Concepts in Pragmatism

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**Abstract**: Pragmatism is a philosophical tradition that understands knowing the world as inseparable from agency within it. It thereby introduces some unique ideas and approaches to the analysis of concepts. Looking largely to pragmatism’s founder, Charles Peirce, this chapter presents an account of concepts as *habits* which associate specific kinds of environmental stimuli with schemata of action and ensuing experience, within linguistic communities. I explain how this account avoids Sellars’ ‘Myth of the Given’. I then explore how Peirce’s semiotic approach to philosophy of language and mind theorized signifying habits as *symbols* which draw *icons* and *indices* together into propositional structures, thereby generating meanings that are specifically applicable and indefinitely generalizable. This original account of concept formation is further illuminated through an examination of Peirce’s philosophy of *perception*, which makes particularly manifest the process whereby primitive indices, or ‘percepts’, are enfolded in symbolic meanings through habitual ‘perceptual judgements’.

**Keywords**: pragmatism, habit, experience, concept formation, icon, index, symbol, Peirce

# Introduction

Pragmatism is a philosophical tradition that understands knowing the world as inseparable from agency within it. It thereby introduces some distinctive ideas and approaches to the analysis of concepts, particularly as pursued in modern Western philosophy. For instance, pragmatism largely repudiates a language-user’s *first-person authority* with respect to the meaning of their concepts, in favour of more social, public understandings. Relatedly, pragmatist accounts of *concept formation* reject what Wilfrid Sellars usefully summarized as ‘The Myth of the Given’ – the idea that conceptual content is transmitted from ‘external’ world to individual mind in some direct, primitive manner.[[1]](#footnote-1) Following pragmatism’s founder, Charles Sanders Peirce, many pragmatists have theorized concepts as a special class of *habits*[[2]](#footnote-2) – habits which associate specific kinds of environmental stimuli with schemata of action and ensuing experience, and which are trained and continually corrected in linguistic communities. For instance, my concept hot consists in more than just a sensation: it includes patterns of action, such as avoiding putting my hand into flames, and it also functions within a broader cultural-scientific legacy that was considerably refined and extended by the invention of technologies such as the thermometer.

Pragmatist analyses of concepts as habits challenge *mentalization* – the idea that a concept’s meaning consists in some kind of intrinsic property that might be ‘read’ through introspection, which is often understood as a characteristically Cartesian tenet.[[3]](#footnote-3) Relatedly, the analysis also challenges *representationalism* – the idea that cognition’s sole role is to collect and process assertions which represent the surrounding world, and it succeeds exactly insofar as those assertions are *true*.[[4]](#footnote-4) Finally, pragmatism challenges *static* accounts of concept meanings, in favour of a dynamic understanding of them as always context-dependent and newly interpreted, holding that in fact this is necessary for ongoing meaning-making.

In all these areas, pragmatism broadens standard empiricist treatments of thought by attending to the links between thought and action.[[5]](#footnote-5) Whilst not requiring that philosophers *abolish* the concept of concepts, pragmatism urges us to recognize that concepts derive their entire meaning and significance from their current or potential utility in helping us navigate our surrounding environment and solve problems. In his recent book *Pragmatism’s Evolution*, Trevor Pearce has compellingly explored how much the early pragmatists were inspired by a certain ecological model of an organism–environment nexus that was newly proposed in the evolutionary biology of the day. In this way, pragmatism arguably updates a mechanistic ‘billiard ball’ metaphysics of mind which survives fossilized inside the older empiricisms of philosophers such as Locke and Hume.

Our discussion begins with Peirce’s famous Pragmatic Maxim, which represents both pragmatism’s founding moment, and a new proposal for clarifying the meaning of concepts. We will see how the vital role that the Maxim grants to agency in producing maximum clarity of meaning effectively translates each of our concepts into a set of hypothetical conditionals which summarize the general expectations that arise from hypotheses containing that concept. We will then briefly explore how this approach led pragmatists to understand concepts as something much closer to habitsthan Cartesian ideas. After that, we will examine how early pragmatists understood *experience* – a crucial notion for them – not simply as an ‘input’ to inquiry, but as a rich range of existential transactions with a surrounding environment, and also as a philosophical method. We will then explore how these broader notions of experience were used to challenge Sellars’ Myth of the Given in related ways, and in the case of the classical pragmatists, independently of Sellars’ own critique.

I strongly believe that the pragmatist who presents the most original and systematic ‘myth busting’ is still Peirce. Accordingly, the later sections of this chapter will explore Peirce’s account of concept formation in detail.[[6]](#footnote-6) We will trace how his understanding of concepts as signifying habits led him to theorize them as *symbols* which work together with *icons* and *indices* to generate meanings that are both specifically applicable and indefinitely generalizable. The originality of Peirce’s semiotic approach will be demonstrated through his *philosophy of perception*, which manages the remarkable feat of unifying a Thomas Reid–style direct realism with the apparently idealist claim that all perception is interpretative,[[7]](#footnote-7) pointing the way towards a freshly conceived epistemology in which, through the tendency of habits to spread themselves across an ever-widening variety of contexts, ‘pictures become predicates.’

# The Pragmatic Maxim: Concepts as Practical Habits

The Pragmatic Maxim was first introduced by Peirce in an 1878 paper for *Popular Science Monthly*, engagingly entitled ‘How to Make Our Ideas Clear’. Here Peirce sought to offer some practical suggestions from ‘modern science’ about how philosophers can best clarify the meanings of their ideas. We will take Peirce’s use of the term ‘idea’ here as synonymous with ‘concept’, as his paper’s title consciously invokes Descartes and the birth of modern philosophy. Indeed, he boldly claims that its suggestions would represent the first progress in clarification of meaning beyond Descartes’s own notion of clear and distinct ideas, which he suggests was somewhat hand-waving; as he puts it, ‘since it is clearness that they were defining, I wish the logicians had made their definition a little more plain.’[[8]](#footnote-8)

The way that modern scientists make their ideas clear, Peirce urges, is by developing and testing the *expectations regarding agency in lived contexts* that those ideas generate. (Here it is worth noting how, although pragmatism is often treated as a theory of truth,[[9]](#footnote-9) in this first appearance it was presented merely as a tool for clarifying meaning.) To this end, Peirce distinguishes three grades of clarity that we can attain with respect to the meaning of our concepts. At the first grade, he claims, we can identify instances without necessarily being able to explain how we achieve this, or why they count as instances. For instance, we might state ‘This is copper’ while pointing to a copper bowl. At the second grade of clarity, Peirce claims, we can give a verbal (or ‘nominal’) definition of a concept. For instance, we might state, ‘Copper is the chemical element of atomic number 29’, having found this definition in a dictionary, though we do not understand what the term ‘atomic number’ means. The third grade of meaning clarity is attained by applying the Pragmatic Maxim, which states:

Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object.[[10]](#footnote-10)

For instance, we might expect that if a particular bowl is copper then it will conduct electricity, and deliver a mellow sound when struck. Note that the Maxim does not state a *theory* of meaning; rather, consistently with pragmatist philosophy’s focus on agency in a lived context, it is designed to be *used*. Its use leads our thinking away from mere verbal definitions of our concepts towards the specific experiences we can expect if we apply them appropriately. In this way, the third grade of clarification effectively transforms the meaning of every concept into a series of *hypothetical conditionals*, which chart the expectations that we should have in practical situations where that concept applies.

Such analyses led Peirce to explicitly identify concepts with *habits*, which he understood to mean intelligible patterns of behaviour which tend to occur regularly and to reinforce themselves the more they are manifested. As this Aristotelian idea has resonated through pragmatist philosophy, this might suggest that Peirce saw concepts as ‘traces in the soul’, which are natural likenesses (or representations) of the things that cause them, and when we come to examine the semiotic framework in which Peirce places his account of habit we will see that there is truth in this. In any case, Peirce sought to sidestep modern philosophy’s widespread methodological dependence on introspection or ‘intuition’ to define the conceptual. This approach is arguably more naturalistic than Cartesian idea-based views of conceptual content, since habits are empirically observable, shared by humans and all living organisms, and capable of literal ‘growth’.[[11]](#footnote-11) Whether a habit’s defining hypothetical conditionals are *true* – and thus, whether the concept in question has a stable meaning on which we can act – requires investigation a posteriori in a public community of inquiry.[[12]](#footnote-12)In this way, Peirce’s ‘experimentalists’ view of assertion’[[13]](#footnote-13) marries pragmatist semantics to pragmatist epistemology. He urges that if we wish to be fruitful inquirers, we must bring the meanings of our concepts to this third level of clarity.

The influence of Peirce’s Pragmatic Maxim is evident in William James’s popular 1907 lecture series *Pragmatism: A New Name for Some Old Ways of Thinking*. Here James relates how, whilst on a picnic, he and his friends whimsically ran around a tree trunk, attempting to view a squirrel which constantly scampered to the other side. This produced an ‘interminable dispute’ over the question, ‘Does the man go round the squirrel or not?’[[14]](#footnote-14) James resolved the dispute by identifying two separate ‘practical meanings’ of the concept ‘going around the squirrel’: being positioned to the north, east, south or west of it, or being positioned in front of, to the side of or behind it. The party quickly recognized that once they agreed on one of these meanings, they agreed on how to categorize the squirrel’s motion, and their dispute collapsed. Here we see how the Maxim can serve equally to deepen our inquiries or to *dispose of* them. In the same way, James urges, pragmatic clarification may be used to dissolve many long-standing disputes concerning metaphysical concepts such as free will and God.[[15]](#footnote-15)

John Dewey is often viewed as the third great ‘classical’ pragmatist, although he sometimes preferred to refer to his view as ‘cultural naturalism’. He also saw modern philosophy’s long-running tendency to analyse concepts purely in terms of representational purport as unhelpful.[[16]](#footnote-16) By contrast, he urged that paying close attention to the practical import of concepts in human life can help to dissolve a range of taxing philosophical pseudo-problems – notably, the so-called mind-body problem[[17]](#footnote-17) and Cartesian radical scepticism. In this way, as observed above, he suggested that experience should not serve simply as an input to inquiry, but as a *method*. He dubbed this method ‘denotative’, to signal that it does not depart from a general theoretical standpoint, but from the specific existences amongst which we find ourselves thrown:

The experiential or denotative method tells us that we must go behind the refinements and elaborations of reflective experience to the gross and compulsory things of our doings, enjoyments and sufferings – to the things that force us to labor, that satisfy needs, that surprise us with beauty, that compel obedience under penalty.[[18]](#footnote-18)

Compared to his fellow pragmatists, Dewey particularly urged that pragmatism’s great lesson is that if one’s philosophy does not directly advance social progress, it is not worth much.[[19]](#footnote-19) Although these ideals exercised a shaping influence on US society during the heyday of Dewey’s career, they are not uncontentious in pragmatist circles.[[20]](#footnote-20)

More recently, so-called neo-pragmatists have offered ‘practical analyses’ to disarm debates about other traditional philosophical concepts. Richard Rorty presents a particularly trenchant critique of representationalism.[[21]](#footnote-21) He claims that our vocabularies – he prefers to analyse language at this level of granularity – should be understood as useful tools, rather than ‘mirrors of nature’,[[22]](#footnote-22) and we can give no sense to the idea that the world itself justifies the use of one vocabulary over another, or presents ‘sentence-shaped objects’.[[23]](#footnote-23) From these claims, Rorty draws the radical conclusion that the concept of *truth itself* is inappropriate for philosophical investigation. Because in practice we can observe no distinguishing marks that differentiate a true statement from one that is universally agreed upon, philosophers can say nothing systematic or useful about an overall concept of truth, and should ‘change the subject’.[[24]](#footnote-24)

Meanwhile, Robert Brandom, Rorty’s student, has applied similarly stringent eliminative medicine to the concept of *experience*, declaring it to be ‘not one of his words’.[[25]](#footnote-25) Like Rorty, Brandom focuses his pragmatist analysis on our language use, often at the level of entire vocabularies, since, as he claims, we are ‘essentially discursive creatures’;[[26]](#footnote-26) he also repudiates representationalism.[[27]](#footnote-27) Unlike Rorty, however, he seeks to rehabilitate notions of truth and objectivity, essentially by shifting their locus of grounding from semantics to pragmatics. To this end, he offers a systematic account of our assertions as moves in a public ‘game of giving and asking for reasons’, which endows us with a special set of responsibilities. For instance, by asserting a proposition, I undertake *commitments* to defend it against any *prima facie* cogent counter-arguments that may be presented, or else to give it up. Insofar as my assertion is successfully maintained in the public space of reasons, participating language-users enjoy *entitlements* to make further assertions which follow logically from it and other successfully maintained assertions. This account of linguistic norms forms the core of Brandom’s reconstructed notions of objectivity and truth.[[28]](#footnote-28)

In their repudiation of experience, and embrace of the ‘linguistic turn’, these neo-pragmatists have generated some interesting tensions with the experimentalism which germinated the original pragmatism.[[29]](#footnote-29) Accordingly, a piece on concepts written from the perspective of these contemporary pragmatisms would look quite different from the present study, which, as noted, largely follows Peirce and his robust notion of experience as existential transaction. Speaking more irenically, however, all these visions of pragmatism share a conscious methodological invocation of lived experience and public problem-solving, which places concepts decisively *within* a world that is experienced as agentive and social.

# Experience Understood as ‘Given’

Sellars’ term the ‘Myth of the Given’ offers a convenient label for a cluster of assumptions that remained relatively unquestioned through modern philosophy. As noted above, it holds that conceptual content is transmitted from ‘external’ world to individual mind in some direct, primitive manner. As Sellars explains, almost all modern philosophers ‘have taken givenness to be a fact that presupposes no learning, no forming of associations, no setting up of stimulus-response connections.’[[30]](#footnote-30)

An illustrative example from classical British empiricism is David Hume.[[31]](#footnote-31) Hume founds his account of perception on the concept of an *impression*, which he takes as primitive, leaving its exact nature and functioning as a problem for ‘anatomists and natural philosophers’.[[32]](#footnote-32) These impressions somehow give rise to *ideas*, which are understood to be copies of impressions which differ from them only in ‘the degrees of force and liveliness, with which they strike upon the mind’.[[33]](#footnote-33) One can usefully picture such an empiricist understanding of perception through the metaphor of a stamp and its imprint, which captures two important features of perception as Hume understands it. First, the ‘stamping’ process is *direct*: it has no intermediary such as, for instance, other, rational faculties of the mind. Ironically, this creates the famous ‘veil of ideas’, or Humean phenomenalism, since on this model one cannot ‘think behind’ one’s impressions of the world and form other ideas about it. Nevertheless, the mind is envisaged in forming impressions as directly confronting the world; and surely in some form this is what perception must consist in?

Second, the process is *determinate*. Hume’s impressions and ideas are particulars, possessing a determinate set of features which are assumed to be *copied* from impressions to ideas. Hume argues for this claim phenomenologically by mentally comparing one of his impressions and its corresponding idea, and arguing that no features have been lost:

When I shut my eyes and think of my chamber, the ideas I form are exact representations of the impressions I felt; nor is there any circumstance of the one, which is not to be found in the other.[[34]](#footnote-34)

Another aspect of this understanding of ideas as direct, determinate ‘stampings’ on the mind is that they are temporal particulars, in the sense that they occur at a particular point in time and there is no temporal duration within the idea itself.

Hume’s philosophy greatly influenced early analytic philosophy. A generation of self-styled ‘logical empiricists’ postulated *sense data* as a kind of experience which provides the raw materials for knowledge whilst itself having no content informed by concepts, practical needs, or anything else non-sensory. Close on their heels, Sellars critiqued the notion of sense data as confusing two importantly different ideas: (1) a purely causal notion of bodily impingement, (2) the idea that there are ‘certain inner episodes which are … non-inferential knowings, and provide the evidence for all other empirical propositions’.[[35]](#footnote-35) Only the second notion has justificatory purport, Sellars argues, but it cannot fulfil its proposed justificatory function, as observation statements such as ‘This tie *looks* green’ arise only when it is known that surrounding conditions are liable to make a tie appear green when it is *not really green*. This shows that being able to make statements such as ‘X *looks* green’ depends on being able to make statements such as ‘X *is* green’, rather than the reverse.[[36]](#footnote-36) Such logical dependencies between observation statements and underlying theories of the world contradict the logical atomism of Hume’s empiricism, according to which something’s ‘looking green’ might be the only thought one ever has.[[37]](#footnote-37)

# Pragmatist Accounts of Experience

We will now examine how classical pragmatist understandings of concept formation repudiated the Myth of the Given independently of Sellars.[[38]](#footnote-38) For the early pragmatists, experience was a central notion. Peirce frequently remarks that experience is our only teacher. James writes: ‘Pragmatism represents a perfectly familiar attitude in philosophy, the empiricist attitude.’[[39]](#footnote-39) And Dewey, in his masterwork in epistemology, *Experience and Nature*, concurs, adding an explicitly methodological twist:

Experience presents itself as the method, and the only method, for getting at nature, penetrating its secrets, and … the use of empirical method in natural science … deepens, enriches and directs the further development of experience.[[40]](#footnote-40)

But these pragmatists deny that we are passive recipients of determinate sense data which may be viewed as antecedents to, or separable constituents of, cognition. Again, the ecological explanatory framework of the organism–environment relation helps us to trace the unique contours of pragmatist thinking. Thus, Dewey describes experience as a matter of adjustments, coordinations and activities, rather than states of consciousness. Dewey gave these ‘adjustments’ and ‘coordinations’ a broad social and historical purview which greatly differs from the methodological individualism of standard empiricisms. For Dewey, experience is a process through which we transact with our surroundings to meet our needs:

Like its congeners, life and history, [experience] includes *what* men do and suffer, *what* they strive for, love, believe and endure, and also *how* men act and are acted upon, the ways in which they do and suffer, desire and enjoy, see, believe, imagine, in short, processes of *experiencing.*[[41]](#footnote-41)

As David Hildebrand ably summarizes, for Dewey ‘experience is not just “stuff” presented to or witnessed by consciousness; rather, experience is activity, engagement with life.’[[42]](#footnote-42)

In later life, James developed a *radical empiricism* which, he claimed, also required that experience be newly understood. He repudiates the logical atomism in Hume’s empiricism, declaring:

The relations between things, conjunctive as well as disjunctive, are just as much matters of direct particular experience, neither more so nor less so, than the things themselves … the parts of experience hold together from next to next by relations that are themselves parts of experience. The directly apprehended universe needs, in short, no extraneous trans-empirical connective support, but possesses in its own right a concatenated or continuous structure.[[43]](#footnote-43)

He even went so far as to claim that experience is the ‘one primal stuff’ which constitutes reality.[[44]](#footnote-44)

However, as noted above, the most systematic philosophical reconfiguration of experience, mind and knowledge – and thus, the nature of concepts – was developed by Peirce. We will therefore now explore Peirce’s account in detail in the original theory of perception that he developed around 1902–1903, which ramifies throughout his pragmatist semantics and epistemology.

# Peirce’s Theory of Perception

Peirce draws a key analytical distinction between two aspects of perception: the *percept*, which is entirely non-cognitive and stands for the world as directly encountered, and the *perceptual judgement*, which is structured propositionally and lies in the space of reasons. We will now explore these notions and how they relate. The *percept* is a direct realist notion, which captures the pragmatist notion of experience as existential transaction with objects separate from oneself. Peirce notes that one might call the percept an ‘image’, except that an image is often taken to represent something other than itself, and the percept does not do that.[[45]](#footnote-45) Nevertheless, it has insistency – it makes a real impact on my consciousness – along three dimensions. Firstly, it contributes something positive to my thinking. If I have a percept of a cat, I do not just perceive some abstract state of affairs, such as the absence of any dog in that spatiotemporal region. I perceive something with qualities of its own. Secondly, the percept compels my thinking – insofar as it is present, I cannot pretend that it is not. Thirdly, the percept is arational: ‘It does not address the reason, nor appeal to anything for support.’[[46]](#footnote-46) It does not have sufficient structure to be rationally evaluable, or for itself to be a rational evaluation. It does not have any parts, or more strictly, ‘It has parts, in the sense that in thought it can be separated, but it does not represent itself to have parts.’[[47]](#footnote-47)

In its directness, the percept bears some similarity to a Humean impression, but it cannot be a Humean idea insofar as it cannot be used to make truth claims, nor be the subject of belief or disbelief. Peirce writes:

The percept does not stand for anything. It obtrudes itself upon my gaze; but not as a deputy for anything else, not ‘as’ anything. It simply knocks at the portal of my soul and stands there in the doorway.[[48]](#footnote-48)

If the percept is really so mute, what is the point of positing it, epistemologically? Perhaps it might be understood to play a causal role, analogous to that Hume gives to impressions in producing ideas? There is some truth to this, insofar as Peirce claims that percepts are related to perceptual judgements by ‘forceful connections’. But this forcefulness should not be understood as the cause of a copy, where that copy is a particular. (Rather, it is a trigger for general habits. This claim will be explored below.) The perceptual judgement cannot be a copy of the percept, as they are too unlike one another, ‘as unlike … as the printed letters in a book, where a Madonna of Murillo is described, are unlike the picture itself.’[[49]](#footnote-49) Firstly, the percept has an integration which the perceptual judgement lacks, since *qua* judgement it requires subject and predicate. Peirce offers as an example his perceiving a yellow chair:

The judgement, ‘This chair appears yellow’, separates the color from the chair, making the one predicate and the other subject. The percept, on the other hand, presents the chair in its entirety and makes no analysis whatever.[[50]](#footnote-50)

The percept also has a definiteness which conflicts with the perceptual judgment’s general predication. Peirce analyses this definiteness into two dimensions. First, it is *individual*: the percept pertains to some particular chair and no other. Secondly, it is *perfectly explicit*: all of its determinables are determinate.[[51]](#footnote-51) The yellowness of the chair-percept will be some perfectly specific colour, such as a dark lemon yellow, whereas our predicate ‘yellow’ must perforce be more general. It is worth noting that our yellow predicate possesses a kind of specifically pictorial generality, which Peirce refers to a number of times using the metaphor of a ‘composite photograph’ – a technique popular in his time which involved exposing the same negative to different objects to achieve a kind of ‘visual average’:

Let us consider, first, the predicate, ‘yellow’ in the judgment that ‘this chair appears yellow.’ This predicate is not the sensation involved in the percept, because it is general. It does not even refer particularly to this percept but to a sort of composite photograph of all the yellows that have been seen.[[52]](#footnote-52)

A further dimension of the perfect explicitness of the percept is that whereas the perceptual judgment with its chosen colour predicate makes no comment on other ‘chair-determinables’, such as shape, these will also be present in the percept.

Since the perceptual judgement is composed of subject and general predicate, and thereby expresses a truth-apt proposition, its interpretation opens out to the community of inquiry. where it takes its place in an unlimited series of logically related judgements. Thus, in our example above, inquirers may develop the meaning of ‘yellow’ and ‘chair’ in unanticipated ways – for example, by determining the wavelength of light which typically produces yellow experiences in humans. Despite its pathways into public discourse, however, the perceptual judgement compels assent as much as the percept – as much as if I open my eyes in front of a yellow chair I cannot avoid having certain sensory experiences, nor can I avoid judging ‘This is a yellow chair’ if I have the appropriate concepts.

At this point one might wonder: *How* does the percept give rise to the perceptual judgement? And how is it possible for the latter to represent the former, if they are so different? We have noted that the perceptual judgement does not copy the percept. Nor does it represent the percept logically, since this would require that the percept serve as some kind of premise from which the perceptual judgment is inferred, which is impossible, since the percept is not in propositional form. This issue will be resolved in the next section, as we examine a Peircean habit-based account of concept formation.

# From Pictures to Predicates: Peirce’s Pragmatist Account of Concept Formation

Philosophers schooled in standard empiricism find it easy to assume that the only possible relation between percept and perceptual judgement (or in Humean terms, impression and idea) is that the latter *copies* the former. But how else can the idea convey the same information as the impression? Otherwise, surely our perception would merely constitute some ‘blind’, causal transaction with the world? In an original way, as a Reidian direct realist, Peirce bites this bullet, claiming: ‘There is no relation between the predicate of the perceptual judgment and the sensational element of the percept, except *forceful connections*.’[[53]](#footnote-53) However, this does not mean that our perception is ‘blind’ (in Kantian terms), but merely that its ‘sight’ should be understood quite differently to what most empiricists have assumed. Peirce claims that the perceptual judgement is an *index* of the percept – a ‘true symptom, just as a weather-cock indicates the direction of the wind or a thermometer the temperature.’[[54]](#footnote-54)

In order to understand this claim, we must dip into Peirce’s semiotics in order to examine an original account of propositional structure which he began to advance during the same 1902–1903 period. Around this time, he coined the term ‘dicisign’ as a more capacious notion than the wholly linguistic ‘proposition’, to accommodate how, in certain contexts, statements may be made extra-linguistically, for instance by means of pictures or diagrams. The essential dicisign structure consists in an *icon* which is fused to an *index* in order to enable something (general) to be said about something (specific). As such, iconic and indexical signs may be broadly understood as ‘pictures’ and ‘pointers’ respectively:

It has been found that there are three kinds of signs which are all indispensable in all reasoning; the first is the diagrammatic sign or icon, which exhibits a similarity or analogy to the subject of discourse; the second is the index, which like a pronoun demonstrative or relative, forces the attention to the particular object intended without describing it.[[55]](#footnote-55)

We can observe this ‘particular double structure’[[56]](#footnote-56) of icon fused to index in Peirce’s discussion of perceiving the yellow chair. He claims that the perceptual judgement ‘This chair is yellow’ indexes the percept through the demonstrative ‘this chair’, while at the same time affixing an icon (or, as we have seen, a ‘composite photograph’) of yellowness to it:

the perceptual judgment which I have translated into ‘that chair is yellow’ would be more accurately represented thus: ‘☞ is yellow,’ a pointing index-finger taking the place of the subject.[[57]](#footnote-57)

What this means is that when any given perception is viewed purely synchronically, all we see is that a percept causally and uncontrollably triggers a perceptual judgement, whilst not providing any of its conceptual content. No conceptual content is provided because, as we have seen, the perceptual judgement indexes the percept rather than describing or copying it. This process cannot be synchronically willed to take place in a particular respect; for instance, I cannot decide to see the chair as pink, if it is clearly yellow. Nevertheless, it can and must be trained and continually improved by cultivating appropriate mental *habits*. Across time, a set of sufficiently similar perceptual judgements may be understood to *intelligibly* *interpret* a set of sufficiently similar percepts through the repetition and growth of the perceptual judgements themselves into a set of stable habits, such as habits of identifying objects as ‘having’ certain colours. The ‘experimentalists’ view of assertion’, as Peirce calls it, then explains how these habits are forced to continually grow and develop under the dual pressure of both lived experience and the corrections of a language-using community, until the end result is a full-blown scheme of general concepts.

Of course, it is evident that we sometimes perceive erroneously. This led modern philosophers in thrall to the Myth of the Given to split the object of perception into two, postulating one object that is unreal but is actually perceived (i.e., sense data), and a second object that is real but ‘lies behind’ the first and is only inferred. In Peirce’s theory of perception, the answer to this problem is not two objects, but *time*. Perceiving occurs across a time span which has at its ‘back end’ a memory of the immediate past and at its ‘front end’ an expectation of the immediate future. What binds this process together, continually transmuting past experiences into future expectations in lived contexts, is *habit*.

This crucial reliance on our habits to interpret our perceptions has profound implications for pragmatist epistemology. Having explored the Reidian direct realism in Peirce’s theory of perception, we now turn to his commitment to the apparently idealist claim that all perception is interpretative, in order to fulfil our earlier promise to explain how these two views might be held together. Peirce explains his ‘interpretivism’ as follows:

Now let us take up the perceptual judgment ‘This wafer looks red.’ It takes some time to write this sentence, to utter it, or even to think it. It must refer to the state of the percept at the time that it, the judgment, began to be made. But the judgment does not exist until it is completely made. It thus only refers to a memory of the past; and all memory is possibly fallible and subject to criticism and control. The judgment, then, can only mean that so far as the character of the percept can ever be ascertained, it will be ascertained that the wafer looked red.[[58]](#footnote-58)

As Sandra Rosenthal ably explains, this means that the perceptual judgment is indubitable, not in the sense that doubts about it can be answered with certain knowledge, but in the ‘pragmatic’ sense that doubts about it cannot coherently be formulated:

The apprehension of an appearance is not certainly true as opposed to possibly false. It is ‘certain’ in the sense that neither truth nor falsity is applicable to it.… It becomes a ‘repetition’ of previous contents only by being assimilated to those contents in the perceptual judgment.[[59]](#footnote-59)

To explore this further, let us return to the case of the disappearing yellow chair percept. Our initial analysis of this scenario posited two distinct percepts in short succession: the first ‘yellow-chair-like’ and the second judged to represent only floorboards. On the basis of such a mismatch, so close together in time, I infer that the first percept is a hallucination, so I both remember it and disregard it. But what if a similar sensory event were to happen all the time, with yellow chair images momentarily appearing and disappearing without a trace? Would I continue to perceive and disregard them? Peirce suggests, in an interesting discussion of the action of optical illusions on the mind over time, that if the yellow chair percepts were *regularly interpreted as illusory*, they would become much less vivid and even disappear altogether:

It is one of the recognized difficulties of all psycho-physical measurement that the faculties rapidly become educated to an extraordinary degree. Thus, contrast-colors, when properly exhibited, are incredibly vivid.… Yet the experimenter becomes in time almost incapable of perceiving them.[[60]](#footnote-60)

The contrast-colour illusion involves staring at a bright patch of colour (e.g., red), then looking at a white surface, which, due to the eye’s previous adjustment to seeing red, will initially appear to be the opposite colour, green. But over time, as the mind learns that the white surface is ‘not really green’, the perceived (supposedly ‘given’) green *literally fades*, and the illusion simply does not work any more.

Such obvious optical illusions afford us a rare glimpse of the inner workings of our own subconscious processes of interpreting percepts into perceptual judgements – processes which are mostly trained into stable habits in our childhood and thereafter disappear from view. The most important thing to note is that such training is a rational process of *overall sense-making*, across past perceptual judgements and incoming percepts. If this sense-making process involves reinterpreting something only apparently seen as in fact illusory, then so be it. Hookway puts this point well:

What we experience is not just a clash between our beliefs and our experience; we often experience incoherence within the experience itself, which simultaneously involves anticipations and thwarts those very anticipations. The fact that, in these cases, ‘the perceptual judgment, and the percept itself, seems to keep shifting from one general aspect to another and back again … shows that the percept is not ‘entirely free from … characters that are proper to interpretations.’[[61]](#footnote-61)

In this way, future experience can, at least in part, literally determine previous experience. *Pace* Humean notions that the mind is directly ‘impressed’ by the world, in Peirce’s understanding of perception, ‘nothing at all … is absolutely confrontitional.’[[62]](#footnote-62)

# The Peircean Symbol as Habit

When an index and an icon fuse into a dicisign, *this very fusion may be understood to create a symbol*.[[63]](#footnote-63) Peirce understands the distinctive role of symbols to be to convey *general information*, in contrast to indices, which merely ‘point’, and icons, which merely ‘picture’.[[64]](#footnote-64) Returning to our example of perceiving a yellow chair, we noted that the generality of the ‘yellowness’ of the initially affixed icon, when viewed synchronically, counts as merely pictorial. But this picture transmutes into the fully conceptual, symbolic generality of the predicate ‘is yellow’ precisely through the repetition of similar judgements to encompass an ever more numerous and various collection of yellow objects across time and space. Thus, Peirce claims that, in essence, a symbol *consists in nothing but a* *habit of associating ideas*.[[65]](#footnote-65)

This process is insightfully discussed in Aaron Massecar’s paper ‘Peirce’s Interesting Associations’. Massecar notes that, for Peirce, association is the only power that exists within the intellect,[[66]](#footnote-66) but it may be analysed into still more basic components. First comes *interest*, then *attention*, and it is attention that actually drives and shapes the processes of idea-association that engender habits of further like associations.[[67]](#footnote-67) Massecar also notes that the process of attention may be understood logically on the model of a *hypothesis* which reduces a certain manifold of experience to unity. A simple example of such a hypothesis would be, ‘The world contains things which are yellow.’ Such a hypothesis creates a habit of noticing yellow things when they appear and, by predicating yellowness of them, associating them with other things which appear to be yellow.

In this way, the attention may be understood to subsume a disparate variety of *feelings* under a single *general sign*, which should be understood as an *active rule* ‘for organising and interpreting feelings as representations’.[[68]](#footnote-68) This subsumption process is how the abstraction of a general concept such as ‘yellow’ from experience actually happens, and how it may be understood not as a ‘given’, but, more accurately, as a ‘taken’. Massecar also explains how, although at one level of analysis the many and varied instantiations of any general concept are understood to be united by *resemblance*, at a deeper level, resemblance itself can be analysed simply as a brute inner compulsion to associate:

To say that two things are alike does not mean that two things have an affinity for one another; rather, to say that two things are alike is to say that we have connected them because of some compulsion to do so.[[69]](#footnote-69)

Once established, these associations are understood to spread through cognition (both individual and communal) according to Peirce’s Law of Mind, which specifies that habit-taking itself is a process which spreads indefinitely through life and mind:

Logical analysis applied to mental phenomena shows that there is but one law of mind, namely, that ideas tend to spread continuously and to affect certain others which stand to them in a peculiar relation of affectibility. In this spreading they lose intensity, and especially the power of affecting others, but gain generality and become welded with other ideas.[[70]](#footnote-70)

It should also be noted that symbols *qua* habits do not merely repeat in more or less identical fashion – rather, they *grow* in a literal evolutionary sense.[[71]](#footnote-71) Thus, for instance, over the course of the repeated use by humans of colour concepts, they have been significantly refined and developed.

We have noted that it is only in symbolic signification that we achieve generality in the usual ‘philosophical’ or conceptual sense. This means that our perception of the chair as yellow, despite current philosophical intuitions about primitive ‘colour qualia’, is not a *de novo* affair, but betrays the presence of conceptual lineaments entrained in us through habit. Properly understanding this entrainment, as, I would urge, Peirce shows us how to do, has crucial philosophical implications. For instance, it enables us to understand howthe supposedly mysterious emergence of conceptual content from the causal order might finally cease to constitute the giant inexplicable gulf that it has across the modern era, along with its attendant mind-body puzzles and anxieties, and its so-called ‘problem of intentionality’.[[72]](#footnote-72)

In place of mind-bending philosophical mystery, we now have a highly original account of how the unique ‘pictorial’ generality of iconic signs scaffolds the development of the unique ‘conceptual’ generality of symbolic signs.[[73]](#footnote-73)Here Rosenthal has insightfully analysed the fundamental similarities to, and departures from, Kant in Peirce’s pragmatism. She claims that Peirce ‘takes from Kant the fundamental insight that concepts are empirically meaningful only if they contain schematic possibilities for their application to sensible experience.’[[74]](#footnote-74) But she also notes that Peirce rejects Kant’s relegation of schemata to the productive imagination, as opposed to the faculty of judgement. Rather, she claims, both faculties combine to produce and mobilize schemata, in ‘a creative functioning of habit as providing a lived or vital intentionality between knower and known’.[[75]](#footnote-75) Thus, lived experience ‘reflects a semiotic structure operative at its most fundamental level’, since ‘human behavior is meaningful behavior.’[[76]](#footnote-76) Such a schema is not an ‘idea’ that dictates a habit. *It is the habit itself*. We may now see how pragmatism – at least as articulated in its original Peircean strain – can advance a naturalistic philosophical account of concepts which avoids the Myth of the Given, whilst nonetheless presenting the concept user as deeply embedded in, and accountable to, a world of real things.

# References

Atkins, Richard. *Peirce and the Conduct of Life: Sentiment and Instinct in Ethics and Religion*. Cambridge: Cambridge University Press, 2016.

Bowden, Sean. ‘Antirepresentationalism and Objectivity in Rorty, Brandom, and Deleuze’. In *Deleuze and Pragmatism*, edited by Sean Bowden, Simone Bignall and Paul Patton, 180–98. London: Routledge. 2014.

Brandom, Robert B. *Articulating Reasons: An Introduction to Inferentialism*. Cambridge, MA: Harvard University Press. 2000.

———. *Making It Explicit*. Cambridge, MA: Harvard University Press, 1994.

———. *Perspectives on Pragmatism: Classical, Recent, and Contemporary*. Cambridge, MA: Harvard University Press. 2011.

———. ‘Vocabularies of Pragmatism: Synthesizing Naturalism and Historicism’. In *Rorty and His Critics*, edited by Robert Brandom, 156–90. Oxford: Blackwell, 2000.

Dewey, John. *Experience and Nature*. Chicago: Open Court, 1929.

———. *Human Nature and Conduct: An Introduction to Social Psychology*. New York: Henry Holt & Co., 1922.

Godfrey-Smith, Peter. ‘Dewey and Anti-Representationalism’. In *The Oxford Handbook of Dewey*, edited by Steven Fesmire, 151–73. Oxford: Oxford University Press, 2019.

———. ‘John Dewey’s *Experience and Nature*’. *Topoi* 33 (2014): 285–91.

Haugeland, John. ‘The Intentionality All-Stars’. *Philosophical Perspectives* 4 (1990): 383–427.

Hildebrand, David. *Dewey: A Beginner’s Guide*. New York: Simon & Schuster, 2008.

———. ‘Dewey, Rorty and Brandom’. In *The Oxford Handbook of Dewey*, edited by Steven Fesmire, 99–130. Oxford: Oxford University Press, 2019.

———. ‘John Dewey’. In *The Stanford Encyclopedia of Philosophy* (Summer 2024 Edition), edited by Edward N. Zalta and Uri Nodelman. https://plato.stanford.edu/archives/sum2024/entries/dewey/.

Hookway, Christopher. The Pragmatic Maxim: Essays on Peirce and Pragmatism. Oxford: Oxford University Press, 2012.

———. ‘“… A Sort of Composite Photograph”: Pragmatism, Ideas, and Schematism’. *Transactions of the Charles S. Peirce Society* 38, no. 1/2 (2002): 29–45.

Hume, David. *A Treatise of Human Nature*. Edited by L. A. Selby-Bigge. Oxford: Oxford University Press, 1978.

James, William. *Essays in Radical Empiricism*. New York: Longmans, Green & Co.,1912.

———. *The Meaning of Truth: A Sequel to* Pragmatism. Cambridge, MA: Harvard University Press, 1975.

———. *Pragmatism: A New Name for Some Old Ways of Thinking*. Edited by Fredson Bowers. Cambridge, MA: Harvard University Press, 1975.

Koopman, Colin. ‘Language Is a Form of Experience: Reconciling Classical Pragmatism and Neopragmatism’. *Transactions of the Charles S. Peirce Society* 43, no. 4 (2007): 694–727.

———. ‘Pragmatism as a Philosophy of Hope: Emerson, James, Dewey, Rorty’. *Journal of Speculative Philosophy* 20, no. 2 (2006): 106–16.

Lakoff, George and Johnson, Mark. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books, 1999.

Legg, Catherine. ‘Habits in Perception: A Diachronic Defence of Hyperinferentialism’. In *Habit and the History of Philosophy*, edited by Jeremy Dunham and Komarine Romdenh-Romluc, 243–60. London: Routledge, 2022.

———. ‘Idealism Operationalized: How Peirce’s Pragmatism Can Help Explicate and Motivate the Possibly Surprising Idea of Reality as Representational’. In *Peirce on Perception and Reasoning: From Icons to Logic*, edited by Kathleen A. Hull and Richard Kenneth Atkins, 40–53. New York: Routledge, 2017.

———. ‘Peirce and Sellars on Nonconceptual Content’. In *Sellars and the History of Modern Philosophy*, edited by Luca Corti and Antonio M. Nunziante, 119–37. London: Routledge, 2018.

———. ‘The Problem of the Essential Icon’. *American Philosophical Quarterly* 45, no. 3 (2008): 207–32.

———. ‘Things Unreasonably Compulsory: A Peircean Challenge to a Human Theory of Perception: Particularly with Respect to Perceiving Necessary Truths’. *Cognitio* 15, no. 1 (2014): 89–112.

Legg, Catherine and Christopher Hookway. ‘Pragmatism’. In *The Stanford Encylcopedia of Philosophy* (Summer 2021 Edition), edited by Edward N. Zalta. https://plato.stanford.edu/archives/sum2021/entries/pragmatism/.

Levine, Steven. ‘Brandom’s Pragmatism’. *Transactions of the Charles S. Peirce Society* 48, no. 2 (2012): 125–40.

———. ‘Rehabilitating Objectivity: Rorty, Brandom, and the New Pragmatism’. *Canadian Journal of Philosophy* 40, no. 4 (2010): 567–89.

Massecar, Aaron. ‘Peirce’s Interesting Associations’. *Transactions of the Charles S. Peirce Society* 48, no. 2 (2012): 191–208.

McDowell, John. *Mind and World*. Cambridge, MA: Harvard University Press, 1994.

Nöth, Winfried. ‘The Criterion of Habit in Peirce’s Definitions of the Symbol’. *Transactions of the Charles S. Peirce Society* 46, no. 1 (2010): 82–93.

———. ‘The Growth of Signs’. *Σημειωτκή/Sign Systems Studies* 42, no. 2/3 (2014): 172–92.

Olen, Peter, and Carl Sachs, eds. *Pragmatism in Transition: Contemporary Perspectives on C.I. Lewis*. Cham, Switzerland: Springer, 2017.

O’Shea, James R. ‘How Pragmatist Was Sellars? Reflections on an Analytic Pragmatism’. In *Wilfrid Sellars and Twentieth-Century Philosophy*, edited by Stefan Brandt and Anke Breunig, 110–29. London and New York: Routledge, 2019.

Owen, David. ‘Hume and the Mechanics of Mind: Impressions, Ideas, and Association’. In *The Cambridge Companion to Hume*, edited by David Fate Norton and Jacqueline Taylor, 79–119. Cambridge: Cambridge University Press, 1993.

Pappas, Gregory Fernando. *John Dewey’s Ethics: Democracy as Experience*. Bloomington: Indiana University Press, 2008.

Pearce, Trevor. *Pragmatism’s Evolution: Organism and Environment in American Philosophy*. Chicago: University of Chicago Press, 2020.

Peirce, Charles S. *Collected Papers*. Edited by Charles Hartshorne, Paul Weiss and A. W. Burks. 8 vols. Cambridge MA: Harvard University Press, 1931–1958.

———. *Pragmatism as a Principle and Method of Right Thinking: The 1903 Harvard Lectures on Pragmatism*. Edited by Patricia Ann Turrisi. Albany: SUNY Press, 1997.

———. *Reasoning and the Logic of Things: The Cambridge Conferences Lectures of 1898*. Edited by Kenneth Laine Ketner. Introduction by Kenneth Laine Ketner and Hilary Putnam. Cambridge MA: Harvard University Press, 1992.

Picardi, Eva. ‘Pragmatism as Anti-representationalism?’ In *New Perspectives on Pragmatism and Analytic Philosophy*, edited by Rosa M. Calcaterra, 129–44. Leiden: Brill, 2011.

Rorty, Richard. Consequences of Pragmatism: Essays 1972–1980. Sussex: Harvester, 1982.

———. Contingency, Irony and Solidarity. Cambridge: Cambridge University Press, 1989.

———. Philosophy and the Mirror of Nature. Princeton: Princeton University Press, 1979.

Rosenthal, Sandra. *Charles Peirce’s Pragmatic Pluralism*. Albany: SUNY Press, 1994.

———. ‘Peirce’s Pragmatic Kantianism: Towards New Epistemic Foundations’. In *Philosophie et culture: Actes du XVIIe congrès mondial de philosophie*, edited by Venant Cauchy, vol. 2, 948–52. Montreal: Éditions du Beffroi, 1988.

Russell, Bertrand. ‘William James’ Conception of Truth’. In Philosophical Essays, 127–49. Cambridge: Cambridge University Press, 1994.

Sachs, Carl. *Intentionality and the Myths of the Given: Between Pragmatism and Phenomenology*. London: Routledge, 2015.

———. ‘“We Pragmatists Mourn Sellars as a Lost Leader”: Sellars’s Pragmatist Distinction between Signifying and Picturing’. In *Sellars and the History of Modern Philosophy*, edited by Luca Corti and Antonio M. Nunziante, 157–77. London: Routledge, 2018.

Sellars, Wilfrid. *Empiricism and the Philosophy of Mind*. Introduction by Richard Rorty. Study Guide by Robert Brandom. Cambridge, MA: Harvard University Press, 1997.

Stjernfelt, Frederik. ‘Dicisigns’. *Synthese* 192, no. 4 (2015): 1019–54.

———. ‘Dicisigns and Habits: Implicit Propositions and Habit-Taking in Peirce’s Pragmatism’. In *Consensus on Peirce’s Concept of Habit: Before and Beyond Consciousness*, edited by Donna E. West and Myrdene Anderson, 241–62. Cham, Switzerland: Springer, 2016.

———. *Natural Propositions: The Actuality of Peirce’s Doctrine of Dicisigns*. Boston: Docent Press, 2014.

Stout, Jeffrey. ‘On Our Interest in Getting Things Right: Pragmatism without Narcissism’. In *New Pragmatists*, edited by Cheryl Misak, 7–31. Oxford: Oxford University Press, 2007.

Varela, Francisco, Evan Thompson and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA: MIT Press, 1992.

West, Donna E., and Myrdene Anderson, eds. *Consensus on Peirce’s Concept of Habit: Before and Beyond Consciousness*. Cham, Switzerland: Springer, 2016.

1. Although Sellars explicitly disavowed pragmatism, he is arguably a fellow traveller: see O’Shea, ‘How Pragmatist Was Sellars?’; Sachs, ‘We Pragmatists Mourn Sellars’. This is particularly true with respect to the idea of ‘the given’, which was deployed extensively by the pragmatist C. I. Lewis, one of Sellars’ key contemporaries: see Olen and Sachs, *Pragmatism in Transition*; Sachs, *Intentionality and the Myths of the Given*. [↑](#footnote-ref-1)
2. For a comprehensive overview of this aspect of Peirce’s pragmatism, see West and Anderson, *Consensus on Peirce’s Concept of Habit.* [↑](#footnote-ref-2)
3. See, e.g., Haugeland, ‘The Intentionality All-Stars’. [↑](#footnote-ref-3)
4. See, e.g., Rorty, *Philosophy and The Mirror of Nature* and *Contingency, Irony and Solidarity*. [↑](#footnote-ref-4)
5. This observation is taken from Godfrey-Smith, ‘John Dewey’s *Experience and Nature*’, 285. [↑](#footnote-ref-5)
6. This is of course not the only way in which a ‘pragmatist account of concepts’ might be worked out, as pragmatism now represents a broad philosophical church – more on this below. [↑](#footnote-ref-6)
7. See Legg, ‘Idealism Operationalized’, ‘Peirce and Sellars on Nonconceptual Content’ and ‘Things Unreasonably Compulsory’. [↑](#footnote-ref-7)
8. Peirce, ‘How to Make Our Ideas Clear’ (1878), in *Collected Papers* [hereafter: CP] 5:389. [↑](#footnote-ref-8)
9. Such an interpretation is notable in the many critiques of pragmatism in analytic philosophy, which stretch back to Russell’s 1910 paper, ‘William James’ Conception of Truth’. [↑](#footnote-ref-9)
10. Peirce, ‘How to Make Our Ideas Clear’, CP5:402. [↑](#footnote-ref-10)
11. Peirce systematically traced these links between philosophy of mind and evolutionary biology in his ambitious 1888 essay ‘A Guess at the Riddle’ (CP 1:354–416). [↑](#footnote-ref-11)
12. At this point it might be objected that we should distinguish between the meaning of a concept, which is explicated by a range of hypothetical conditionals, and the (metaphysical) nature of the things that are supposed to fall under this concept. However, under pragmatist philosophy the sharpness of this distinction cannot be maintained, as we shall see. I am grateful to Stephan Schmid for discussions on this point. [↑](#footnote-ref-12)
13. Peirce, ‘What Pragmatism Is’ (1905), CP 5:411. [↑](#footnote-ref-13)
14. James, *Pragmatism*, 27. [↑](#footnote-ref-14)
15. See James, *Pragmatism* and *The Meaning of Truth*. [↑](#footnote-ref-15)
16. Good contemporary summaries of Dewey’s views on this matter may be found in Godfrey-Smith, ‘John Dewey’s *Experience and Nature*’ and ‘Dewey and Anti-Representationalism’. [↑](#footnote-ref-16)
17. Thus, in *Experience and Nature*, 265, Dewey writes: ‘Immediate qualities, being extended from the object of science, were left thereby hanging loose from the “real” object. Since their *existence* could not be denied, they were gathered together into a psychic realm of being, set over against the object of physics. Given this premise, all the problems regarding the relation of mind and matter, the psychic and the bodily, necessarily follow. Change the metaphysical premise; restore, that is to say, immediate qualities to their rightful position as qualities of inclusive situations, and the problems in question cease to be epistemological problems. They become specifiable scientific problems … of how such and such an event having such and such qualities actually occurs.’ For a useful overview of Dewey’s epistemology, see Hildebrand, *Dewey*, ch. 2. [↑](#footnote-ref-17)
18. Dewey, *Experience and Nature*, 316. [↑](#footnote-ref-18)
19. Examples of this viewpoint being advanced by latter-day Deweyan pragmatists include Hildebrand, ‘Dewey, Rorty and Brandom’, 118–20; Pappas, *John Dewey’s Ethics*; and Koopman, ‘Pragmatism as a Philosophy of Hope’. [↑](#footnote-ref-19)
20. Peirce himself argued strongly against the viewpoint in his 1898 Harvard lectures, published as *Reasoning and the Logic of Things*. His arguments continue to be advanced by contemporary Peircean pragmatists; see, e.g., Atkins, *Peirce and the Conduct of Life*. [↑](#footnote-ref-20)
21. Rorty’s anti-representationalism is helpfully summarized in Brandom’s Introduction to *Rorty and His Critics*; see also Bowden, ‘Antirepresentationalism and Objectivity’; Picardi, ‘Pragmatism as Anti-representationalism?’ [↑](#footnote-ref-21)
22. Rorty, *Philosophy and the Mirror of Nature*. [↑](#footnote-ref-22)
23. Rorty uses this image in a number of places, e.g., ‘Response to Robert Brandom’, 184. [↑](#footnote-ref-23)
24. See Rorty, *Contingency, Irony and Solidarity*, and *Consequences of Pragmatism.* [↑](#footnote-ref-24)
25. Brandom, *Perspectives on Pragmatism*, 197; *Articulating Reasons*, 206. [↑](#footnote-ref-25)
26. Brandom, ‘Vocabularies of Pragmatism’, 178. [↑](#footnote-ref-26)
27. See Brandom, *Articulating Reasons* and *Making It Explicit*. Again, this position is helpfully summarized in Bowden, ‘Antirepresentationalism and Objectivity’. [↑](#footnote-ref-27)
28. See Brandom, *Articulating Reasons* and *Making It Explicit.* [↑](#footnote-ref-28)
29. Cogent complaints in print include Koopman, ‘Language Is a Form of Experience’; and Levine, ‘Brandom’s Pragmatism’ and ‘Rehabilitating Objectivity’. See also Legg and Hookway, ‘Pragmatism’, sect. 5.2. For a (partial) defence of Rorty, see Stout, ‘On Our Interest in Getting Things Right’. [↑](#footnote-ref-29)
30. Sellars, *Empiricism and the Philosophy of Mind*, §6, 20. [↑](#footnote-ref-30)
31. The discussion in this paragraph and the next is drawn from Legg, ‘Things Unreasonably Compulsory’, 92–94. [↑](#footnote-ref-31)
32. Hume, *Treatise* 1.1.2, ed. Selby-Bigge, 7. See also Owen, ‘Hume and the Mechanics of Mind’. [↑](#footnote-ref-32)
33. Hume, *Treatise* 1.1.1, ed. Selby-Bigge, 1. [↑](#footnote-ref-33)
34. Hume, *Treatise* 1.1.1, ed. Selby-Bigge, 3. One might legitimately query the introspective methodology here. If any features had been lost, how would Hume know? [↑](#footnote-ref-34)
35. Sellars, *Empiricism and the Philosophy of Mind*, §7, 21–22. [↑](#footnote-ref-35)
36. Sellars, *Empiricism and the Philosophy of Mind*, §18, 43. [↑](#footnote-ref-36)
37. Sellars, *Empiricism and the Philosophy of Mind*, §19, 44. [↑](#footnote-ref-37)
38. The discussion in the next three sections draws from my papers, ‘Things Unreasonably Compulsory’, ‘Idealism Operationalized’ and ‘Sellars and Peirce on Nonconceptual Content’. [↑](#footnote-ref-38)
39. James, *Pragmatism*, 31. [↑](#footnote-ref-39)
40. Dewey, *Experience and Nature*, 2. [↑](#footnote-ref-40)
41. Dewey, *Experience and Nature*, 18. [↑](#footnote-ref-41)
42. Hildebrand, ‘John Dewey’, §3.3. [↑](#footnote-ref-42)
43. James, *The Meaning of Truth*, 7. [↑](#footnote-ref-43)
44. James, *Essays in Radical Empiricism*, 4. [↑](#footnote-ref-44)
45. Peirce, ‘Telepathy and Perception’ (1902), CP 7:619. [↑](#footnote-ref-45)
46. Peirce, ‘Telepathy and Perception’, CP 7:622. [↑](#footnote-ref-46)
47. Peirce, ‘Telepathy and Perception’, CP 7:625. [↑](#footnote-ref-47)
48. Peirce, ‘Telepathy and Perception’, CP 7:619. [↑](#footnote-ref-48)
49. Peirce, *Pragmatism as a Principle and Method of Right Thinking*, 160. [↑](#footnote-ref-49)
50. Peirce, ‘Telepathy and Perception’, CP 7:631. [↑](#footnote-ref-50)
51. Peirce, ‘Telepathy and Perception’, CP 7:625. [↑](#footnote-ref-51)
52. Peirce, ‘Telepathy and Perception’, CP 7:634. For a discussion of this notion, and its role in Peirce’s philosophy, see Hookway, ‘… A Sort of Composite Photograph’. [↑](#footnote-ref-52)
53. Peirce, ‘Telepathy and Perception’, CP 7:634. [↑](#footnote-ref-53)
54. Peirce, ‘Telepathy and Perception’, CP 7:628. [↑](#footnote-ref-54)
55. Peirce, ‘One, Two, Three: Fundamental Categories of Thought and of Nature’ (1885), CP 1:369. [↑](#footnote-ref-55)
56. This phrase, and its philosophical implications, have been explored in depth by Stjernfelt in a body of work, including ‘Dicisigns’, ‘Dicisigns and Habits’ and *Natural Propositions*. [↑](#footnote-ref-56)
57. Peirce, ‘Telepathy and Perception’, CP 7:645. [↑](#footnote-ref-57)
58. Peirce, ‘Reason’s Rules’ (ca. 1902), CP 5:544. [↑](#footnote-ref-58)
59. Rosenthal, *Charles Peirce’s Pragmatic Pluralism*, 4. [↑](#footnote-ref-59)
60. Peirce, ‘Telepathy and Perception’, CP 7:647. [↑](#footnote-ref-60)
61. Hookway, *The Pragmatic Maxim*, 17. [↑](#footnote-ref-61)
62. Peirce, ‘Telepathy and Perception’, CP 7:653. [↑](#footnote-ref-62)
63. The discussion in this section draws from my papers, ‘Idealism Operationalized’ and ‘Habits in Perception’. [↑](#footnote-ref-63)
64. For Peirce’s own formulations of this key three-way distinction in his semiotics, see CP, 2:92, 2:247–49, 2:304, 3:363, 4:531, 5:73–74 and 8:335. See also Legg, ‘The Problem of the Essential Icon’, 207–9. [↑](#footnote-ref-64)
65. Peirce, ‘One, Two, Three’, CP 1:369. [↑](#footnote-ref-65)
66. Massecar, ‘Peirce’s Interesting Associations’, 193. [↑](#footnote-ref-66)
67. Massecar, ‘Peirce’s Interesting Associations’, 194. [↑](#footnote-ref-67)
68. Ibid. [↑](#footnote-ref-68)
69. Massecar, ‘Peirce’s Interesting Associations’, 198. [↑](#footnote-ref-69)
70. Peirce, unpublished MS, ca. 1898, CP 6:104. [↑](#footnote-ref-70)
71. Nice accounts of such organic development are given in Nöth, ‘The Growth of Signs’ and ‘The Criterion of Habit’. [↑](#footnote-ref-71)
72. See Nöth, ‘The Growth of Signs’. [↑](#footnote-ref-72)
73. Such an account is arguably not entirely unknown elsewhere, as for instance in the work of George Lakoff and Mark Johnson on ‘embodied cognitive structures’ (see, e.g., their *Philosophy in the Flesh*, which inspired Francisco Varela, Evan Thompson and Eleanor Rosch to develop a so-called ‘sensorimotor enactivist’account of cognition in their *The Embodied Mind*. But that is a story for another time. [↑](#footnote-ref-73)
74. Rosenthal, *Charles Peirce’s Pragmatic Pluralism*, 27. [↑](#footnote-ref-74)
75. Ibid. [↑](#footnote-ref-75)
76. Ibid. [↑](#footnote-ref-76)