

Constructivism and Realism in C. S. Peirce

James Hutton

Department of Philosophy, CEU

In partial fulfillment of the requirements for the degree of Masters of Arts.
Supervisor: David Weberman
Submitted in Budapest on 2nd June 2014.

CONTENTS

CONTENTS	2
PREFACE	3
SYNOPSIS	6
CHAPTER ONE	7
1. Peirce's Constructivist Theory of Truth.....	7
2. The Mind-Dependence of Method, and of Truth.....	16
3. Realism: Representation and Mind-Independence.....	19
4. The Inconsistency	22
CHAPTER TWO.....	23
1. Deflating Realism to Intersubjectivity.....	24
2. The 'Rigidification' Strategy	27
3. Restricting Representationalism	30
CHAPTER THREE	34
1. Does Peirce accept Restricted Representationalism?	34
2. Restricted Representationalism and the Threat of 'Anthropocentricity' ..	37
3. Justifying Restricted Representationalism	39
CHAPTER FOUR.....	48
1. Undiscoverable Error	49
2. Convergence	54
3. The Pragmatist Theory of Meaning.....	56
CHAPTER FIVE	57
1. Realism and the Denial of Recognition-Transcendence.....	57
2. Realism and the Law of the Excluded Middle.....	60
3. The Question of Realism	64
BIBLIOGRAPHY	66

PREFACE

If truth does not float free of the mind, but is shaped by the epistemic conditions particular to human reason, how can the truth be a representation of a mind-independent reality? In other words, how could **constructivism** be combined with **realism**? This essay is an exploration of the possibility combining the two.

C. S. Peirce (1839-1914) is best remembered for his radically **constructivist** account of truth, which identifies truth with “The opinion which is fated to be ultimately agreed to by all who investigate” (‘How to Make Our Ideas Clear’, EP 1.139). And yet, an enthusiastic proponent and practitioner of science, Peirce endorsed the view that reality is essentially unaffected by what we may think about it. This essay is an attempt to find a coherent interpretation of Peirce’s thought that preserves both his **constructivism** and his **realism**, and thereby to investigate the relation between the two theses.

Discussions of **realism** in the twentieth century were marked by a tendency to see what is *prima facie* an ontological question – whether, or to what extent, reality is independent of the mind – as a question in semantics – whether, or to what extent, truth is independent of the conditions of knowledge. As a result, Peirce has often been read as occupying a space on the ‘antirealist’ side of the debate: since he refuses to conceive of truth as a ‘radically non-epistemic’ matter, interpreters have felt

pressed to gloss his apparent endorsement of realism as encoding merely a belief in intersubjectivity.¹

This essay accepts the challenge of taking Peirce at his word, in spite of his apparently divergent commitments, and details an interpretation of his thought that combines **constructivism** with **realism**.

If the reader deems the interpretative project to have been a success, this result ought to be of interest beyond the confines of Peirce scholarship. For example, many feel the pull of constructivist views in the domains of normativity and mathematics, in which we feel unwilling to countenance the possibility of there being truths that could forever escape our methods of deliberation or proof. In these domains, **constructivism** is often contrasted with **realism**. This essay would suggest that such an opposition is a false dichotomy, because the two sides are not mutually exclusive. Furthermore, the compatibility of **constructivism** and **realism** would provide impetus for new readings of other philosophers whose emphasis on the bounds of human cognition have been taken to imply antirealism.²

Perhaps most importantly, the compatibility of **constructivism** and **realism** would reassure us that the idea of philosophy without metaphysics, championed by some in the twentieth century, was indeed misguided: that if we feel the pull of the question of the relationship between subject and object, between mind and world, semantics alone does not suffice to give us an answer, because theory of truth does not determine ontology.

¹ See for example Altschuler (1982); Hookway (1985: 37).

² I particularly have in mind Kant. This project was first conceived as a comparison of Kant and Peirce, involving an effort to take seriously Kant's claim to be an "empirical realist" (see e.g. Kant 1996: A 370) alongside the **constructivist** aspects of transcendental idealism. It quickly became clear that that project was too large for the prescribed length of this essay.

I hope I have provided the reader with some motivation for reading what I have to say on the matter of **constructivism** and **realism** in C. S. Peirce.

SYNOPSIS

CHAPTER ONE: *An apparent tension between Peirce's account of truth and his account of reality is sketched, which results from a joint commitment to **constructivism** and **realism**. Realism itself consists of two parts, **representationalism** and the **mind-independence of reality**. This tension is formulated as a triad of inconsistent theses. Through an examination of two of Peirce's essays: 'The Fixation of Belief' and 'How to Make Our Ideas Clear', evidence is offered that Peirce supports of each of the three apparently inconsistent theses.*

CHAPTER TWO: *Three strategies are detailed in service of the goal of clearing Peirce of inconsistency. The first highlights important aspects of Peirce's views, but is inadequate a solution to the tension. The second could dissolve the tension, but only by smuggling antirealist assumptions into the notion of 'reality'. The third strategy – restricting **representationalism** – provides an acceptable way to reconcile **constructivism** and **realism**.*

CHAPTER THREE: *With the help of a re-examination of his account of reality, it is argued that Peirce's commitment to representationalism is restricted to the domain of scientific inquiry. On the Peircean assumption that there is convergence amongst scientific inquirers, the restricted version of representationalism is compatible with constructivism and mind-independence – the inconsistency has been overcome. Grounds are given for restricting **representationalism** in this way.*

CHAPTER FOUR: *Peirce's theory of truth precludes the possibility of undiscoverable error. His belief in convergence is incompatible with the possibility that theory is underdetermined by evidence. This chapter argues that these features of Peirce's thought do not stem from tacit antirealism, but rather follow from his **pragmatist** theory of meaning*

CHAPTER FIVE: *The similarity between Peirce's pragmatism and Dummettian semantic 'antirealism' is acknowledged, but it is argued that 'antirealism' in that sense does not conflict with ontological realism. The claim that Peirce is committed to the possibility of reality being indeterminate – which would conflict with **realism** is examined, and then rejected. The status of the realism-antirealism debate is assessed, in the light of the findings of the essay.*

CHAPTER ONE

§1: Peirce endorses **constructivism**, the view that to be true is to be the output of the method of inquiry.

§2: What process counts as the method of inquiry is a matter contingent on human psychology. As such, truth varies with the nature of the mind of the inquirer: **truth is mind-dependent**.

§3: Peirce is a **realist**: he holds that true belief **represents** reality, and **that reality is mind-independent**.

§4: As they stand, these commitments are inconsistent.

In two articles of 1877 – ‘The Fixation Of Belief’ and ‘How To Make Our Ideas Clear’ – C. S. Peirce develops an account of truth and an account of reality that appear to contradict with one another. Peirce’s view entails the **mind-dependence of truth**. Simultaneously, Peirce appears to be committed to **realism**: the view that beliefs are **representations** of reality, and that the reality they represent is **not mind-dependent**. Chapter One is an exposition of these disparate commitments in Peirce’s essays. The final section contains an elaboration of the problem they jointly present, an apparent incoherence that it is the task of this essay to overcome.

1. Peirce’s Constructivist Theory of Truth

In this section, I offer a relatively lengthy exposition of some of the central aspects of Peirce’s theory of truth, particularly its relation to the notions of inquiry and method. In the course of the exposition, it is shown that Peirce is a *constructivist*: he believes that truth is constitutively linked to the method of inquiry.

Truth, Peirce claims, means “the opinion which is fated to be ultimately agreed to by all who investigate” (‘How to Make Our Ideas Clear’, EP 1.139). Though this is the aspect of Peirce’s philosophy for which he is perhaps best known, it stands in need of explanation. I propose to clarify the meaning of Peirce’s theory of truth by explaining **(a)** his notion of inquiry, **(b)** what he means by the endpoint of inquiry, and **(c)** his commitment to agreement on the unique theory by inquirer.

(a) Peirce characterizes inquiry as “a struggle to attain belief” caused by “the irritation of doubt” (‘The Fixation of Belief’, EP 1.114). Whilst he agrees that there is an internally accessible “dissimilarity between the sensation[s]” of doubt and belief (ibid.), Peirce focuses on their differing behavioural profiles in differentiating these two kinds of mental state: if we believe a proposition, then it will “guide our desires and shape our actions”, such that the possession of a belief involves “there being established in our nature some habit which will determine our actions” (ibid.).

The behavioural profile or the “positive effect” (as Peirce calls it) of doubt is not a standing disposition to act in given ways in certain circumstances, but is the more immediate consequence of “stimulat[ing] us to inquiry until it is destroyed”. As such, doubt and inquiry are defined simultaneously – doubt as the mental state and inquiry as the process that is its expression. This need not be construed as a vicious circularity, given that the process in question can also be picked out by its output: settled belief.

It should be noted that Peirce’s notion of inquiry is perhaps broader than the sense usually attached to that term: any process which results in settled belief, no matter how that result is produced, counts as inquiry. In particular, the “doubt-belief

theory of inquiry” (Altschuler 1982: 36) makes no reference to factive notions – inquiry is foremost the search for settled belief, rather than for truth or for knowledge. Inquiry is the search for belief *simpliciter*, rather than explicitly for true belief. We might say that Peirce’s notion of truth is downstream from his notion of inquiry, which can be cashed out entirely without mention of the former.

Nonetheless, Peirce should not be interpreted as making the implausible claim that in inquiring we look for any old belief, whether we have reason to think it true or not. Indeed, for all beliefs, “P” and “P is true” are true in just the same circumstances, and any reason to doubt that P is true is thereby a reason to doubt that P. Therefore, inquiry will only lead us to beliefs that we think are true. In Peirce’s own words, “The most that can be maintained is, that we seek for a belief that we shall *think* to be true. But we think each one of our beliefs to be true, and, indeed, it is a mere tautology to say so.” (‘The Fixation of Belief’, EP 1.115) He is not denying that inquiry has something to do with truth – indeed the very principle we are in the process of explicating is that they stand in a very tight relation. Rather, he is maintaining that an account of inquiry that makes no reference to truth can nonetheless be perfectly adequate.

(b) What is meant by the endpoint of inquiry? When does a belief count as “fixed”?

With our characterization of inquiry in hand, we are in a position to try and make sense of Peirce’s notion of the endpoint of the process of inquiry. Since inquiry is the cycling between belief and doubt, in which new beliefs are sought that are not susceptible to the worries that dislodged the old ones, the whole process will come

to an end if we reach a set of beliefs that are not susceptible to doubt. This is the meaning Peirce attaches to the phrase “the fixation of belief”: beliefs are genuinely “fixed” when they can no longer be dislodged, when nothing that can happen to us will remove our credence in them.

Peirce does *not* mean by the state of fixation that enough evidence has been adduced to rule out the possibility of error: the end of inquiry is not defined in terms of epistemic certainty, or the impossibility of falsity. Firstly, Peirce is attempting to elucidate the meaning of ‘truth’ by means of the notion of the end of inquiry, so if he had to appeal the notion of error in his characterization, the explanation would be uninformative: we would already have to have a handle on truth and falsity to make sense of it, in which case it would be redundant as a clarification. Secondly, an appeal to epistemic certainty – freedom from the possibility of error – would conflict with Peirce’s anti-Cartesian conception of epistemology, particularly his *fallibilism*. Peirce held that inquiry is always framed by “a fallible background of ‘common sense’ belief” (Misak 2004: 153), rather than standing on foundations which are antecedently certain. Inquiry “is not standing upon the bedrock of fact. It is walking upon a bog, and can only say, this ground seems to hold for the present.” (CP 5.589, quoted by Misak, loc. cit.) By Peirce’s lights, we are never in a position to rule out the possibility that we have started off on the wrong track, with false assumptions, so a state incompatible with the mere possibility of error plays no part role in Peirce’s characterization of “fixed” belief.³

³ Nevertheless, his account of truth commits Peirce to denying the possibility of undiscoverable error, so being at the endpoint of inquiry is after all incompatible with being in error. The point being made in the text is that this is a consequence of the theory, not an element of what it *means* to count as the end of inquiry.

So, to have a belief or set of beliefs “fixed” – to be at the fated end of enquiry – is to be in a position of psychological certainty of some kind. Peirce maintains that psychological certainty is compatible with fallibilism, since accepting the mere possibility that P is false is not the same as doubting P. Beliefs remain firm in the face of the possibility of their falsity, unless there is a positive reason for doubting them:

Some philosophers have imagined that to start an inquiry it was only necessary to utter a question whether orally or by setting it down upon paper ... But the mere putting of a proposition into the interrogative form does not stimulate the mind to any struggle after belief. There must be a real and living doubt, and without this all discussion is idle. (“The Fixation of Belief”, EP 1.115)

Furthermore, the common-sense assumptions upon which we proceed need not be “ultimate and absolutely indubitable propositions”, they must only be *psychologically* certain: “If the premisses [sic] are not in fact doubted at all, they cannot be more satisfactory than they are” (ibid.).

Still, a “fixed” belief is not merely one in which an inquirer has a credence above some threshold. Fixation, as Peirce deploys the concept, is a *forward-looking* state, not just a momentary condition. To be fixed, a belief must not merely be the subject of particularly firm conviction, but must be such that the conviction will survive all further investigation. We can cash this out in the following way.

To count as “fixation”, the conviction that P must be robust under a certain class of counterfactuals. For any action that the inquirer can take, what would happen were they to take it would not bring her doubt that P. For example, if she selects her beliefs on the basis of experimental evidence, then a belief is fixed only if

- i) She is convinced that P, and

ii) There is no physically possible experiment which would have a result that would remove this conviction.

This is not to say that P is totally sealed off from all testimony of experience, because the second condition may be made true in virtue of counterfactuals that hold contingently. There may be logically possible events that would dislodge the inquirer's belief, *were* they to happen, but if the world is such that these events *would not* happen, no matter what we do, then condition (ii) can still hold.

When inquiry leads us to beliefs that have these features, the process is at an end, as doubt will no longer arise and we will no longer be driven to find new beliefs.

(c) Peirce's formulation commits him to the view that inquiry has a unique endpoint: "*the* opinion which is fated to be ultimately agreed to by all who investigate" ('How to Make Our Ideas Clear', EP 1.139, emphasis added). What grounds can he have for thinking that there is a unique set of beliefs that can become "fixed" (in the sense just detailed) in the minds of inquirers?

His discussions of the process of inquiry focus around the notion of the "method" required to produce "fixed" belief. This is based on the psychological observation that we do not select our beliefs willy-nilly, but rather follow certain processes in settling upon opinions: we are systematic in the way we allocate credence to claims. The essays 'The Fixation of Belief' and 'How to Make Our Ideas Clear' are the first two instalments in a series published in *Popular Science Monthly*, entitled 'Illustrations of the Logic of Science', which constitute an exposition of Peirce's conception of the scientific method, and the principal conclusion of 'The

Fixation of Belief' is that the method of science is the only way of carrying out inquiry that will produce "fixed" belief, at least as far as humans are concerned. As a result of this, much of what Peirce says about inquiry ought to be read as applying only to the domain of scientific inquiry.

Peirce believed that scientific inquiry, if it were to be carried out unhindered for long enough, would result in convergence amongst inquirers on a single theory.⁴ This explains his commitment to the uniqueness of the opinion fixed by inquiry displayed in his characterization of truth, which comes from 'How to Make Our Ideas Clear', the second essay in the series, by which time Peirce has established (at least to his own satisfaction) the method of science is *the* method of inquiry. For the time being, let us accept **convergence** – that the process of scientific inquiry tends towards the fixation of a unique theory – as an assumption. We will return to this claim in Chapter Four, where it will be argued that it can be rendered plausible within the framework of Peirce's 'Pragmatist' theory of meaning.

Still, there is no reason that different methods of inquiry result of the fixation of the same theory, upon which science is fated to converge, and as will be argued in the next section, by Peirce's lights it is at most a matter of psychological contingency that scientific investigation is *the* method of inquiry. We can paraphrase Peirce's characterization of truth as follows:

P is true if it belongs to the theory *fixed* by the method of inquiry;

⁴ Though see Hookway (2004: 135) for the claim that Peirce's views about the conditions of the end of inquiry have more the status of 'regulative assumptions' than theoretical claims about how inquiry would unfold under certain conditions.

in which the schema 'method M *fixes* theory T' should be read as a shorthand for 'inquiry carried out according to method M, if carried out unhindered for an indefinite time, would tend to produce the fixation of belief in theory T.'

To put the present point another way, there is no reason to rule out that the truth-value of P would vary for different referents of "the method of inquiry". According to the Peirce's theory, if method varies, so may truth.

Furthermore, if there are possible methods for which convergence does not hold, such that inquiry can result in the fixation of different, contradictory theories, then the truth-value of a proposition may have to be further relativized to one of the theories that inquiry may fix. As has already been noted, Peirce focuses almost entirely on "scientific" inquiry, which is subject to convergence. However, there are some brief remarks in 'How to Make Our Ideas Clear' that confirm his endorsement of the relativity of the intension of truth to a method and even to one particular result amongst many, in the case of methods that do not produce convergence.

He notes that, since it has been shown that scientific method is the only genuine way of fixing belief, "the ideas of truth and falsehood, in their full development, appertain exclusively to the experiential method of settling opinion" ('How to Make Our Ideas Clear', EP 1.137), but then goes on to describe what truth would amount to if other methods were substituted into the characterization of truth. For the medieval philosopher who (Peirce claims) selects his opinions at random and then holds on to them in the face of all argument to the contrary, "the truth is simply his particular stronghold." (ibid., EP 1.138)

In such a case, truth diverges from what it is in the context of scientific method, because there is of course no reason that this “stronghold” should be the theory reached at the endpoint of scientific inquiry, nor even that all inquirers employing this method of inquiry should settle on the same views.

He goes on: “When the method of authority prevailed [and oppression was used to instil belief in a particular doctrine], the truth meant little more than the Catholic faith.” (ibid.)

For a proposition P, the questions of (1) whether it belongs to the final scientific theory, of (2) whether it is an article of Catholic doctrine, and of (3) whether an individual has chosen to believe it, come what may, clearly diverge. Therefore, if the referent of “the method of inquiry” could vary between these different methods of fixing belief, so too would the truth-value of P vary.

This concludes the exposition of Peirce’s theory of truth, as we are now in a position to examine its place in his thought as a whole, in particular its relation to his views about representation and reality. From what we have seen, we can conclude that Peirce is a *constructivist* about truth: he holds that truth is constitutively determined as the endpoint of an idealised version of the method we use for seeking beliefs, namely inquiry.⁵ In particular, we should note that Peirce’s theory entails the following conditional:

⁵ Cf. the characterisation of ‘constructivism’ in the *Stanford Encyclopedia of Philosophy* article ‘Constructivism in Metaethics’: “Constructivism in ethics is the view that insofar as there are normative truths, for example, truths about what we ought to do, they are in some sense determined by an idealized process of rational deliberation, choice, or agreement.” (Bagnoli 2011)

P is true if it belongs to the theory *fixed* by the method of inquiry.

A consequence of this is that method stands in a constitutive relation to truth: what is true depends, in some deep way, on what the method of inquiry is. Indeed, if the method could vary, so would the truth.

The next section will deal with the question of what it takes for a method to fit the description; what counts as the method of inquiry.

2. The Mind-Dependence of Method, and of Truth

This section details Peirce's account of what it takes for a method to stand in the constitutive relation to truth. It is observed that he is committed to the **mind-dependence of truth**.

Given the link between the method of inquiry and truth that was explained in the previous section, we might expect Peirce's account of what counts as the method of inquiry to be epistemological in nature. After all, as we have just seen, Peirce is committed to saying that any view in which 'the method of inquiry' tends to produce a robust kind of credence is true. But in seeking to establish what method should be substituted into his characterization of truth, Peirce considers not the reliability of different methods, but rather their aptness to bring about 'fixed' belief, given the propensities of the human mind.

Peirce's discussion of method takes place in 'The Fixation of Belief', and is an examination of how inquiry would have to be carried out in order to carry humans towards the "fated" end of genuinely fixed belief: Peirce aims to establish which method of investigation can produce beliefs that would never be superseded. As such it is an examination of the nature of the method which is constitutive of truth

for creatures with psychology like our own. The grounds Peirce gives for rejecting the three alternative methods he considers are psychological and sociological in nature, rather than epistemological in any conventional sense.

When he criticises the “method of tenacity” (i.e. paying no heed to any evidence that counts against one’s chosen belief), the psychology of doubt is at the fore. Peirce’s view is that “It would be an egotistical impertinence to object that [this] procedure is irrational, for that only amounts to saying that his method of settling belief is not ours.” (‘The Fixation of Belief’, EP 1.116) Instead, the “method of tenacity” is rejected because “it will be apt to occur to [the inquirer adopting it] ... that [others’] opinions are quite as good as his own, and this will shake his confidence in his belief” (ibid.). The objection is that the “method of tenacity” does not produce robust psychological certainty.

The “method of authority” (i.e. suppressing all disagreement with a chosen doctrine) fails to fix beliefs permanently because some people have a tendency to notice that the views being imposed on them by the local authority are not the only views that have ever been believed. They then realise “that there is no reason to rate their own views at a higher value than those of other nations and other centuries; thus giving rise to doubt in their minds.” (‘The Fixation of Belief’, EP 1.118) The “method of authority” is rejected because it does not produce genuinely fixed belief among the community of inquirers.

Similarly, the “*a priori* method”, according to which we choose “propositions [which] seem[] “agreeable to reason”” (‘The Fixation of Belief’, EP 1.119) is rejected because, seeing that our beliefs result merely from the peculiarities of our own taste,

we come to see them as no better grounded than those of others whose taste rules in favour of an opposing doctrine.

The reasons for which these methods of inquiry do not produce theories that satisfy Peirce's conception of "truth" is not a result of their lack of a propensity to reliably produce accurate representations. The bottom line is that, as a consequence of human psychology, they do not banish doubt for good.

Indeed, the factors that render each of these epistemic practices incapable of producing genuinely fixed belief (and therefore rule them out as candidates for being *the* method referred to by Peirce's truth schema) depend on contingent aspects of human psychology. Peirce argues that the method of science is the only epistemic practice capable of eliciting credence that cannot be dislodged, a result of the fact that it produces convergence amongst inquirers, and ensures that belief is not "determined by any circumstance extraneous to the facts" ("The Fixation of Belief", EP 1.120). But if the human mind had been different, one of the other practices he identifies could have been the method of inquiry constitutive of truth.

In the previous section, it was established that Peirce's theory of truth has the consequence that if the method of inquiry can vary, so can truth. Combining that result with the observation that we have just made, that method depends on the psychology of the inquirer, we get the result that **truth is mind-dependent**.

Consider a counterfactual situation in which people were much more stubborn and obstinate than they in fact are, and less likely to pay heed to the opinions of others. If we extend these vices far enough, we will reach a situation in which the "method of tenacity" is capable of producing fixed belief (in the sense

detailed in §1). In this counterfactual situation, inquiry according to the method of tenacity will stand in the constitutive relation to truth specified by the schema. At that 'stubborn' world, a piece of dogma onto which inquirers cling (e.g. the view that the sun orbits the Earth) is true. But in the actual world, in which scientific evidence leads inquirers to doubt, and ultimately reject that claim, it is false. Peirce is committed to saying that the truth of propositions of all kinds co-vary with contingent features of human psychology, and as such are mind-dependent. Peirce's talk of a situation in which the truth of a proposition coincides with whether or not it belongs to the body of Catholic dogma turns out to be a possible situation that he is committed to. This provides us with the first element of the inconsistent triad of views to which Peirce is apparently committed:

Mind-dependence of truth: whether or not a proposition is true depends on human psychology.

3. Realism: Representation and Mind-Independence

In spite of his belief in the mind-dependence of truth, Peirce is apparently committed to Realism, the view that beliefs are **representational**, and that what they represent is a **mind-independent reality**. In this section, I will simply present the textual evidence that supports ascribing these views to Peirce.

There are no grounds for thinking that Peirce rejects the common-sense view that to have a belief is to take a stance on how the world is. Beliefs **represent** the world as being a particular way, rather than some other way that it could have been. And, whilst his characterization of truth is carried out without appeal to any notions other than features of the practice of inquiry, Peirce endorses the view that truth is

also associated with representing things as they really are. In his own words, “The opinion which is fated to be ultimately agreed to by all who investigate, is what is meant by the truth, and *the object represented in this opinion is the real.*” (‘How to Make Our Ideas Clear’, EP 1.139, emphasis added.) He equates “true belief” with “belief in the real” and “false belief” with “belief in fiction” (ibid., EP 1.138).

We have just seen that truth is mind-dependent, that it varies with psychology. The result of combining of the **mind-dependence of truth** and the **representationalism** provide strong grounds for thinking that Peirce conceives of reality as mind-dependent. It will perhaps be easiest to make clear this connection by talking in terms of possible worlds.

Consider four possible types of inquirer: the stubborn, the impressionable, the self-assured and the inquisitive, let us call them. The psychology of these communities of inquirers is such that the method of inquiry – the epistemic practice capable of producing fixed belief – varies between them. For the stubborn inquirers, the method is the “method of tenacity”; for the impressionable inquirers, the “method of authority” tends towards fixed belief; for the self-assured, personal taste provides strong conviction, so investigation according to the “*a priori* method” produces fixation; the inquisitive inquirers are like those of the actual world, as Peirce describes them, for whom only the “method of science” is capable of producing robust psychological certainty. For each possible community, the endpoint of inquiry according to the method that produces fixation for *them* constitutes what is true. For arguments sake, imagine that the theories that are true

(in accordance with Peirce's theory) in each of these situations contain one of the following incompatible views:

- (1) The world came into existence spontaneously 10 000 years ago.
- (2) The world was created by God 6 000 years ago.
- (3) The world has been in existence for infinitely long.
- (4) The world began several billion years ago, with a Big Bang.

Since the object of true belief is the real, and Peirce is committed to the truth of each of these propositions at the world in which inquirers are fated to fixedly believe it, he seems to be committed to saying that reality itself varies with the variations in the psychology of the inquirer: a mere difference in the minds of the inquirers is sufficient for a difference in reality itself.

Psychology 1 → Method 1 (tenacity) → Truth 1 → Reality 1

Psychology 2 → Method 2 (authority) → Truth 2 → Reality 2

Psychology 3 → Method 3 (*a priori*) → Truth 3 → Reality 3

Psychology 4 → Method 4 (science) → Truth 4 → Reality 4

The variation in psychology has the result that a different method is determined, which fixed a different truth, and that truth represents a different reality.

However, Peirce asserts that **reality is mind-independent**. He characterizes the real as "something upon which our thinking has no effect." ('The Fixation of Belief', EP 1.120) Similarly, in 'How to Make Our Ideas Clear', Peirce writes that "we may define the real as that whose characters are independent of what anybody may think them to be" ('How to Make Our Ideas Clear', EP 1.137). He describes reality as

“some external permanency” (“The Fixation of Belief”, EP 1.120), and as being something distinct from our sensations, though causally responsible for them: “those realities affect our senses according to regular laws, and, though 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” (ibid., EP 1.120). The most natural reading is that Peirce accepts the common-sense ontology, according to which we are organisms belonging to a causally interacting world of objects. These objects do not depend on our thought for their existence and could go in existing even if we did not believe in them. Peirce appears to be a **realist**, rather than an idealist.

4. The Inconsistency

We are now in a position to formulate the inconsistent triad, each element of which Peirce apparently endorses.

Constructivism: Truth is mind-dependent.

Representationalism: Reality is as true belief represents it to be.

Realism: Reality is mind-independent.

This is the tension in Peirce’s thought that it is the goal of this essay to diffuse.

CHAPTER TWO

§1: Peirce's apparent commitment to realism could be interpreted as a mere endorsement of intersubjectivity. But this would not account for his strongest claims about mind-independence.

§2: Treating "reality" and its cognates as involving rigid designation would allow a Peircean to pay lip service to the mind-independence of reality. However, the 'rigidification strategy' involves an 'anthropocentric' conception of reality, and is therefore highly unsatisfying.

*§3: A full-blooded realism can be reconciled with Peirce's theory of truth if **representationalism** is **restricted** to the domain of scientific inquiry.*

There are various possible ways to proceed towards our goal of clearing Peirce of his the accusation of inconsistency. Three of these options are explored and evaluated in Chapter Two. The first, which involves an appeal to intersubjectivity amongst the community of inquirers, is fine as far as it goes, but it is insufficient to rescue Peirce's commitment to realism. The second attempts to escape inconsistency by merely logical means, by considering the possibility that "reality" is a rigid designator, but this superficial modification of Peirce's commitments produces an unsatisfactory result. The third proposal is to **restrict** the claim of **representationalism**, such that only beliefs produced by the "method of science" have content. The task of justifying this move is set aside for the next chapter, but it is argued that this third option provides a means of overcoming the inconsistency: of reconciling Peirce's radically **constructivist** account of truth with his ontological **realism**.

1. Deflating Realism to Intersubjectivity

Peirce displays an awareness of the tension between his accounts of truth and of reality in 'How to Make Our Ideas Clear':

[I]t may be said that this view [of truth as the fated end of inquiry] is directly opposed to the abstract definition which we have given of reality [as that upon which thinking has no effect], inasmuch as it makes the characters of the real depend on what is ultimately thought about them. (EP 1.139)

The way that he goes on to address this problems points the way to the first strategy for overcoming the tension in Peirce's thought detailed in Chapter One:

But the answer to this is that, on the one hand, 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; and that, on the other hand, though the object of the final opinion depends on what that opinion is, yet what that opinion is does not depend on what you or I or any man thinks. (EP 1.139)

The point being made here is that the endpoint of inquiry, as the notion features in Peirce's theory of truth, is not meant to be some moment in history: the final moment of investigation, conceived of as a series of sociological-cum-historical events unfolding in society over time. Rather, it is determined 'in the abstract' – fixed by the nature of the method of inquiry, which in turn is determined by features of the psychology of the inquirers in question.

Within the Peircean framework, the truth of the true theory is a consequence, not of what any individual will *de facto* come to believe, nor even of what the community of inquirers will believe at the most advanced point reached before humanity's extinction. Rather it is the truth because it is the theory that *would* be reached by following the method of inquiry, which human nature determines, and

appealing to all evidence that *could* be discovered. As such, Peirce's view does not amount to a particularly radical form of idealism, according which reality ontologically depends on the beliefs that observers happen to have.⁶

Available data which, as a matter of contingency, is never collected – observable phenomena which happen to remain unobserved – still count towards the content of the true theory, by Peirce's lights. For this reason, Peirce is able to maintain that many questions which we will never in fact address nonetheless have determinate answers. For instance, he believes that there is a fact of the matter as to whether a stone in darkness on the bottom of the ocean is shiny: "that stone *may* be fished up tomorrow," ('How to Make Our Ideas Clear', EP 1.140) so the evidence that *would* arise counts, even if no one ever fishes it up and that evidence never actually informs anyone's beliefs.⁷

Peirce emphasises the fact that he is not committed to truth being at the mercy of the mistakes of particular inquirers (and thereby as mutable, fragile and potentially idiosyncratic as the actual beliefs of individual thinkers):

Our perversity and that of others may indefinitely postpone the settlement of opinion; it might even conceivably cause an arbitrary proposition to be universally accepted as long as the human race should last. Yet even that would not change the nature of the belief, which alone could be the result of investigation carried out sufficiently far; and if, after the extinction of our race, another should arise with faculties and disposition for investigation, that true opinion, that true opinion must be the one which they would ultimately come to. "Truth crushed to earth shall rise again," and the opinion which would finally result from investigation does not

⁶ This is the reason why Russell's accusation that Peirce's theory of truth relies on a "much disputable" "sociology prophecy" misses the mark. (Russell 1939: 317-8)

⁷ Here we see Peirce's belief in real dispositions, not reducible to material conditionals, playing a role. Cf. Short (2004: 255) and Altschuler (1982, n.14).

depend on how anybody may actually think. ('How to Make Our Ideas Clear', EP 1.139)

Since truth is constituted by inquiry 'in the abstract', rather than in the course of unfolding events, facts remain constant across any inquirers who are psychologically similar enough that the same method is required by them for achieving fixed belief, irrespective of what they happen to believe.

We have established that simply getting clear about the relation between method, inquiry and truth suffices to significantly soften the nature of the mind-dependence of reality to which Peirce is apparently committed: reality is at most contingent on the intersubjective features of the community of inquirers, so it is fixed in advance of how the actual activities of inquirers turn out. According to this conception, reality is permanent, not something that is built up as inquirers proceed. Given this independence, reality is clearly not to be identified with the mental states of individuals, so we can make sense of Peirce's description of reality as "external": the Peircean theory does not have the consequence that reality is 'in the head'.

Nevertheless, this clarification offers us no grounds for ruling out the counterintuitive thesis that reality is dependent on the psychology of the community of inquirers as a whole. Bizarre counterfactuals still follow from Peirce's position, as it stands: e.g. Peirce as we have him so far is committed to saying that if humans were more impressionable to a sufficient degree to make the "method of authority" into *the* method of inquiry, then the universe would be 6 000 years old. And as we have seen, Peirce is most plausibly read as endorsing the kind of common-sense view to which science points, according which inquirers are just organisms that are one type of object amongst many causally interacting, real objects.

In order to emphasise the seriousness of the conflict between this these mind-dependence claims and the findings of science, consider the view, plausible in the context of Darwinian theory, that processes going back many millennia shaped every aspect of human nature. These processes could have gone differently, so as to have led to the evolution of a species impressionable enough to be destined for fixed belief in a literal version of biblical creationism. This is a natural enough consequence of the scientific theory of evolution. And yet Peirce – on the view that we are so far attributing to him – is committed to denying it: if inquirers had the tendency to fix upon the belief that the cosmos is 6 000 years old, then it would *really* be the case that the cosmos is 6 000 years old, and therefore not the case that human nature resulted from the evolutionary pressures of the Holocene era.

The claim that biology is mind-dependent in this way is counter-intuitive, but it also seems to run counter to Peirce's zealous endorsement of science itself. Given that Peirce makes no mention of the implausible counterfactuals about reality; that he gives the appearance of having a common-sense conception of reality; and that he wrote voluminously (to say the least) on scientific method, without expressing the view that scientific theory should be responsive to idealistic metaphysics, it should be an interpretative last resort for us to claim that his apparent commitment to **realism** is nothing more than an appeal to the intersubjective similarities in the psychology of inquirers. We ought to look for another strategy.

2. The 'Rigidification' Strategy

An adequate reconciliation of Peirce's views must – at the very least – absolve him of commitment to a thoroughgoing counterfactual dependence of reality on

psychology. Emphasising that it is the general and shared psychology of the community of inquirers, rather than the thoughts of individuals, that are in question is not sufficient in this respect. However, if “reality” were shown to designate rigidly, then the apparent commitment to the embarrassing counterfactuals could be dissolved.

Perhaps Peirce’s view is that “reality” refers to the object represented in beliefs fixed by *our* method of inquiry. If this were so then, even in contexts in which possible psychologies determining other methods (and hence fixing incompatible theories), “reality” would mean the world as it is represented in the final scientific theory, that would be produced if *our* method of inquiry were extended indefinitely into the future. If our conception of reality is bound up with the method that fixes belief *for us*, meaning that the reference of the concept “reality” remains constant while we ring the changes on psychology and method then the commitment to implausible mind-dependence claims would be avoided.

Psychology 1 → Method 1 (tenacity) → Truth 1	{ Reality 4
Psychology 2 → Method 2 (authority) → Truth 2	{ Reality 4
Psychology 3 → Method 3 (<i>a priori</i>) → Truth 3	{ Reality 4
@ Psychology 4 → Method 4 (science) → Truth 4	→ { Reality 4

However, no aspect of the ‘rigidification’ strategy should lead us to think that the ontological picture of offer is any way different to what that which we ruled to be incompatible with Peirce’s **realism**. In particular, since **representationalism** still holds for the other possible truths, nothing has removed to the commitment to objects arranged as each true theory depicts them existing at each world. By the

lights of the ‘rigidification’ strategy, these objects do not fall within the intension of “reality” (as we use that term in the actual world), so it enables us to pay lip service to the mind-independence of reality. However, abstracting from the indexical content of that the notion of reality has according to the strategy (or ‘considering a different world as actual’) things are just the same. From an ontological point of view, Peirce is still committed to wholesale changes in reality being necessitated variations between possible psychologies.

Indeed, if we could form locutions to cancel the rigidity of the term, Peirce would face troubling mind-dependence counterfactuals just as before. He would then be in the uncomfortable position of disagreeing with science over which phenomena genuinely operate in a way that is indifferent to the psychology of inquirers. For arguments sake, unattractive counterfactuals of the following sort might have to be endorsed: “If there was a community of inquirers more impressionable than we, then *their* reality would have been created 6 000 years ago.”

To put the point more impressionistically, the ‘realism’ delivered by the ‘rigidification’ strategy seems anthropocentric or parochial, in a way that harms its credentials of providing a full-blooded realism. If there is nothing special about *our* method of inquiry to mark it out as capable of delivering accurate views about how things are – if we can point to nothing when accounting for its special relation to reality, except for the fact that it is *ours*, and can offer no impartial grounds for thinking that there is a principled difference between our method and other possible methods – then the ‘reality’ depicted by our best theory is apparently bound up with

our own point of view. A mere quirk of the grammar of the word “reality” cannot achieve the task of vindicating full-blooded common-sense realism.

3. Restricting Representationalism

So if we are to succeed in finding a coherent interpretation of Peirce’s views that features a robust realism, we must deny the ontological picture (spelled out in Chapter One, §3) that gives rise to the mind-dependence of reality on the psychology of inquirers. To do this whilst keeping intact Peirce’s novel account of truth, we need to rethink the connection between truth and reality. In other words, **representationalism** cannot remain in its current form if the mind-dependence of truth and the mind-*independence* of reality are to be upheld.

The strategy that I propose is to restrict **representationalism** to inquiry carried out according to the “method of scientific”, so that only the theory fixed by scientific inquiry is a representation of reality as it is. In this section, I will explain the character of this strategy and show that it would free Peirce from the charge of inconsistency: when combined with the restricted version of **representationalism**, Peirce’s **constructivist** theory of truth becomes compatible with **realism**. The further task of justifying the restriction on **representationalism** is taken up in Chapter Three.

First let us rehearse the metaphysical picture, formulated on the basis of Peirce’s theory of truth and his endorsement of **representationalism**, that came into conflict with **realism**, by implying that reality is mind-dependent.

Psychology 1 → Method 1 (tenacity) → Truth 1 → Reality 1

Psychology 2 → Method 2 (authority) → Truth 2 → Reality 2

Psychology 3 \rightarrow Method 3 (*a priori*) \rightarrow Truth 3 \rightarrow Reality 3

Psychology 4 \rightarrow Method 4 (science) \rightarrow Truth 4 \rightarrow Reality 4

Method is mind-dependent: as we consider variations in the psychology of the community of inquirers, the nature of the method according to which inquiry must unfold in order to produce fixed belief changes. Truth is constituted by method: as the method changes, so does the endpoint of inquiry, which Peirce's theory identifies with truth. Truth represents reality (as it is): theories picture the world as being a certain way; true theories do so correctly; so reality is as truth says it is. Because of these three links, variations in psychology necessitate variations in reality: in a thoroughgoing way, reality is mind-dependent.

The strategy of restricting representationalism asserts that the third link does not hold unless the psychology of the inquirer determines the "method of science" as the process according to which inquiry is carried out. The result is that variations in the psychology of the inquirer no longer necessitate thoroughgoing changes in how the rest of reality is. Only when the psychology of the inquirer is such as to determine the method of science will inquiry lead them towards fixed belief in a theory is a representation. Different psychologies, and the other methods of inquiry, will result in different theories being true, but these alternatives are not representational, so Peirce is no longer committed to saying that reality varies along with truth.

Psychology 1 → Method 1 (tenacity) → Truth 1 X

Psychology 2 → Method 2 (authority) → Truth 2 X

Psychology 3 → Method 3 (*a priori*) → Truth 3 X

Psychology 4 → Method 4 (science) → Truth 4 → Reality 4

With the strategy of restricting representationalism in hand, Peirce's views are compatible with the possibility of worlds which vary only in terms of the psychology of the inquirers they contain, whilst the rest of reality remains fixed. Therefore, no undesirable mind-dependence counterfactuals threaten. (The closest possible worlds to our own, in which antecedents such as "if inquirers were impressionable enough to acquire fixed beliefs via the method of authority" hold, are ones in which all of the features of reality that are causally independent of psychology are the same as actuality.)

Putting things in a more impressionistic manner, for any given environment, there are many possible ways that an inquirer could go about selecting beliefs. The matter of which method is constitutive of truth, in accordance with Peirce's constructivist theory, will depend on the psychology of the inquirer, and therefore what is true will be mind-dependent (in a particular and limited sense that we have already taken some pains to individuate). But only inquirers with a certain psychology – and hence with a particular method of inquiry – will, in settling on beliefs, be producing representations of their environment, and taking a stance on how it is. Only for that type of epistemic practice will truth bring with it the added significance of correct representation. Although Peirce holds that they fall within the intension of 'truth', the endpoints of the other types of inquiry do not picture the

world as being a certain way – they are not representational. Therefore, Peirce's view that truth is mind-dependent does not entail that reality is mind-dependent.

Before the restriction was placed on **representationalism**, Peirce appeared to be committed to the view that different kinds of inquirer, as a result of differences in their psychology, necessarily inhabited different realities. With the restriction in place, however, we can attribute to Peirce the a thoroughly **realist** view: many different kinds of creature can exist within the same reality, but reality is only in view for inquirers engaged in a certain kind of inquiry.

By means of this strategy, we have found an interpretation according to which Peirce must no longer be saddled with inconsistency. The new triad of views which results from placing the restriction on **representationalism** is perfectly consistent:

Constructivism: Truth is mind-dependent.

Restricted Representationalism: The truth, as constituted by scientific method, represents reality.

Realism: Reality is mind-independent.

CHAPTER THREE

§1: Peirce holds that only the products of scientific inquiry are representational.

*§2: The strategy of **restricting representationalism** bears affinities to the ‘rigidification’ strategy rejected in Chapter Two. Does it yield an ‘anthropocentric and parochial’ version of realism?*

*§3: Considerations on the nature of representation, and the role that experience must play if thought is to be directed at the world, provide principled reasons for restricting **representationalism** to what Peirce calls ‘scientific inquiry’.*

We have within our sights a strategy for reconciling **constructivism** and **realism**. What remains to be done? The first task, addressed in §1 of this chapter, is to justify the claim this fusion of the two positions is Peirce’s: to show that it is plausible to interpret Peirce’s writings as embodying an endorsement of **restricted representationalism**. The next task is to show that the strategy is a viable option in the context of genuine **realism**; that the restriction of representationalism to science can be motivated without recourse to the fact that science is *our* method.

1. Does Peirce accept Restricted Representationalism?

In this section, I will show that there is evidence that the move of restricting representationalism to the “method of science” is present in Peirce’s writing.

When he introduces the “method of science” (in ‘The Fixation of Belief’, EP 1.119-20), Peirce characterizes it as ensuring that our beliefs are not “determined by any circumstance extraneous to the facts”. In Peirce’s eyes, the “method of science” is tightly bound up with a belief in a mind-independent, external world:

“Its fundamental hypothesis, restated in more familiar language, is this: There are real things, whose characters are entirely independent of our opinions about them;

those realities affect our senses according to regular laws, and ... we can ascertain by reasoning how things really are.”

What is special about practitioners of the “method of science” is that they take themselves to be responsive to an external reality in their thought, and act accordingly. Beliefs produced in the context of any other practice, Peirce thinks, do not serve as commitments about how things are in the extra-mental world. I would contend that it is plausible to put the following gloss on this point: only beliefs produced by scientific inquiry represent reality. And this, of course, is the thesis of **restricted representationalism**, the thesis which opens up the possibility of reconciling **constructivism** and **realism** as described in Chapter Two, §3.

Further textual support for the attribution of **restricted representationalism** to Peirce is to be found in ‘How to Make Our Ideas Clear’ (EP 1.137). Following his equation of “true belief” with “belief in the real”, he writes that

“As we have seen in the former paper [i.e. ‘The Fixation of Belief’], the ideas of truth and falsehood, in their full development, appertain exclusively to the scientific method of settling opinion. A person who arbitrarily chooses the propositions which he will adopt can use the word truth only to emphasize the expression of his determination to hold on to his choice.” (EP 1.137)

In other words, in the context of the “method of tenacity”, the fixation of a belief does not bring with it the significant of representation of what is real, but only marks it as the attitude the inquirer is stubbornly clinging on to. And as we have already noted, Peirce applies similar criticisms to the significance of truth in the context of the “method of authority” (“the truth meant little more than the Catholic faith” ‘How to Make Our Ideas Clear’, EP 1.138) and the “*a priori* method” (“the truth is simply [the inquirer’s] particular stronghold” *ibid.*).

An objection could be raised against this reading of Peirce, on the grounds that he talks in terms of inquirers forming *beliefs*, no matter what the method of inquiry is. *Prima facie*, beliefs are representational, ‘propositional attitudes’. To ascribe a belief to someone is to say that they have a certain view about how the world is.

However, there is good reason to think that Peirce is simply using the term “belief” in a broader, more permissive sense than we might, and that in his sense the term brings with it no commitment to the mental state in question being representational. This reason comes from Peirce’s rather ‘bare-bones’ characterization of the conditions a state must satisfy in order to be a belief:

“And what, then, is belief? ... We have seen that it has just three properties: First, it is something that we are aware of; second, it appeases the irritation of doubt; and, third, it involves the establishment in our nature of a rule of action” (‘How to Make Our Ideas Clear’, EP 1.129).

The list of the necessary conditions for belief makes no reference to the state being representational, or exhibiting intentionality. As Peirce uses the term, a state can be a ‘belief’ without having content.

This permissive use of the concept of belief is especially easy to account for within the context of Peirce’s theory of truth, which, as we have seen, manages to characterize truth in terms of the process of inquiry, without any appeal to a notion of representation. We could say that Peirce has a permissive attitude towards the question of which types of mental states are ‘truth-apt’, and that being representational is not a necessary condition of truth-aptness on his view. In a manner analogous to the way that ‘minimalism’ about truth is employed by non-

cognitivists about various domains in order to argue that attitudes and sentences which do not embody assertoric judgments can nonetheless have truth-values, Peirce uses a sort of ‘minimalism’ about belief to extend his use of that term beyond the limits of the representational.

In sum, Peirce’s use of the term ‘belief’ to apply to the states produced by all forms of inquiry does not present a problem for attributing to him the view that only the “method of science” produces representational mental states. It is plausible to read Peirce as endorsing only the **restricted** version of **representationalism**, which, as was argued in Chapter Two, can be combined without contradiction with the mind-dependence of truth (Peirce’s version of **constructivism**) and the mind-independence of reality (**realism**).

2. Restricted Representationalism and the Threat of ‘Anthropocentricity’

Peirce admits the possibility that creatures psychologically different from humans could exist, and that their modes of inquiry would produce ‘fixed’ beliefs – in the sense necessary for them to count as true, by the lights of Peirce’s theory of truth – very different from those towards which the path of scientific inquiry leads. We have now seen evidence that Peirce believes that only the products of scientific inquiry are **representational**: only beliefs settled on by means of the “experiential method” (an alternative name that Peirce gives to the “method of science”, when revising the text in 1893. See note 14 to ‘How to Make Our Ideas Clear’, EP 1.378) show the world as being certain way, and only for them does a belief’s truth have the consequence that reality is as the belief depicts it. (In accordance with **restricted**

representationalism, ‘beliefs’ produced in other ways do not even depict reality as being a certain way.)

But so far, no reason has been given for the claim that only the “method of science” produces representational attitudes. Could it not be the case that the web of beliefs fixed by some other method is representational? If so, would they too depict a ‘reality’, although one very different from the picture of reality that science delivers? Unless the restriction of **representationalism** to the domain of science can be motivated philosophically, the metaphysical picture we are faced with seems hardly less ‘anthropocentric and parochial’ than what would be achieved by the restriction of the reference of “reality” to the deliverances of *our* inquiry, i.e. the ‘rigidification’ strategy, which we rejected.

If Peirce’s notion of reality were bound up with an anthropocentric standpoint, the claim that he is a true **realist** would be in jeopardy. Sure enough, from within our own point of view, we can stamp our feet and insist that the world is in not in view for other kinds of inquirer, who do not heed experience when selecting beliefs. But so far, the situation could be symmetrical: unless we have a reason for rejecting the contention that different modes of inquiry could produce representations, another type of inquirer’s insistence that *our* theories fail to connect with *their* reality would be as good as our own. So far, the only way of avoiding relativism of ontology to method of inquiry is the ‘anthropocentric’ insistence that only *our* method will do. Therefore, more work needs to be done to show that **restricted representationalism** is acceptable in the context of a full-blooded, non-

anthropocentric **realism**: independent support needs to be found for the view that only beliefs produced by Peirce's "method of science" are representations.

In the next section, we will examine the case for asserting that there is something sufficiently special about scientific inquiry to substantiate the claim that only it is equipped to produce representations of reality. The aim is to show that, while the proposal is to restrict representationalism to *our own* method of inquiry, this is not merely because it is *our own*.

3. Justifying Restricted Representationalism

There is a philosophically plausible conception of intentionality⁸ which can be used to motivate restricted representationalism, the claim that only those beliefs settled upon by means of what Peirce calls the "method of science". According to this conception, there are certain necessary features that a practice must possess in order to be capable of producing representational states. It will be argued that Peirce's conception of science is sufficiently broad that these conditions will suffice to qualify any such practice as an instance of the "method of science".

The account of intentionality appealed to in this section is, of course, rather tendentious, though I do believe it has some plausibility. However, my aim is merely to show that restricted representationalism can be motivated without recourse to an anthropocentric conception of reality. For my purposes, it is not necessary to convince the reader of the correctness of the account of intentionality appealed to, but only that it has some basic degree of philosophical plausibility. After all, my project in this essay is to show that Peirce has a *coherent* position which combines

⁸ This account of intentionality owes a debt to Sellars (1967, esp. chapters 1-5; 1956), Brandom (2008), and McDowell (1994; 2004; 2009, essays 1-3).

constructivism and realism, not that he is correct. The aim of this section is to show that, according to one plausible approach to intentionality – which I dub *empiricist inferential-role functionalism* – any practice capable of producing representations will necessarily adhere to be “scientific” in Peirce's sense.

The conception of intentionality to which I will appeal belongs to a family of approaches to the philosophy of mind called functionalism. Functionalism is the view that the status of a mental state as representational (and as possessing just such-and-such content) depends not on its intrinsic features but rather on the place it holds within a network of other states. Just as in computing, the question of what state a computer chip is in is answered, not by describing the state of each of its bistable circuits, but in terms of what other states it would move into when fed such-and-such inputs, the Functionalist sees mental kinds as individuated by their relations to other mental states, as well as sensory inputs and behavioural outputs. In computing the machine's state is captured by the place it holds in a particular program. Similarly, for the functionalist about the mind, a mental state is individuated by the place it holds in a practice.

The view in question is that, in order to be representational, a mental state must have a place in particular sort of practice: not just any mental 'program' will have states, such that anything that occupies them will count as a representation of reality. In other words, only certain types of practice have the capability of producing representations. There are only certain methods of settling upon 'beliefs' (in the Peirce's wide sense, see Chapter 3, §1) against the background of which 'beliefs' have representational content.

Within the family of functionalism, the view to which I am appealing belongs to the genus of 'inferential-role' functionalism. The view is that the nature of a mental state is fixed, not merely by its position in a causal nexus, but within a framework of norms. According to inferential-role functionalism, we must not leave out the relations of justification that exist between different states. Once the 'program' or practice to which a mental state belongs is described with reference to the inferential norms that govern it, it becomes possible to talk about the conditions under which a thinker is *warranted* to occupy that state (by the standards of the practice). To say that she is engaged in that practice is to say that she is responsive to the norms that constitute it when she settles upon a mental state: she forms such-and-such a belief on the grounds that she has justification for it, and is warranted to hold it (by the standards of the practice).

To put things schematically: to form a belief that P in the context of practice M is to come to have credence in P by means of applying the norms of warrant that constitute M. The inferential-role functionalist believes that the mental state can only be individuated by referring to its inferential role in a practice, and that practices are individuated by the norms of warrant (or rules of assertability) that constitute them.

Though it would be anachronistic to say that Peirce was an inferential-role functionalist, the way that he individuates the different methods of inquiry in 'The Fixation of Belief' is by means of distinguishing under what conditions a 'belief' counts as warranted, by the lights of each practice. For example, a thinker is engaged in a practice instantiates the "method of tenacity" if he distributes his credence in

beliefs just on the basis of how well they cohere with the arbitrarily selected body of dogma.

The species of inferential-role functionalism that motivates the claim of restricted representationalism is produced by adding in a view we can call ‘empiricism’, according to which mental states attain their directness at the world only by means of the relation they stand in to *experience*. If the warrant of my thoughts depends only on other aspects of what I think, then the highest standard to which my views can be held is internal coherence. In such a scenario, what the world outside my thought is like would be totally irrelevant to the assertability of one of my thoughts, and therefore my settling on such-and-such a belief would commit me to nothing about how the world beyond myself stands: how the world is would make no difference to the status of my belief, so my belief can make no claim about how the world is. To use John McDowell's memorable image, thought would be “a frictionless spinning in the void” (McDowell 1994: 11).

A minimal constraint on being in touch with the world, then, would be that warrant be responsive to features which do not merely depend on the subject, but which depend on how the world is. The sensory surfaces of an organism, in being causally affected by the external world, provide such an opportunity for external constraint on thought. However, for thought to be directed at the world (i.e. to be representational), it is not sufficient that mental states causally dependent on the firings of sensory receptors, and therefore causally dependent on the external world, occur. The rest of thought must be responsive to these mental states triggered by the senses: other thoughts must depend for their warrant on sensations being thus and

so, rather than some other way. In other words, the *experiences* (as we can call the mental states triggered by the senses when they take place in a context that imbues them with content) must have a particular inferential role.⁹

For a mental state to have representational content, the matter of whether it is warranted must at the end of the day come down to how the world is. The empiricist inferential-role functionalist holds that only in the case that the belief will at some point be subject to revision, unless the world is a certain way, can the unrevisability – the persisting warrant – of that belief take on the propositional significance: only then can an endorsement of the belief amount to a claim that the world is one particular way, and not another. Therefore, for a practice to be capable of producing representations, all beliefs which provide epistemic support for beliefs which are (putatively) about the world must themselves be capable of being supported or undermined by experience. The thinker engaged in that practice must allocate credence on the basis of nothing that does not ultimately rely on experience.

Nevertheless, if their content is to concern how things are, rather than how they appear, conclusions drawn on the basis of experience must be defeasible under certain circumstances, e.g. if new evidence indicates that a past experience was a case of illusion. We can see how, on this conception of the nature of mental content, truth would coincide with warrant under ideal epistemic conditions: the intension of

⁹ This is the insight expressed by Kant's famous dictum that "Thoughts without content are empty, intuitions without concepts are blind. The understanding can intuit nothing, the senses can think nothing. Only through their unison can cognition arise." (Kant 1998: A 51/B 75) Experiences can only provide us with content if they have a place in reasoning, and thoughts can involve empirical content only if they stand in rational relations to experience. For creatures that are only related to the external world via sensation, thought can be directed at the world only if both conditions are fulfilled. It has a famous descendent in Sellars's view that experience must occupy a place in the "space of reasons" in order to be epistemologically significant (Sellars 1956: section 36).

a belief can be considered to be the range of circumstances in which someone with access to all of the relevant evidence would deem the thought to be warranted, and its content can be understood as the proposition that the present state of affairs falls within that intension, or in other words, that all of the necessary conditions for the belief's warrant hold.

Our judgments make claims, not only about what the content of experience has been, but also about other aspects of the world which we have not experience. In forming such beliefs, we must extrapolate from the evidence we possess and infer things beyond it. Such inferences involve the employment of a canon of inferences, which themselves must be potentially open to revision if it clashes with experience, if our 'synthetic judgments' are to be more than mere shadows of our own associative propensities. For example, the inferential rule that if *x* has a beak, you are warranted to judge that it was born with wings, stands in conflict with the evidence that platypuses exist. If the rule purports to have objective validity, it should not be a foregone conclusion whether the inferential rule or the surprising experience should be cast aside. The rules require not only sanction from the practice, but should be brought into harmony with the objective correlations of the world.

To sum up the empiricist inferential-role functionalist position, in order for a mental state to be representational, it must have a place in a practice in which warrant is distributed purely on the basis of experience, in which all beliefs are potentially open to revision, should evidence that conflicts with them emerge.

The distinctive features that a practice must possess in order to be capable of producing representational mental states, according to the view that I have been

calling empiricist inferential-role functionalism, chime very closely with the things that mark inquiry according to the “method of science” as Peirce conceives it.

The distinctive thing about the “method of science” is that by employing it the inquirer ensures that her beliefs are not “determined by any circumstance extraneous to the facts” (“The Fixation of Belief”, EP 1.119), and rather are “caused by nothing human, but by some external permanency”. What this amounts to is that, in order to count as “scientific”, an inquirer must give credence to claims purely on the basis of how well they are supported by experience.

Experience itself is does not receive a lengthy discussion in the essays of 1877. However, Misak (2006) draws our attention to the following passage in the *Collected Papers*:

[A]nything is, for the purposes of logic, to be classed under the species of perception wherein a positive qualitative content is forced upon one’s acknowledgement without any reason or pretension to reason. There will be a wider genus of things partaking of the character of perception, if there be any matter of cognition which exerts a force upon us. (CP 7.623, quoted by Misak 2006: 404)

Experience, or perception, is the thought compelled from outside one’s own mind, which pays no respect to what one already believes.¹⁰ In allocating warrant on the basis of experience, therefore, we are ensuring that thought is constrained by something other than what we already think.

Peirce’s account of the role of experience in scientific inquiry requires that the thinker check experience in the light of further evidence, so that “by taking advantage of the laws of perception, we can ascertain by reasoning how things really

¹⁰ We should note at this point, as Misak does, that Peirce’s conception of experience leaves ample room for things other than sensory perception, such as moral feeling, or the compulsion of the results that follow upon manipulating mathematical symbols.

are, and any man, if he have sufficient experience and reason enough about it, will be led to the one true conclusion.” (‘The Fixation of Belief’, EP 1.121) Furthermore, Peirce conceives of “scientific method” as deeply self-critical, containing within it the science of logic, the task of which is to ascertain which forms of inference are truth-preserving: to count as a scientific inquirer, one must subject inferential rules to testing, much in the same way as was described above.¹¹

Continual testing of hypotheses was also central to Peirce’s conception of scientific inquiry, of a sort that ensures that any belief we hold is highly vulnerable to revision, and will be revised unless the world is one particular way. In order to be engaged in “scientific” inquiry then, the rules of warrant one employs must be such as to make unrevisability very hard to come by, and to make the status of a particular belief as unrevisable highly dependent on how the world is.

From this brief sketch, we can see that the necessary conditions for a practice to be capable of producing representational mental states – according to the rather tendentious, though I hope not completely implausible account of intentionality I have described – suffice to earn that practice the label of “science”, as Peirce applies it. In other words, according to empiricist inferential-role functionalism, only beliefs produced by inquiry according to the “method of science” are representations of reality. I have not aimed to convince the reader of the truth of the account of intentionality appealed to, but so long as I have succeeded in showing how one could be attracted to it without recourse to any ‘anthropocentric’ assumptions about the nature of reality, then **restricted representationalism** has been shown to cohere

¹¹ See §2 of ‘The Fixation of Belief’ for a brief characterization of the science of logic, as Peirce conceives it (EP 1.111-3).

with **realism**. If this is the case, then the strategy for reconciling **constructivism** and **realism** offered in Chapter Two, §3, is available.

CHAPTER FOUR

*§1: The denial of the intelligibility of error that would not be rooted out by the “method of science” can be supported by an appeal to Peirce’s **pragmatist theory of meaning**, which implies that recognition-transcendent error is an unintelligible notion.*

*§2: The assumption of **convergence** can also be discharged on the grounds of considerations arising from Peirce’s **pragmatist theory of meaning**.*

*§3: Peirce’s **pragmatist theory of meaning** has strong affinities with the theory of semantics that motivates Dummettian Anti-Realism. Since the assumptions underpinning Peirce’s account of truth and reality rely on it, are his realist credentials once again under threat?*

We have formulated a strategy for resolving the tension between Peirce’s theory of truth and his commitment to realism that we set out to dissolve. Furthermore, we have seen evidence that Peirce’s commitment to representationalism is of the restricted kind required for this resolution. And there are philosophical grounds for endorsing this strategy that do not rely on an ‘anthropocentric’ privileging of our own mode of inquiry. In sum, we have reached an interpretation of Peirce according to which his radically **constructivist** theory of truth can be combined with a fully fledged **realism**. What remains to be done?

The threat that remains is that commitments incompatible with realism could have worked their way in along the way. This chapter deals with two worries of this sort, arising directly from Peirce’s theory of truth. Peirce’s theory of truth brings with it the claim that inquiry, if continued long enough, would root out all error: that there is **no undiscoverable error**. Furthermore, we took on board as an assumption Peirce’s view that scientific inquiry produces **convergence** amongst inquirers, that

inquirers will not face choices between incompatible yet empirically equivalent theories. In this Chapter, doubts will be raised as to whether these views can have any plausibility within the framework of realism. If the assumptions indeed have no place in a coherent form of realism, but rather can only be motivated by antirealist conceptions, then we would not have a genuine fusion of constructivism and realism. However, this chapter will argue that both claims follow from Peirce's **pragmatist theory of meaning**, and hence do not rely on supplementary assumptions which are idealistic in nature.

1. Undiscoverable Error

In order to accept Peirce's theory of truth, we must rule out *a priori* the possibility that there are states of affairs that could never be discovered. *Prima facie*, it seems possible that a theory could satisfying Peirce's characterization of truth, and nonetheless be false – it could contain an undiscoverable error, which would not come to light even under an idealized extension of the process of investigation. Inquirers could be misled into fixed belief in such an undiscoverably false theory, with no hope of rooting out their error. In practice, we may think that such a situation is unlikely and pass over such a sceptical hypothesis when selecting theories, but Peirce's theory of truth would have the odd result that this possibility can be ruled out *a priori* once we have a proper understanding of 'truth'. How can Peirce be justified in denying that there may be unknowable states of affairs, if he believes that reality is ontologically independent of our thought about it?

At the very least, Peirce is at least consistent on this point throughout his career: he denies the possibility of error which we could never come to know about.

This view is expressed in his 1868 essay, ‘Some Consequences of Four Incapacities’: “a proposition whose falsity can never be discovered, and the error of which therefore is absolutely incognizable, contains, upon our principle, absolutely no error.” (EP 1.52)¹²

The denial of recognition-transcendent falsity is a special case of his rejection that it is intelligible that there could be undiscoverable states of affairs – facts that hold without there being any trace of them available to experience. But what are Peirce’s grounds for denying that reality can have richness that is unconstrained by limitations about what we could know about it? The denial of unknowables would be easy to justify in the context of ontological idealism: if reality is a construction out of our thought and perception, then there it cannot support distinctions of a finer grain than differences in our thought. Does Peirce’s identification of truth with the endpoint of inquiry rely after all on an idealistic conception of reality?

To show that this is not the case, I will argue that Peirce’s denial of the possibility of unknowable states of affairs can be justified by his **Pragmatist theory of meaning**, and therefore in no way depends upon an antirealist ontology. The central maxim of the **Pragmatist theory of meaning** is that “there is no distinction of meaning so fine as to consist in anything but a possible difference of practice.” (‘How to Make Our Ideas Clear’, EP 1.131) Expressed more fully, the view is as follows:

¹² We must interpret Peirce’s talk of the “incognizable” as referring to what is *unknowable* or *imperceptible* rather than the *unthinkable*, otherwise the ‘fourth incapacity’ – “We have no conception of the absolutely incognizable.” (‘Some Consequences of Four Incapacities’, EP 1.30) – would be trivial.

“If beliefs ... appease the same doubt by producing the same rule of action, then no mere difference in the manner of consciousness of them can make them different. ... [They] differ only in their mode of expression.” (EP 1.130)

In order to see how the Pragmatist theory of meaning allows Peirce to discount the intelligibility of undiscoverable states of affairs, consider two theories, T – which makes claims only about knowable states of affairs – and T* – which is identical to T in its claims about knowable states of affairs, but which contains further claims about “incognizable” matters. If T and T* differ neither in

1. the expectations for experience they bring with them;

nor

2. the rules of action they produce;

then, in the eyes of the Pragmatist, they do not differ in meaning but are alternate ways of saying the same thing.

Theory T and brings with it a range of expectations for experience, that we can model as an assignment to each of a suitably wide class of event a value of “expected” or “unexpected”. If my experiences to date all fall within the class of “expected” events, then T is able to appease any doubts I have arising from what I have experienced. And if I believe T, any “unexpected” event, should it occur, will give rise to doubt in at least some aspect of it.

Theory T* agrees as it does with T about all knowable states of affairs. *Ex hypothesi*, the extra claims about unknowable matters, over which it differs with T, have no consequences for experience and cannot be investigated. Therefore, T* brings with it just the same expectations for experience that T does: the assignment of “expected” and “unexpected” to possible experiences does not differ between T

and T*. This means that (1) is fulfilled. T and T* “appease the same doubt” (‘How to Make Our Ideas Clear’, EP 1.130), in the sense that they can accommodate precisely the same array of phenomena. If an experience has pushed me into a state of doubt, then T will be able to account that experience if and only if T* is able to.

Do they fulfil the Pragmatist theory’s second necessary condition for sameness of meaning? Do T and T* “produc[e] the same rule of action” (ibid.)?

Peirce operates with a standard belief-desire psychology, so beliefs only determine rules of action when combined with desires. So the question we must ask is as follows. Is it the case that T and T* do not differ with respect to the actions they would produce when combined with an arbitrary set of desires?

The way that beliefs interact with desires in order to produce action is by providing what we can call ‘action conditionals’ – beliefs of the form “If I do A, the result will be B.” If T and T* produce different habits of action, they must disagree over some action conditional. Now, if they differed over some conditional where the result is to be filled in by some observable state of affairs, then that action conditional could serve as a means for telling between the two theories: perform A, and observe whether B or B* follows. Since (*ex hypothesi*) T and T* are empirically equivalent, there can be no such disagreement. T and T* cannot differ over an action conditional in which the consequence is something observable.

If they are yet to produce different habits of action, it can only be means of disagreeing over an action conditional in which the consequence is something unobservable. But such a difference in beliefs would only produce a difference in

rule of action when combined with a (*de dicto*) desire for that to unknowable states of affairs.

The Pragmatist has grounds for denying the intelligibility of the claim that someone possesses such a desire: presumably, one has to be able to entertain an object in thought or experience in order to form a desire for it. In other words, if I cannot even *refer* to an object or state of affairs, then I cannot possibly begin desiring it.

But, as has just been shown, the Pragmatist believes that the semantic resources requisite to refer to an unknowable state of affairs presuppose a desire for that unknowable states of affairs, because there is no practical difference made by expressions mentioning unknowables in their absence. The semantic resources presuppose the desire, which in turn presupposes the possession of the semantic resources. Assuming the Pragmatist theory of meaning, this circularity of dependence makes it impossible ever to form a desire for an unknowable state of affairs. Without such a desire, even if they disagree over an action conditional with an unknowable consequence, T and T* will not produce different habits of action.

What has just been shown is that it follows from the Pragmatist theory of meaning that our semantic resources constrain us to distinctions within the realm of what can be known.¹³ All error can in principle be rooted out, and the *prima facie* objection to the equation of truth with the end of inquiry on the basis of the

¹³ It should be born in mind, however, that Peirce has a much broader conception of experience than, which includes among other things the results of manipulating symbols in mathematical, algebraic or formal reasoning and the beliefs that force themselves on us 'intuitively', so to speak, when we consider moral matters. Misak discusses the place of metaphysical, mathematical and moral inquiry in Peirce's conception of scientific method in Misak (2004), and offers a general account of what Peirce means by "experience" in Misak (2006, esp. p. 404)

possibility of undiscoverable falsity can be defeated within the framework of the theory of meaning Peirce endorses.

For now let us concede the **Pragmatist theory of meaning** to Peirce as an assumption. In Chapter Five, the question will be raised as to whether this theory of meaning is itself in tension with a commitment to realism.

2. Convergence

Prima facie, it seems plausible that theory is undetermined by evidence: even given the totality of what can be observed about the world, the number of possible theories is not reduced to one, because reality outstrips experience. Even with the denial of recognition-transcendent error in hand, and granting Peirce's extension-cum-idealization of the actual process of inquiry to an indefinitely long process in which theories are brought into line with all relevant possible experience and all idiosyncrasies, errors and irrationalities are eventually rooted out, Peirce's belief in **convergence** seems questionable. As we saw, reconciling Peirce's theory of truth with his claims about reality requires that scientific inquiry should lead to the fixation of one unique theory, but the possibility of divergent yet empirically equivalent¹⁴ theories would put the whole project in jeopardy.

Can Peirce deny the intelligibility of the suggestion that theory is underdetermined by evidence? Once again, idealism could be used to justify the assumption. If Peirce were to deny that reality is separate from experience – that the world at which our beliefs are directed has an independent existence outside our encounters with it – then it would be easy to motivate his denial that multiple

¹⁴ This formulation comes from Quine (1975).

conflicting theories are compatible with the totality of experience. However, the case with **convergence** is much the same as was the case with **undiscoverable error**. The assumption can be justified without idealism, by means of an appeal to Peirce's **Pragmatist theory of meaning**.

Let us recapitulate how the Pragmatist goes about arbitrating questions: two beliefs are – in spite of any appearances to the contrary – equivalent in meaning if they differ in neither

1. the expectations for experience they bring with them,
- nor
2. the rules of action they produce.

Consider now two empirically equivalent theories, T_1 and T_2 . The situation is precisely the same as we saw in the last section, when considering T and T^* . *Ex hypothesi*, T_1 and T_2 are empirically equivalent, which is to say that they bring with them just the same expectations for experience – they do not differ in (1).

Do they produce the same rules of action when combined with arbitrary sets of desires? Consider first desires relating only to observable states of affairs: T_1 and T_2 may not differ in the actions they recommend for fulfilling these desires, or they would have to differ over an observation statement of the form “If action A is chosen, (observable) state of affairs B will follow,” and hence would not be empirically equivalent. We can only form desires for unobservable states of affairs if we can think about them. And the **Pragmatist theory of meaning** entails that someone not already in possession of such a desire lacks the semantic resources to

refer to unobservable states of affairs, and therefore rules out the possibility of anyone forming such a desire. T_1 and T_2 do not differ in (2) either.

Ergo, they are equivalent in meaning.

3. The Pragmatist Theory of Meaning

Peirce's assumptions – that there is **convergence** amongst inquirers employing the “method of science” and that there is **no undiscoverable error** that would elude indefinitely extensive scientific inquiry – can be justified without putting ontological constraints of an idealistic sort on reality, by an appeal to his theory of meaning. In other words, Peirce's reconciliation of **constructivism** and **realism** lean on the **pragmatist theory of meaning**, that “there is no distinction of meaning so fine as to consist in anything but a possible difference in practice.” (‘How to Make Our Ideas Clear’, EP 1.131) If this assumption is itself compatible with realism, then so too is Peirce's radically constructivist theory of truth (according to which truth is thoroughly mind-dependent).

The final question, to be addressed in the last chapter of this essay, is whether Peirce's theory of meaning is itself combatable with realism.

CHAPTER FIVE

*§1: Despite its affinities with Dummett's semantic 'antirealism', Peirce's Pragmatist theory of meaning does not directly conflict with ontological **realism**.*

§2: The possibility that Peirce may be compelled to reject the law of the excluded middle – a move that would be incompatible with realism – is considered, and then refuted.

§3: The matter of how to go about settling questions of realism is determined to be a question in metaphysics.

1. Realism and the Denial of Recognition-Transcendence

As has already been seen, the pragmatist theory of meaning has the consequence that there can be no recognition-transcendent states of affairs. This is the central tenet of 'antirealism' as it is conceived of by Dummett. Does this mean that it was a mistake to think that Peirce was a realist?

This denial means that reality remains tethered to our methods of finding out about it, and cannot have any features that outstrip our powers to recognise them. Therefore, Peirce is not in a position to endorse the view that Dummett characterizes as 'realism', when it comes to statements about reality, namely that "their truth or falsity is, in general, independent of whether we know, or have any means of knowing, what truth-value they have". (Dummett, 1968: 358) Differences in truth and falsity cannot be of a finer grain than our means of telling between the two and acting accordingly.

The aim of this section is to argue that the similarities between Peirce and Dummett, striking as they are, provide us with no reason to conclude that Peirce cannot be an *ontological* realist after all. This is not to deny that there is any validity

to Dummett's view that there is an affinity between antirealist ontological views and the semantic thesis that he calls 'antirealism', but only to highlight that the affinity does not amount to an equivalence, and that there no entailment from the semantic thesis to the ontological view.

The affinity between ontological antirealism and semantic 'antirealism' is as follows: if one adopts an antirealist ontological conception of a particular domain (for instance, idealism about physical objects), then there are certain pressures towards denying the possibility of recognition-transcendent states of affairs. For example, if an entity such as a chair is in fact a mental item, then, plausibly, the conditions under which it can feature in thought and perception are synonymous with the conditions of its very existence, and its essence cannot outstrip the features it possesses in cognition. No aspect of it will be unknowable. If this is the case, then there can be no unknowable truths about the chair. For any question about the chair, the answer to which could not be known, there would be no fact of the matter.

But of course, showing that ontological antirealism provides reasons for adopting semantic 'antirealism' does not amount to showing that the same holds in the reverse. And as was made clear in Chapter Four, Peirce's reasons for denying the possibility of recognition-transcendent truths do **not** stem from idealistic ontological views, but from his Pragmatist theory of meaning.¹⁵

To clarify the contrast between the different grounds for denying the coherence of the notion of recognition-transcendent states of affairs, the following

¹⁵ Of course, the same can be said for Dummett: his endorsement of semantic 'antirealism' stems from limitations on referential capabilities of languages arising from how we go about learning to speak them. This section should also provide the reader with grounds for thinking that Dummett's arguments for 'antirealism' do not by themselves conflict with ontological realism.

picture may be helpful. For the idealist, reality is something like a logical construction out of experience, and for that reason is no richer than its knowable aspects. For Peirce, on the other hand, reality is constrained to the knowable not by its ontological nature but rather by the limitations of our referential capabilities. Stepping outside Peirce's theory of meaning, we could say that reality is richer than its knowable characteristics, but that only its knowable character passes through the filter imposed by the limitation of language and thought to differences in meaning that amount to differences in practice. The Pragmatist theory of meaning would have it that this story is incoherent (since it attempts to refer to unknowables, which cannot be referred to). But we can see that the disagreement between the proponent of this picture of reality and Peirce concerns the limitations of language and thought, not the nature of the objects represented in them. Given the availability of this picture, it becomes clear that it is a *non sequitur* to insist that someone who denies the possibility of recognition-transcendent states of affairs must therefore deny that thought represents a mind-independent reality. There is no immediate reason to move from the denial of recognition-transcendent aspects of reality to the denial that belief can represent something external, which is not modally or ontologically dependent on thought.

To the extent that Peirce's pragmatist theory of meaning commits him to 'anti-realism', this is not an ontological thesis, and hence does not stand in conflict with the endorsement of a **realist** ontology. Nor does it create problems for the view that thought **represents** this reality. Ontological antirealism may well give us good reason to deny that the objects of thought can outstrip our knowledge of them, but

the connection does not hold in the other direction, and Peirce's theory of meaning does not force him towards accepting ontological antirealism, or idealism.

2. Realism and the Law of the Excluded Middle

No direct can be made from Peirce's denial of the possibility of unknowable states of affairs to ontological antirealism. But another threat lurks in the vicinity: Dummett forcefully argued that the denial of recognition-transcendent truths obliges us to revise our logic, through the rejection (though not a denial) of the law of the excluded middle (that either P or P's negation must be true) and the closely related principle of bivalence (that P must be either true or false). If there are questions which are to remain forever undecided – questions to which to finite extension of inquiry will provide no answer – and there are no facts that can outstrip our means of finding them out in this way, then there will be questions which have no determinate answer and propositions which are neither true nor false. Though we may never be in a position to rule out the possibility that an unanswered question will yet be answered, it is no longer a logically self-evident truth that there will be some determinate fact of the matter.

And it could be argued that, whilst we can understand our knowledge leaving some question unsettled, we can make no sense of the notion that an external, mind-independent reality *itself* is indeterminate. If this is the case, then we have a chain of reasoning starting from Peirce's denial of recognition-transcendent states of affairs and ending with a view that conflicts with **realism**: the denial of unknowables compels a revision of logic that yields a conception of reality as potentially indeterminate, and that conception is incompatible with full-blooded

ontological **realism**. At least for the purposes of discussion, I will accept the view that countenancing the possibility of indeterminate states of affairs (ignoring cases due to vagueness, a discussion of which cannot be included here) is incompatible with **realism**.¹⁶ Must Peirce really say that reality itself may be indeterminate?

The first point to be raised in this connection is that Peirce was evidently aware of this tension. Firstly, Peirce denied that the law of the excluded middle was a law of logic and instead saw it as a principle standing in need of justification, and potentially a “regulative but not a speculative” principle, if it cannot be justified (*‘An American Plato: Review of Royce’s Religious Aspect of Philosophy’*, EP 1.236).

Misak (1990) interprets Peirce as taking the step of demoting the law of the excluded middle to the status of a ‘regulative principle’, a theorem that we have no grounds for believing in but which, in practice, we must treat as true. If this were so, then Peirce would clearly be countenancing the possibility of indeterminate matters, a possibility that Peirce agrees contradicts our common conception of reality: “If we think that some questions are never going to get settled, we ought to admit that our conception of nature as absolutely real is only partially correct.” (ibid., EP 1.236)

However, contra Misak’s interpretation of him, Peirce writes that

Our experience in this direction warrants us in saying with the highest degree of empirical confidence that questions that are either practical or could conceivably become so are susceptible of receiving final solutions provided the existence of the human race be indefinitely prolonged and the particular question suffice sufficient interest. As for questions which have no conceivable practical bearings, as the

¹⁶ I do find this view intuitively appealing, but it seems to me that the intuition is not unimpeachable. For example, our thought about indeterminacy and reality ought to be responsive to results in quantum physics (though the interpretation of these results and their relation to the laws of logic are as fraught a matter within theoretical physics as they are for philosophers).

question whether force is an entity, they mean nothing, and may be answered as we like without error. (ibid., EP 1.234-5)

The passages from this essay to which Misak refers concern the question of whether *in actuality* inquiry is likely to settle all questions. But as we saw in Chapter Two, §1, truth is fixed ‘in the abstract’ by the nature of inquiry, not created as investigation proceeds. So matter of our forecast concerning the prospects of inquiry given that “the human race will ultimately be extirpated” (ibid., EP 1.235) do not bear on the law of the excluded middle. The passages in which he seems to draw antirealist conclusions are premised on the assumption, which he in fact rejects, that some meaningful questions would remain unanswered even under an ideal extension of scientific inquiry:

Let us suppose, then, for the sake of argument, that some questions ... never do [get settled]. In that case, I should say that the conception of reality was rather a faulty one, for while there is a real so far as a question that will get goes, there is none for a question that will never be settled; for an unknowable reality is nonsense. (ibid., EP 1.235)

If we think that some questions are never going to get settled, we ought to admit that our conception of nature as absolutely real is only partially correct. (ibid. EP 1.236)

These passages should not convince us that Peirce really endorses the possibility of such indeterminacies. (We should join Misak (1990, fn. 8) in taking the language of actuality in these passages to be mere imprecision.) Unfortunately, I am not in a position to comment on the materials from unpublished manuscripts upon which Misak draws. However, given the conflict between her account and Peirce’s realism, I am not willing to accept it on trust that Peirce’s writings on fictional characters reveal him as rejecting the law of the excluded middle across the board.

Peirce certainly sees bivalence as an assumption that plays an indispensable 'regulative' role in inquiry, but he can also justify it as a 'speculative' principle with the help of the Pragmatist theory of meaning: if a question is meaningful, then the totality of experience will tell one way or the other. Peirce's rejection of the law of the excluded middle as a law of logic does not amount to the affirmation that some states of affairs are indeterminate.

Before we move on, we should briefly note that Peirce's view has some unpalatable consequences as to what we can meaningfully ask questions about. For example, it is natural to think that facts about past events are just as rich as those about present events and persisting states of affairs, while evidence about happened in the past is often rather constrained. Whilst Peirce thinks that, for any given question, we should hold out hope that evidence will turn up that will decide the matter, he is committed to saying that any questions for which this hope would never be fulfilled are in fact meaningless. Peirce's views therefore place a severe limitation on our ability to engage in meaningful speculation about, for example, events in the past that left no evidence.

Putnam puts this point by claiming, "Peirce's definition of truth as the opinion to which inquiry would converge if indefinitely pursued has ... antirealist consequences about the past" (Putnam 1996: 154), and I think this is right. Whilst Peirce *is* a full-blooded realist about the persistent features of the world, his 'forward looking' account of meaning means that he has a view of time that may be unpalatable to many. As Peirce puts it, "if nothing is [read: would be] ever settled about the matter, it will be because the phenomena do not consistently point to any

theory; and in that case there is a want of that “uniformity of nature” ... which constitutes reality, and makes it differ from a dream.” Peirce is perhaps read as a peculiar sort of *presentist*, believing that the past is only real to the extent that it is manifest in the present, and that attempts to make distinctions of a finer grain in speech and thought are misguided. Of course, many philosophers have endorsed the view that the present is somehow ontologically special, and should not for that reason be interpreted as being antirealists on all counts.

3. The Question of Realism

Peirce’s **constructivist** theory of truth is compatible with **realism**, given that he holds that only one type of method is capable of producing representations of reality. The theory of truth rests on a denial of recognition-transcendent truths, and of differences between theories that do not amount to empirical differences, but these claims can be justified by the **pragmatist theory of meaning**, a theory which is itself compatible with realism. Peirce is both a **constructivist** and a **realist**, and his position is coherent.

I will conclude this essay with a short discussion of where this leaves the question of realism. In the course of the discussion, it has been argued that philosophical questions about the relation between the mind and the world cannot be dispensed with by considering semantics or the theory of truth. How, then, do we go about asking such questions?

Peirce’s view on this matter is that the question of realism is a question in metaphysics: the only way in which we can go about deciding whether or not some

body of belief represents a mind-independent world is by asking that question directly and weighing up the arguments on each side.

The pure mathematician deals exclusively with hypotheses. Whether or not there is any corresponding real thing, he does not care. His hypotheses are creatures of his own imagination; but he discovers in them relations which surprise him sometimes. A metaphysician may hold that this very forcing upon the mathematician's acceptance of propositions for which he was not prepared, proves, or even constitutes, a mode of being independent of the mathematician's thought, and so a reality. ('Truth and Falsity and Error', CP 5.567, quoted by Misak 2004: 167)

If we are interested in the relationship between the mind and the world, then we must engage in metaphysics. This essay cannot move on to the question of how we should go about positively exploring these metaphysical questions. Its task was just to establish that the questions remain open, even if we endorse a **constructivist** theory of truth, because **constructivism** is compatible with **realism**.

BIBLIOGRAPHY

Peirce's works:

Most references to Peirce's writings are to the edition, *The Essential Peirce: Selected Philosophical Writings*, Bloomington and Indianapolis: Indiana University Press. In the text, these references are of the form 'EP [volume number].[page number]'. For works not included in this edition, references are to the *Collected Papers of Charles Sanders Peirce*, Cambridge, MA: Harvard University Press, and follow the conventional form, 'CP [volume number].[paragraph number]'.

Other works:

Altshuler, B. (1982). Peirce's Theory of Truth and the Revolt against Realism. *Transactions of the Charles S. Peirce Society*, 18(1), 34–56.

Bagnoli, C. (2011). Constructivism in Metaethics. In *Stanford Encyclopedia of Philosophy*. Retrieved from <http://plato.stanford.edu/entries/constructivism-metaethics/>

Brandom, R. (2008). *Between Saying and Doing: Towards an Analytic Pragmatism*. Oxford: Oxford University Press.

Dummett, M. (1968). The reality of the past. *Proceedings of the Aristotelian Society*, 69(New Series), 239–258.

Hookway, C. (1985). Peirce. London: Routledge.

Hookway, C. (2004). Truth, Reality, and Convergence. In C. Misak (Ed.), *The Cambridge Companion to Peirce* (pp. 127–149). Cambridge: Cambridge University Press.

Kant, I. (1996). *Kritik der reinen Vernunft*. (J. Timmermann, Ed.). Hamburg: Felix Meiner.

McDowell, J. (1994). *Mind and World*. Cambridge, MA: Harvard University Press.

McDowell, J. (2004). Naturalism in the Philosophy of Mind. In M. DeCaro & D. MacArthur (Eds.), *Naturalism in Question*. Cambridge, MA: Harvard University Press.

McDowell, J. (2009). *Having the world in view: Essays on Kant, Hegel, and Sellars*. Cambridge, MA: Harvard University Press.

Misak, C. (1990). Pragmatism and bivalence. *International Studies in the Philosophy of Science*, 4(2), 171–179.

- Misak, C. (2004). C. S. Peirce on Vital Matters. In C. Misak (Ed.), *The Cambridge Companion to Peirce* (pp. 150–174).
- Misak, C. (Ed.). (2004). *The Cambridge Companion to Peirce*. Cambridge: Cambridge University Press.
- Misak, C. (2006). Scientific Realism, Anti-Realism, and Empiricism. In J. R. Shook & J. Margolis (Eds.), *A Companion to Pragmatism* (pp. 398–409). Oxford: Blackwell.
- Putnam, H. (1996). Pragmatism and realism. *Cardozo Law Review*, 18, 153–170.
- Quine, W. (1975). On empirically equivalent systems of the world. *Erkenntnis*, 9(3), 313–328.
- Russell, B. 1939: ‘Dewey’s New Logic’. In A. Rorty (Ed.) (1966), *Pragmatic Philosophy* (pp. 315-27). NYC: Doubleday.
- Sellars, W. (1956). Empiricism and the Philosophy of Mind. *Minnesota Studies in the Philosophy of Science*, 1.
- Sellars, W. (1967). *Science and Metaphysics Variations on Kantian Themes*. Atascadero, CA: Ridgeview.
- Short, T. (2004). The Development of Peirce’s Theory of Signs. In C. Misak (Ed.), *The Cambridge Companion to Peirce* (pp. 214–240).
- Wright, C. (1992). *Truth and objectivity*. Cambridge, MA: Harvard University Press.