the course of doing so, we address an issue which is important for Peirce's pragmatism, the nature of perceptual judgements. This complements Chapter 11 of the book, which explores the different strategies that Peirce employed for arguing for, or 'proving' the correctness of the maxim of pragmatism (Section 5).

A clear understanding of Peirce's thought is inseparable from a grasp of how his ideas, and the problems he was concerned with, developed (see Hookway 2000: 15–20; Murphey 1961). The final chapter illustrates this by trying to provide a narrative of his different strategies for demonstrating the correctness of the pragmatist maxim. Section 3 of this introduction prepares for this by showing how successive discussions of his maxim gave a central role to the analysis of different kinds of representations: beliefs, judgements, assertions, and propositions.

(p.3) 0.1 Pragmatism: maxim of logic or system of philosophy³

Peirce is often described as the founder of pragmatism. Although he did not use the word 'pragmatism' at that time, he defended what has come to be known as the pragmatist maxim in his 1878 paper 'How to Make Our Ideas Clear'. The maxim was designed to show how we can obtain full reflective clarity about the contents of concepts and propositions. We achieve clarity about the contents of propositions when we have identified how we think their acceptance could make a difference to what it could be rational for us to do; we clarify the proposition by identifying the 'practical consequences' we take it to have. And we achieve clarity about the contents of concepts by identifying the ways in which the fact that the concept applied to objects could have practical consequences. Peirce's canonical statement of his maxim was:

Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object. (EP 1: 132; W3: 266)

The other classical pragmatists were happy to identify Peirce as the founder of the position. In 1898, James identified pragmatism as 'the principle of Peirce, the principle of pragmatism' both in his lecture on 'Philosophical Conceptions and Practical Results' at the philosophical union at the University of California (James 1898) and in his Lowell 'Lectures on Pragmatism' in Boston in 1906. In the Lowell lectures, he explained that 'Mr Peirce, after pointing out that our beliefs are really habits of action, said that, to develop a thought's meaning, we need only determine what conduct it is fitted to produce: that conduct is, for us, its sole significance' (James 1907: 28–9). When John Dewey wrote an article on 'The Development of American Pragmatism' (1925), he observed that 'the origin of pragmatism goes back to Charles Sanders Peirce' and he was happy to endorse Peirce's claim that 'the rational purport of a word or any other expression lies exclusively in its conceivable bearing upon the conduct of life.'⁴

Although Peirce insisted that 'the word pragmatism was invented to express a certain maxim of logic', he also admitted that it 'involves a whole system of philosophy' (p.4) (CP 8.191, 1904). There are at least three reasons why the adoption of this logical rule can carry other commitments with it. First, as Peirce himself admitted in 1903 (CP 5.16), the formulation given above is vague: for example, just how should we understand 'practical consequences?', for example? This is not explained in Peirce's paper and, in 1903, Peirce thought that an adequate formulation of the maxim was still something for further research. James and Peirce understood the maxim differently, the former applying it in ways that displayed his nominalism, while Peirce favoured a version that required a commitment to realism (see Chapter 9).⁵

Second, one use of the maxim is to clarify problematic or controversial philosophical concepts such as *truth* and *reality*. As we shall see later in this section and in Chapter 1, Peirce used the maxim to reject the 'nominalist conception of reality', and James and Dewey used it to challenge the 'copy theory' of truth along with principles of a priori metaphysics. Pragmatism requires us to reject many influential philosophical opinions. And, third, we need to recall that the maxim of pragmatism was introduced, in 'How to Make Our Ideas Clear', as part of the method of science. Peirce had already

argued that the aim of inquiry is the establishment of settled or 'fixed' belief, and that this method is the only approach to inquiry that yields stable belief. A Peircean pragmatist thus, would, accept what Peirce described as the 'fundamental hypothesis' of this method:

There are real things whose characters are entirely independent of our opinions about them; those realities affect our senses according to regular laws, and our sensations are as different as our relations to the objects, yet, by taking advantage of the laws of perception, we can ascertain by reasoning how things really are, and any man, if he have sufficient experience and reason enough about it, will be led to the one true conclusion.(EP 1: 120, 1877; W3: 254)

The method of science involves a commitment to realism, empiricism, and an emphasis on the idea that inquiry contributes to a convergence of opinions by competent inquirers. In later work, Peirce employed a system of categories and he required that logic should depend upon the normative sciences of ethics and aesthetics, and upon the claim that the *summum bonum* is 'the growth of concrete reasonableness'. (See, for example, CP 5.3; EP 2: 343-4, 1905; Kent 1987: 158; Anderson 1995: 41-2.)

The final three chapters of this book are concerned with Peirce's pragmatist maxim, understood narrowly as a maxim of logic. As we have noted, Peirce's original formulation of the maxim was vague: just what is a 'practical consequence'? He expected the content of the maxim to become clearer as he advanced his attempts to demonstrate the correctness of the maxim. And Chapter 9 explores some of Peirce's different formulations of the maxim and also tries to clarify our understanding of it by examining some examples of Peirce's illustrations of its use. Chapter 10 compares the views of Peirce and (p.5) James by tracing the different ways in which they understand 'practical consequence'. In Peirce's view, James's pragmatism was 'nominalist' and Peirce's own was 'realist'. The final chapter examines the different strategies used by Peirce for defending the correctness of the pragmatist maxim between 1878 and 1907.⁶ The first seven chapters address aspects of 'the whole system of philosophy' that pragmatism involves: the critique of Cartesianism (Chapter 1); issues about truth and reality (Chapters 1 and 3); the critique of psychologism (Chapter 5) and the metaphysics and epistemology of mathematics (Chapter 6); abductive reasoning (Chapter 4) and perception (Chapters 7 and 8).

In my first book on pragmatism, *Peirce* (1985) I observed that Peirce 'recognizably inhabits our philosophical world, forging tools and concepts which are still central to philosophical debate' (1985: 1). He is, of course, also a philosopher who belongs to the late nineteenth century, and any attempt to understand and evaluate his thought must take account of this. But it is striking that we can enhance our understanding of Peirce's work by placing it in the context of contemporary philosophical debates, and we can often find useful contributions to contemporary debates by reflecting upon Peirce's work. We find evidence of this in work on truth, on representation, logic, metaphysics, and elsewhere. We share a tradition with Peirce, and we are helped to understand both the earlier stages of this tradition and our own attempts to further the tradition by entering into conversation with Peirce.

Part of the explanation of this is that much of Peirce's work is shaped by his contributions to logic and our understanding of the method of science and by his sympathies to what we might call 'exact philosophy'. What we share with at least some classical pragmatists are our problems, the questions we ask and the doubts and uncertainties which give rise to them. We also often share *strategies* for responding to those problems. And the problems that evidently arise within Peirce's inquiries are ones that pose questions that are interesting from a contemporary perspective. It is also important that Peirce often failed to complete his book projects or other manuscripts. It is only by entering into discussion with Peirce, while taking account of context, that we can understand what sort of completions of his remarks would be recognized by Peirce. And when we do this, we find ourselves engaging with important philosophical problems.

0.2 The critique of Cartesianism: realism and mind-independence

Among Peirce's most important achievements lie his critique of Cartesian methods in philosophy and his defence of a non-Cartesian approach to epistemology. This too provides part of the background of the pragmatist maxim. We turn to this now.

(p.6) In 'Some Consequences of Four Incapacities', the second of Peirce's papers in the *Journal of Speculative Philosophy in 1867-8*, Peirce listed and rejected some theses which determine the 'Spirit of Cartesianism'. The first is that 'philosophy must begin with universal doubt' and the second holds that 'the test of certainty lies in the individual consciousness. The third is that we should abandon 'the multiform argumentation of [mediaeval]

philosophy' and replace it by 'a single thread of argument often depending upon inconspicuous premises.' We should always ask what reason we have for accepting any proposition that we consider; and unless we can find good reason for believing it, we should adopt an attitude of doubt towards it.

In contrast with this, Peirce insists that our practice should be in harmony with 'the successful sciences' and with common-sense. We can't doubt something unless there is positive reason to do so, and we should 'begin with all the prejudices that we actually have when we enter upon the study of philosophy'; the test of an opinion can be established only by a *community* of inquirers, and we cannot trust the individual consciousness. And, in the spirit of the sciences, our reasoning 'should not form a chain which is no stronger than its weakest link, but a cable whose fibres may be ever so slender, provided they are sufficiently numerous and intimately connected (EP 1: 29).' Chapter 1 examines these ideas, seeking to understand Peirce's reasons for denying that sceptical doubts have any philosophical force and identifying the flawed metaphysical pictures which lead us to take scepticism seriously.

One aspect of this position is a view about reasons for belief and doubt. Peirce says that the doubt supported by Cartesian sceptical scenarios is fake or pretend doubt. We should not 'pretend to doubt in philosophy what we do not doubt in our hearts' (EP 1: 29; W2: 212). In order to change our opinions we need 'real and living doubt' (EP 1: 115; W3: 248). The mere fact that I cannot provide positive reasons for believing a proposition does not provide us with a reason for doubting it. Like Isaac Levi, Peirce adopts a 'principle of doxastic inertia' or conservatism: 'there is no need to justify current beliefs, only changes in belief' (Levi 1998: 179). By contrast, Cartesian philosophers adopt the principle that unless we can justify our beliefs, we should abandon them. These passages can seem unsatisfying: Peirce is simply inviting us to agree that we only need reasons for our beliefs when faced with a real, convincing reason for coming to doubt them. But, underlying his claims is a diagnosis of how the philosophical tradition has gone wrong.

The issue at stake concerns how we should understand the concept of *reality*, how we should think of *how things really are*. The idea of *reality* involves the idea of 'mind-independence': how things really are can be independent of how they appear to be. Our liability to error illustrates how such a gap between what we believe and what is really the case can occur. And the possibility of scepticism is threatening because of the possibility that any (or all?) of our beliefs could turn out to be mistaken. Peirce tries to

argue that the possibility is threatening if we have a flawed understanding of mind-independence. In a review of a new edition of Berkeley's writing, Peirce diagnoses what has gone wrong. Philosophers like Berkeley and Descartes adopt a 'nominalist' (p.7) conception of reality and mind-independence which makes scepticism and nominalism hard to avoid. His discussion exploits a comparison of two different ways of making sense of 'mind-independence'.

According to Peirce, we know that there is a mind-independent reality because 'we find our opinions constrained'. When I observe the tree outside my window, it is not up to me what opinions I form or what experiences I have. As Peirce puts it 'there is something which influences our thoughts, and is not created by them.' He continues:

We have, it is true, nothing immediately present to us but thoughts. These thoughts, however, have been caused by sensations, and these sensations are constrained by something out of the mind. This thing out of the mind, which directly influences sensation, and through sensation thought, because it *is* out of the mind, is independent of how we think it, and is, in short, the real. (EP 1: 88; W2: 468, 1871)

So reality is characterized in terms of its role as the cause of our sensations and thoughts.

If this account of reality is correct, then our sensations fit Peirce's conception of an *intuition* as described in the first of his 1868 papers in the *Journal of Speculative Philosophy*. An intuition is 'a cognition not determined by a previous cognition of the same object'. It is similar to an ultimate first premiss, to a premiss not a conclusion, except that premisses are judgements with propositional content while intuitions can also be non-propositional cognitions. An example of this would be a simple sensation which is 'determined directly by the transcendental object' (EP 1: 12; W3: 194). We are not directly aware of the transcendental object, and we are aware of it, simply, as whatever constrains our cognition. Peirce observes that, if this account of reality is correct, then we cannot avoid nominalism about universals or generals: and, if this is correct, then our ordinary cognitions will not be able to record real patterns or general qualities in reality. We have no way of comparing our classifications of things with reality. If this framework is adopted, then we avoid scepticism only by claiming that the world is, somehow, our creation.

Peirce then proposes an alternative account of mind-independence which, he thinks, is more natural, and which he evidently prefers. Consider his example:

Suppose two men, one deaf, the other blind. One hears a man declare he means to kill another, hears the report of the pistol, and hears the victim cry; the other sees the murder done. Their sensations are affected in the highest degree with their individual peculiarities. The first information that their sensation will give them, their first inferences will be more nearly alike but still different...but their final conclusions, the thought remotest from sense, will be identical and free from the one-sidedness of their idiosyncrasies. There is then to every question, a true answer, a final conclusion, to which the opinion of every man is constantly gravitating. Thus: human opinion universally tends in the long run to definite form which is the truth. (EP 1: 89; W3: 468, 1871)

In 'How to Make Our Ideas Clear', Peirce arrived at a similar view by applying the pragmatist maxim to the clarification of *reality*. His procedure is indirect, first clarifying *truth* (p.8) and then deriving a conception of reality from this: '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' (EP 1: 139; W3: 273, 1878). Chapter 3, 'Truth, Reality, and Convergence', discusses these claims about truth in detail, arguing, in particular, that a common interpretation of Peirce's account of truth which holds that he accepted the 'absolute conception of reality' is mistaken.

Defining reality as, simply, the object of a true proposition, involves treating *reality* as a logical concept; we can treat it as a metaphysical view, only if we think of metaphysics as a discipline that it is primarily concerned with logical issues. In later work, Peirce said that once we establish objects of some kind (values, numbers, classes, for example) there remains a metaphysical issue about just what the 'mode of being' of these realities is (see Chapter 3). For Peirce, metaphysics is an empirical, scientific discipline, one which can explain why realities of particular sorts conform to the laws that they do. Why or how can we be fated to arrive at particular opinions about the behaviour of such things? The fact of convergence on the facts about some object may determine *that* these objects are real; but metaphysical issues remain about how or why they behave as they do.

Hilary Putnam has argued that one of the characteristic marks of pragmatism is the desire to endorse a position which rejects scepticism but endorses fallibilism (1994: 152). This is confirmed by Peirce in his review of Berkeley's writings (EP 1: 83–105; W2: 462–86, 1871). Although we are 'constantly gravitating' towards the truth, it is allowed that we may 'for a time recede from it' but, given 'more experience and time for consideration, [we] will finally approach it'. We may not live to see the truth: 'there is a residuum of error in every individual's opinions. No matter: it remains that there is a definite opinion to which the mind of man is, on the whole, and in the long run, tending' (EP 1: 89; W2: 469). Peirce's confidence here may be over-optimistic; we cannot be confident that we will be able to collect the evidence that is required for us to reach the truth. But the general idea that our methods of inquiry are self-correcting, that error need not be a permanent feature of our position, is a fundamental aspect of Peirce's work (see Cooke 2006). Chapter 4, on 'Interrogatives and Uncontrollable Abductions' discusses the ways in which the use of abductive, deductive, and inductive reasoning contribute to the progress made by the use of the method of science. It emphasizes the importance of asking the right questions if our inquiries are to succeed, exploiting Peirce's insistence that the conclusions of an abductive inference has a content which is best expressed by an interrogative expression.

0.3 Some questions about the maxim of pragmatism

Suppose we want to clarify the concept *heavy*. Then we could do this by clarifying the content of a proposition such as:

That object is heavy

The box you are carrying is heavy.

(p.9) In each case, we clarify the concept by clarifying a simple proposition in which that concept is applied to something. For this to provide a clarification of the concept, we would need to establish that none of the practical consequences which the proposition had would depend upon the way in which the object was identified: the fact that it is a *box*, for example, should be irrelevant to the analysis of heaviness. Moreover, the information we obtain in this way should provide all that is required for the clarification of other propositions in which it occurs. Thus if I want to clarify *If the box is heavy I should not try to lift it*, the contribution of the concept *heavy* to this clarification will be provided by the clarification of the simple proposition discussed above.

There may be an alternative to the claim that the pragmatist clarification of the simple proposition forms part of the clarification of the complex propositions in which it occurs. We could revise Peirce's formulation by claiming that the maxim is a tool for clarifying propositions rather than as a tool for clarifying concepts.⁷ We could then hold that we have a clear grasp of a concept when we can clarify all familiar propositions that contain it. The pragmatist maxim is a methodological rule for clarifying propositions, it is not directly part of a systematic semantics or theory of meaning for expressions of a natural language.

As was noted above, Peirce's explanations of his pragmatist maxim are not worked out in very much detail. The original formulation in 'How to Make Our Ideas Clear' was vague, using an unexplained concept of *practical consequences*. During his last decade, Peirce sought a rigorous proof of the correctness of the maxim, and he acknowledged that we will not be able to give a detailed statement of the maxim until we have constructed the proof: the proof will display the content of the maxim as well as demonstrating its truth.

As is documented in Chapter 9, the most helpful careful formulations of the pragmatist maxim are found in writings from 1903 and later. The first of the 1903 'Lectures on Pragmatism' captures the 'practical' dimension very clearly:

Pragmatism is the principle that every theoretical judgment expressible in a sentence in the indicative mood is a confused form of thought whose only meaning, if it has any, lies in its tendency to enforce a corresponding practical maxim expressible as a conditional sentence having its apodosis in the imperative mood.(EP 2: 134–5)

We clarify a proposition by showing how its truth would make a difference to what it is rational for us to do. Of course, what it would be rational to do, given the truth of this proposition, will depend upon aspects of the context. A 1905 formulation amplifies this: the meaning of a proposition, or 'the entire intellectual purport of any symbol', is captured by identifying habits of behaviour ('general modes of rational conduct') that should be adopted, conditional upon 'all the possible different circumstances and desires' (EP 2: 346).

(p.10) Let us allow that the 'desires and circumstances' constitute the *contexts* in which we can act. So, if we seek guidance on how we should act, we can ask what habits of rational action we should adopt in the context

in which we propose to act. We might then consider *possible* contexts in which our desires are different or our circumstances are different. In that case, we may decide to try to change features of our context rather than simply doing what it is best to do given the desires we have and the circumstances in which we find ourselves. Indeed we might hold that what it is rational for us to do should not be determined by the *desires* we happen to have; instead we should be guided by our understanding of what desires we *ought* to have or by our conception of the good. This is in line with Peirce's conception of the *summum bonum*, the 'growth of concrete reasonableness'. Our use of the pragmatist maxim in guiding our inquiries and other actions is inseparable from our reflections about what it is reasonable. A full understanding of the pragmatist maxim probably requires an understanding of our cognitive contexts, of the sorts of information we should take account of in reflecting about the consequences of our actions in different possible circumstances.

This account of the content of the pragmatist maxim raises some interesting issues. It is a common assumption that a pragmatist clarification of a concept or proposition will consist in a universal general formulation. When Peirce explains *reality*, he simply says '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 true proposition is the real' (EP 1: 139; W3: 273). And what we mean by describing something as *hard* is that 'it will not be scratched by many other substances' (EP 1: 132; W3: 266). In different contexts, this may not be a salient 'practical consequence': when I wonder whether a cricket ball is hard, I may be interested in whether it will bounce when it hits the ground or whether it will hurt when it hits the batsman. Pragmatist clarifications are context relative. We need not seek a single clarification that will work for *all* possible contexts; nor, for an adequate clarification of the concept, do we need to be able to clarify the use of the concept in any possible context that may arise. The maxim is a methodological tool for the effective use of concepts in the contexts we occupy, or those which are relevant to our inquiries. The general patterns of rational behaviour that are relevant in different possible contexts may not be the same.

These developments in how Peirce formulated his pragmatism after 1903 and 1905 reflect important developments in his thought. Throughout his philosophical career, he was opposed to the view that research in psychology, biology, and other natural sciences could be used in normative logic and epistemology. Although he was opposed to psychologism from

the 1860s, he became especially insistent on the need to avoid it after around 1898 (see Chapter 5). As has been explained, this may reflect the developments in his views of *possibility* in the 1890s (see Lane 2007), as well as his important contributions to formal logic. Normative logic must equip us to reflect objectively about different possible states of affairs, and this is reflected in the appeal to possible contexts in applying the pragmatist maxim.

(p.11) Peirce saw his opposition to psychologism as a major disagreement between himself and other pragmatists such as James and Dewey (See Chapters 5 and 10): while Dewey sought a *rapprochement* between logic and psychology, Peirce used a review of Dewey's book as a vehicle for setting out some of his criticisms of the use of psychology and evolutionary biology in logic. It appears that after he had written 'How to Make Our Ideas Clear', Peirce had doubts about the tenability of the maxim, probably because he thought that his arguments for pragmatism depended upon controversial psychological views about the nature of belief. Stirred by the fame, or notoriety, that James's espousal of the doctrine gave to pragmatism, Peirce was determined to provide a non-psychologist defence of pragmatism which would take the form of a proof.

0.4 Beliefs, judgements, assertions, propositions

The pragmatist maxim is supposed to provide complete clarification of concepts and hypotheses: it provides all the clarification that is required for participation in cognition and inquiry. In order to evaluate this claim, we need an account of the kinds of cognitive states and activities that are involved in inquiry. According to the arguments of Peirce's well known papers, 'The Fixation of Belief' (1877) and 'How to Make Our Ideas Clear' (1878), the fundamental cognitive states are *belief*, and *doubt*. In the former paper, he argues that the aim of inquiry is *settled belief*, and this conclusion is used as a premiss in his argument that the only legitimate method of inquiry is the method of science: other methods are rejected because their reflective use cannot give rise to settled belief. The second paper argues that use of the pragmatist maxim will provide clarifications of concepts and hypotheses that will meet all our cognitive needs. This means that we should adopt the pragmatist maxim because doing so is necessary for the stable settlement of belief. It does this because it makes manifest what is involved in believing something. The argument exploits a view about what a belief is. In 'The Fixation of Belief', we learn that, as well as being associated with a distinctive sensation, 'our beliefs guide our desires and

shape our actions' (EP 1: 114; W3: 247). Peirce continues that 'the feeling of believing is a more or less sure indication of there being established in our nature some habit which will determine our actions.' Beliefs are habits of action, and this is the key both to the method of inquiry we should adopt and to the correctness of the maxim of pragmatism.⁸ By identifying what habit of action constitutes a particular belief, we learn what the content of the believed proposition is.

Peirce wrote little about pragmatism for at least twenty years after writing 'How to Make Our Ideas Clear'. Once his interest in pragmatism returned, Peirce expressed some doubts about whether the concept of *belief* could do all the explanatory work it (p.12) was given in the earlier papers. For example, in his 'Lectures on Pragmatism' in 1903 he acknowledged that his 1878 defence of the maxim of pragmatism depended on the argument that 'belief consists mainly in being deliberately prepared to adopt the formula believed in as a guide to action' (EP 2: 139). He admitted that if this analysis of belief is correct, then it is evident that 'the proposition believed can itself be nothing but a habit of conduct'. But he expressed doubts about whether beliefs are indeed habits of action. Peirce suspects that that his earlier view can be 'traced...back to a psychological principle' (EP 2: 14). Views about our aims in inquiry should not be reduced to psychological facts because man 'could alter his nature, or his environment would alter it if he did not voluntarily to do so, if the impulse were not what was advantageous or fitting' (*ibid.*). Logic is not concerned with what we take our cognitive desiderata to be; rather, it is concerned with what our cognitive goals *ought* to be. Psychology cannot answer the normative issue that concerned him.

Peirce's next reformulation of his position is initially surprising: 'The question of belief, or in other words the question of what the true logical analysis of the act of judgment is, is the question upon which logicians of late years chiefly concentrated their energies' (EP 2: 140). Without explaining why, he asserts that we should give a central role to judgement rather than to belief. This suggests that an analysis of belief can be identified with an analysis of the act of judgement. Why should this be? Since a belief is a state and a judgement is an act, it may be easier to read it as a proposal that we should abandon the question about belief and replace it with questions about judgement. So, what is judgement? And how is the investigation helped along by giving it a central role?

Before answering this question directly, we should examine a number of passages from 1898 and 1901 which express some different reasons for

doubting whether belief, understood as a habit of action, can have the fundamental role that Peirce had given it. In a paper from 1898 called 'The First Rule of Logic', he argued that 'holding for true' is ambiguous, that there are two kinds of holding for true (EP 2: 56):

the one is that practical holding for true which alone is entitled to the name of Belief, while the other is that acceptance of a proposition which, in the intention of pure science remains always provisional. To adhere to a proposition in an absolutely definitive manner, supposing that by this is merely meant that the believer has personally wedded his fate to it, is something which in practical concerns, say in matters of right and wrong, we sometimes cannot and ought not to avoid; but to do so in science amounts simply to not wishing to learn. Now he who does not wish to learn cuts himself from science altogether. (EP 2: 56)

In 'On the Logic of Drawing History from Ancient Documents', Peirce describes 'practical belief' as 'what a man proposes to go upon'. With science, things are different because 'a problem started today may not reach any scientific solution for generations', and the person who starts the inquiry doesn't expect to learn the solution in his lifetime (EP 2: 85). The conclusion is that 'the word "belief" is out of place in the vocabulary of science' (*ibid.*). In pure science, a currently accepted proposition 'is merely the formula reached in the existing state of scientific progress'.

(p.13) Why is this important?⁹ In the 1878 paper, Peirce appears to defend a unitary conception of belief which has two features:

1. A belief is a habit of action, something whose content is determined by the ways in which it enables us to meet our desires or needs.
2. Scientific research aims at settled belief.

In the late 1890s, Peirce denied that a single conception of belief could meet *both* of these needs (See Hookway 2000: ch.1).

We have already noticed how in 1903 Peirce used the concept of *judgement* in accounting for (or instead of) belief. What does he mean by *judgement*? If a belief is a habit of action, then the deliberations that are undertaken in acting in accord with this habit will often involve making judgements.

This concept of judgement comes from Kant. A fundamental form of cognition involves recognizing things as falling under concepts. According

to Kant, this involves making judgements about them; indeed 'the only use which the understanding can make of concepts is to judge by means of them (1787: A68). The results of acts of judgement are always the acceptance of a proposition. Kant reminds us that judgement always issues in *mediate* knowledge of things, engaging with representations of a representation of the object. Indeed all judgements are functions of unity among our representations (1787: A69); and the knowledge it provides is always *mediate*'.

Peirce's account of *judgement* is similar to Kant's. A judgement is an 'act of consciousness' or a mental act (EP 2: 12, 292). Through this act, 'the judger seeks to impress upon himself the truth of a proposition' and to determine in [his] mind...belief in a proposition'. The judgement 'involves the formation of a mental proposition combined with an adoption of it or act of assent to it.' As for Kant, for Peirce a judgement has a mediate character. In 'Questions Concerning Certain Faculties Claimed for Man', he claims that all cognitions, and hence all judgements, result from inference (EP 2: 11-120). It is significant here that Peirce's explanation of the nature of judgement appeals to the idea of a *proposition*; judgements thus involve a more fundamental kind of representation. This is in line with his anti-psychologism, as is shown in the following passage from 1903:

- To explain the judgment in terms of a proposition is to explain it by what is essentially intelligible.
- To explain the proposition in terms of the judgment is to explain the self-intelligible in terms of a psychological act, which is the most obscure of phenomena or acts. (EP 2: 275fn)

(p.14)

Just as we need to appeal to judgements to understand belief, we need to understand propositions in order to understand judgements. In 1877 and 1878, Peirce sought to explain what propositions are in terms of the content of beliefs; but in 1903, he suggested that propositions are more fundamental than beliefs or judgements.

When we make a judgement, we evaluate the available reasons for belief and judge that these reasons are sufficient. These evaluations must be sensitive to our cognitive aims, and must reflect our adherence to these values. It is not surprising that the standards employed may vary according to whether, for example, we are engaged in pure science or in practical matters.

Peirce's discussion in his 1903 lecture has three stages.

1. First, as we have seen, Peirce holds that the best way of providing a non-psychological account of belief is to employ a logical analysis of *judgement*.
2. Second, he asserts that we best understand judgement by exploiting the fact that it is 'closely allied to *assertion*' (EP 2: 140).
3. Third, he observes 'that the act of assertion is an act of a totally different nature from the act of apprehending the meaning of a proposition', and an analysis of judgment or assertion cannot 'throw any light' on 'the widely different question of what the apprehension of the meaning of a proposition is' (*ibid.*).

So, it seems, we are to explain belief and judgement in terms of assertion and our concern, when trying to defend the pragmatist maxim, should be on what is involved in the *apprehension of meanings*, rather than on belief, judgement, or assertion. Those interested in the parallels that emerge in the work of different philosophers concerned with the foundations of logic will be reminded of Frege's insistence, in his 1918 paper 'Thoughts' that we should distinguish (1) the grasp of a thought, (2) the acknowledgement of the truth of a thought—the act of assertion, and (3) the manifestation of this judgement-assertion (Frege 1984: 355–6).

How should we understand the 'close alliance' between judgement and assertion? Michael Dummett discusses two possibilities: we can compare the view of assertion as 'the expression of an interior act of judgment' and the view of judgement as 'the interioration of the external act of assertion' (Dummett 1973: 362). It is clear that from the 1860s until his death, Peirce favoured the second of these views.¹⁰ In this context, Short has emphasized that thought is internalized discourse, and that it follows from this that 'the private act must be modelled on the public one' (Short 2007: 247; and see EP 1: 23–4, 1865).

Peirce clarified the relations of propositions and assertions in a letter. A proposition is not an assertion, but is, rather, a sign *capable* of being asserted (CP 8.337). In order to understand assertion, Peirce advises us to consider a case where the 'assertive element is magnified'. This is provided by 'a very formal assertion such as an affidavit':

(p.15) Here a man goes before a notary or magistrate and takes such action that if what he says is not true, evil consequences will be visited upon him, and this he does with a view to thus causing other men to be affected just as they

would be if the proposition sworn to had presented itself to them as a perceptual fact. (EP 2: 140)

How is the assertive force of an assertion manifested? According to Peirce, it cannot be a conceptual element of the content of the proposition expressed: after all *any* proposition can be uttered unasserted; even if it is the proposition that one is making an assertion. This is probably the clue to Peirce's somewhat mysterious claim, in a letter to Lady Welby, that 'the act of assertion is not a pure act of signification' (CP 8.337). Rather, he says, assertion is 'an exhibition of the fact that one subjects oneself to the penalties visited on a liar if the proposition asserted is not true (*ibid.*). One's self-subjection to norms of assertion is somehow 'exhibited', or displayed. Our making the assertion reveals the commitments that we undertake.

In concluding this section, we must recall Peirce's insistence on the priority of propositions to beliefs, judgements, assertions, and so on. We can perform these acts because we can grasp the propositions ('dicent signs'), and we should not identify propositions with judgements or assertions. We can understand arguments without urging anyone to be persuaded by them. This has important implications for Peirce's attempts to demonstrate the correctness of pragmatism (see Chapter 11). Rightly or wrongly, it is widely accepted that Peirce argued from the premiss that a belief is a habit of action to the conclusion that the content of a proposition is determined by a habit of action. As we shall see, in Peirce's later work, the argument goes in the opposite direction. Through investigating what is involved in understanding an, 'intellectual concept', Peirce concludes that a proper understanding of such a concept involves identifying it with a habit of action. If beliefs are propositional attitudes, then we can reason that since the meaning of a proposition is a habit of action, then a belief is a habit of action too.

0.5 Perceptual judgements and the given

The method of science gives a special role to perception: we obtain reliable knowledge of reality because realities 'affect our senses according to regular laws'. A perceptual judgement is the 'first judgment of a person as to what is before his eyes; and such judgments are beyond control but also, of course, fallible' (EP 2: 191). Like all judgements, perceptual judgements involve 'the formation of a mental proposition combined with an adoption of it or act of assent to it' (EP 2: 191). Its content has a propositional structure. Peirce describes such a judgement as 'the extreme case of an abductive inference':

it involves applying concepts to the objects of our experience, evaluating the information that is available; but the inference involves no *reflective* weighing of evidence.

Much pragmatist engagement with these important features of cognition takes the form of a reaction to the idea that our beliefs are grounded in the 'given' (see Chapter 8; (p.16) and Lewis 1929; Sellars 1963: 191–6). The given is typically characterized as a perceptual content which is both non-inferential and non-conceptual; in that case the given provides some sort of basis for our perceptual judgements, but it is not to be identified with them. Perceptual judgements are both inferential and conceptual; but the given has neither of these features. If we were to accept what Peirce called 'the nominalist conception of reality', our main contact with reality would be through what Peirce sometimes called 'intuitions', and they would thus fit what is often described as the 'given'.

Peirce drew a distinction between the *percept* and the perceptual judgement. It would be a mistake to identify the *percept* with the non-inferential, non-conceptual given. When he sits writing in his room, 'the yellow chair with a green cushion that he sees on the other side of his table *is* the percept' (CP 7.619; and see Hookway 1985: 156f). The percept is the material object seen directly. Although Peirce distinguishes percept and perceptual judgement, he also insists that these two elements are really fused in the *percipuum*.¹¹ We must resist the idea that generality (or conceptual interpretation) are to be found in the perceptual judgement but not in the percept): 'our very percepts are the results of cognitive elaboration' or 'conceptualisation' (CP 5.146). Peirce distinguishes three elements in percepts. First, they embody 'qualities of feeling', and each of them is 'something positive and *sui generis*, being how it is regardless of how or what anything else is' (CP 7.625); second, some element of the percept appears as it does 'relatively to a second part', in a way that gives vividness to the things we attend to, and leads us to perceive it as a *singular individual*; and, third, I can identify the percept as having the appearance of having a particular character, of being a yellow chair, for example. This third feature is most evident in the perceptual judgements that we make, but it cannot be distinguished from the other elements. It would be a mistake to think of the first element, 'the qualities of feeling' capturing the essence of our pure experience: our experience incorporates qualities of feeling, an object which possesses 'singularity' and something which is captured in our conceptualizations (CP 7.626–7; and see Hookway 1985: ch.5 passim)¹²

Chapter 7 explores in detail a metaphor used by Peirce to explain the nature of *ideas* or general properties: this is the idea that an idea is 'a sort of composite photograph'. In that chapter, it is argued that this tries to explain how we can apply 'ideas' to elements of our experience by using these composite photographs functioning as schemata. This is supported by a remark in a manuscript from 1905: 'a percept is much like a moving picture accompanied with sounds and other sensations' (MS: 939).

(p.17) The evidence for the abductive character of perception lies in the fact that there are intermediate cases between perception proper and reasoning proper, cases where we can control our experience by manipulating conceptual possibilities. Like Wittgenstein nearly fifty years later, Peirce draws upon cases of aspect shift to provide an intermediate case between ordinary perception and cases where it is clear that we are drawing inferences on the basis of what is seen. Peirce himself uses the Schroeder stair as an example (CP 7.647), but using Wittgenstein's example of the duck-rabbit is a nice way of registering some historical dependencies: the duck-rabbit figure is usually attributed to Joseph Jastrow who had been Peirce's research collaborator and student at Johns Hopkins in the late 1870s. Reflecting upon such figures shows that *how something looks* (and not just what we believe it is) depends upon our expectations. Another example used by Peirce concerned the experience of looking out of a train window and mistakenly taking it that his train is moving, when, in fact, it is the train on the next platform that is starting to move. The experience can continue to have this deceptive character even when he knows that it is not his own train that is moving (CP 5.181). What we experience is not just a clash between our beliefs and our experience; we often experience incoherence within the experience itself, which simultaneously involves anticipations and thwarts those very anticipations. The fact that, in these cases, 'the perceptual judgment, and the percept itself, seems to keep shifting from one general aspect to another and back again' (CP 5.183) shows that the percept is not 'entirely free from...characters that are proper to *interpretations*' (CP 5.184).

In cases of aspect shift, we may be able to control what we see, but in perception, this is not normally the case: 'The perceiver is aware of being compelled to perceive what he perceives' (CP 4.541). The percept 'neither offers any reasons for (its) acknowledgement or makes any pretence to reasonableness'. 'It acts upon us, it forces itself upon us; but it does not address the reason, nor *appeal* to anything for support' (CP 7.622). The 'abductive suggestion' here comes to us 'in a flash' and (at the time it occurs) is 'absolutely beyond criticism'. But in spite of this, 'it is an act

of *insight*, although of extremely fallible insight' (CP 5.181). So we face a question about how this process of automatic, educable and insightful abductive interpretation of perceptual experience is possible. Success in cognition depends upon some of our concepts and ideas taking a form that enables them to serve this role.

This is one more area where the composite photograph metaphor comes into its own. Our ideas provide templates that can provide a sort of recipe for imaginative, automatic anticipation of the future run of experience. We might say that, unconsciously, they guide us in determining how things *should* look and in constructing experience in the light of that; and they do this without the intervention of careful reflective deliberation. And it is easy to see that this is the sort of guidance that can be provided by iconic representations—for example by a photograph—but not by a paragraph or two of careful description. Our ideas provide diagrams that can structure our experience and give it a form that enables it to inform our further inquiries and deliberations.

Peirce's account of perception has important implications for the rest of his philosophy. Our cognitive contact with external things is grounded in indexical reference to external (p.18) objects in perceptual judgements (see Hookway 2000: ch.4). Such reference is not mediated through descriptions of the objects using general concepts; perception teaches that *that* is a red book. Second, as we have seen, perceptual experience is itself shaped by concepts: the way things look is determined by concepts through the use of schemata.

How are these views about perception involved in Peirce's general epistemological outlook and his criticisms of Cartesianism? And how are they involved in Peirce's pragmatism? First, they recognize that perceptual experience is rich, that it provides us with fallible information about a mind-independent world of external things and general laws and patterns. Perceptual judgements provide first premisses for our knowledge, and this role is not undermined by the fact that perception is fallible. The rich experience that Peirce describes contrasts with what Peirce calls 'intuitions', and with the emaciated 'given' that is criticized by Wilfrid Sellars (for discussions that develop some of Peirce's views about perception, see Chapters 7 and 8).

If we follow Peirce in recognizing the richness of our experience, especially his claim that perception provides direct contact with external things and his insistence that perceptual experience involves a conceptualization and

an awareness of what Peirce calls 'thirdness', we should notice Peirce's recognition of some related phenomena. One of Peirce's strategies for defending pragmatism exploits these views about perception, combining the claims that perceptual experience is an extreme form of abductive reasoning, and also claiming that all of our concepts are initially grounded in. We can also see awareness of these complexities in his criticisms of Sigwart's view that our knowledge of logic is grounded in logicity. In Chapter 5, we have seen how Peirce criticized Sigwart's idea that logic is grounded in simple 'feelings of logicity'. These feelings are, presumably, very similar to the *given* character that Peirce found in his discussions of *intuitions*. Just as Peirce recognized richness and complexities in *percepts* that go beyond what we associate with the *given*, so he argued that feelings of logicity have a similar kind of complexity in feelings of logicity. Similar remarks might be made about Peirce's insistence that we should be guided by things that we doubt 'in our hearts'. Perhaps we can perceive the logicity of an argument or the doubtfulness of a proposition, just as we fallibly perceive external things. But these suggestions are just speculations.

0.6 Conclusion

The year of 1898 was an important date in Peirce's philosophical development. William James declared that he was a pragmatist, both in a lecture to 'Professor Howison's Philosophical Union at the University of California' and through the publication of his lecture as 'Philosophical Conceptions and Practical Results' (1898: 287–309).¹³ His work (p.19) in formal logic was making considerable progress. And there were radical and important developments in his understanding of *possibility*, his earlier epistemic understanding of possibility giving way to a more substantial objective conception (Lane 2007). The combination of these factors had important consequences for the philosophical agenda that came to dominate his thought.

First, although Peirce had always rejected psychologism in logic, he had new reasons to explain why psychologism should be rejected, and it became especially important to understand just how a non-psychologistic normative system of logic was possible. Second, after a long period in which Peirce had been doubtful of the correctness of pragmatism, the notoriety it had earned from James's declaration that he was a pragmatist led Peirce to recognize that his own version of the doctrine was superior to James's. Peirce sought credit for his acknowledged role as the founder of pragmatism, but

he was determined that it should be *his* version that deserved respect and philosophical attention.

Peirce's version deserved this respect for several reasons. First, it recognized that the principle of pragmatism was a maxim of *logic*. Second, Peirce's pragmatism, unlike James's, was committed to 'extreme' *realism*. This led Peirce to seek a rigorous formulation of the maxim and to attend to the case for the sort of realism his pragmatism required. Third, if the pragmatist maxim is a principle of normative logic, and such a logic should be defended in non-psychologistic terms, then Peirce was committed to constructing a non-psychologistic defence of the pragmatist maxim. After the early 1900s, Peirce could argue that logic was 'formal semeiotic', a formal, systematic account of sign interpretation, and he could try to show that the maxim of pragmatism could be defended as a theorem of this formal theory of signs. This took the form of a search for what he called 'a proof' of pragmatism. By discussing Peirce's philosophy of mathematics (Chapter 6) and his rejection of psychologism (Chapter 5), and then by giving an extended account of just how Peirce tried to argue for (or prove) the maxim of pragmatism, we will explore some of the most important features of Peirce's later work.

The relationship between the views of the different pragmatists are important and some of these are discussed in this book. Peirce's criticisms of James's pragmatism are the subject of Chapter 10, and his reactions to Dewey's naturalistic conception of logic are discussed in Chapter 5. We also consider how Peirce would have responded to other pragmatist thinkers such as C. I. Lewis (Chapter 8) and Richard Rorty (Chapter 2).¹⁴

Notes:

(1) Chapter 5 provides an account of the arguments that led to his rejection of psychologism and identifies some points of connection between Peirce's work and the views of Frege and Husserl. Chapter 11 illustrates the role of Peirce's anti-psychologism in his search for a 'proof' of the correctness of his pragmatism.

(2) These contributions include his work on formal logic and the logic of statistical reasoning (see Houser, Roberts, and van Evra 1997), on the mathematics of continuity, and on phenomenology and the defence of objective idealism.

(3) In 1905, Peirce tried to avoid confusion between the different versions of pragmatism by retaining 'pragmatism' in a wider sense, including views

of which he would not approve, and introducing the word 'pragmatism' 'to serve the precise purpose of expressing the original definition' or, perhaps more accurately, for capturing Peirce's own version of the doctrine (CP 5.414; EP 2: 334–5).

(4) Dewey's chief criticism of Peirce was that he 'was not at all a systematic writer and never expounded his views in a single system', and he said it was left to William James to 'extend' Peirce's insights. This does not mean that Peirce was not a systematic *philosopher*. The architectonic structure he developed around 1900 is one of the great philosophical systems. Dewey recognizes that Peirce never published his views in a finished systematic manner, although this was something he always aspired to do. In simple terms, Dewey's complaint was that, where Peirce's pragmatism formed part of a system of *logic* and part of a method to be employed in scientific inquiry, James, and Dewey himself, were concerned with the value of religious belief. He may also have objected that Peirce failed to explore the degree to which pragmatism was a distinctively American philosophy.

(5) Peirce insisted that he was a realist and lamented that most of his pragmatists did not share his realism. Indeed, he claimed that his realism had steadily become more robust, more extreme as his philosophical views matured. However, it is important to bear in mind that he always identified 'nominalism' as the primary enemy of realism. Few philosophers, not even Plato, escaped the charge of nominalism (see Forster 2011). Peirce was taking sides on battles that dated from the debates between Duns Scotus and Ockham.

(6) Peirce continued to seek a proof of pragmatism after 1907. Some of these inquiries have been described and studied by Ahti-Veikko Pietarinen (2006, 2008; Pietarinen and Snellman 2006).

(7) In the final chapter, we shall touch on issues about whether the maxim of pragmatism is a tool for clarifying concepts or propositions. Probably we clarify concepts by clarifying propositions that contain them. Peirce began a brief early discussion of this issue in 1868 (EP 1: 22).

(8) In 'Questions Concerning Certain Faculties Claimed for Man', Peirce noted the widespread assumption that 'the knowledge of belief is essential to its existence' (EP 1: 22; W2: 170–1). He distinguishes two ways to define belief: *sensational belief* is belief that is accompanied by 'a peculiar feeling of conviction' and active *belief* is 'that judgment from which a man will act' (EP 1: 22).

(9) In the light of Peirce's remarks about the two kinds of 'taking to be true', we might conclude that he abandoned the idea that beliefs are habits of action. This is not necessarily true. In pure scientific research, we may still 'act' on the basis of scientific beliefs, by using them in designing experiments or in planning observations, even if we would not use them as guides to action in connection with practical matters. Laboratory actions are one thing, and actions that shape everyday life or matters of personal importance are another. How we act depends upon the risks we are ready to take and the goals we have.

(10) Dummett favours this view as well, attributing it to Frege in an extended discussion in (Dummett [1973](#): 295–363).

(11) This claim that percept and perceptual judgement are fused in the percipuum is supported by Peirce's remark that 'We know nothing about the percept otherwise than by the testimony of the perceptual judgment, excepting that we feel that blow of it, the reaction against it, and we see the contents of it arranged into an object in its totality (CP 7.643).

(12) Some recent scholars have found residues of a commitment to the given in the work of Dewey and other pragmatists. It is an important issue whether Peirce's views about the relations between the percept, the perceptual judgment and the percipuum escapes this commitment (see Koopman 2007; Aikin 2009).

(13) This first appeared in *University Chronicle* at Berkeley, 1: 287–310, and as a pamphlet issued by the philosophical union. A 'condensed and revised version' was incorporated in 'The Pragmatic Method' (1904) and in part of lecture three of *Pragmatism* 1908.

(14) These discussions complement the analysis of Peirce's criticisms of Josiah Royce's views about truth and reference in Hookway ([2000](#): ch.4).

