Peirce, Vygotsky and Concept Formation

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Phd Thesis

Signed Declaration

I, Chris Barnham, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Abstract

The purpose of this thesis to explore the theoretical similarities between Peirce and Vygotsky with respect to the process of concept formation.

It is acknowledged that these two thinkers are seldom associated with each other in relation to the learning process. Peirce is seen as one of the founders of modern semiotics, but he is rarely linked with the activity of concept formation itself. Vygotsky, whilst associated with the latter, is not interpreted as a semiotician – even though he sometimes uses the terminology of signs. It will be argued in the course of this thesis, however, that their views are closer to each other than is commonly recognised and that this convergence derives from the influence of Hegel.

In the case of Peirce, Hegel is often viewed in negative terms – as a philosophical legacy that Peirce is reacting against. It will be argued that this interpretation overlooks the deeper impact of Hegelian thought in terms of how Peirce constructs his semiotics. Indeed, an Hegelian interpretation of concept formation helps reframe Peirce's account of the 'mediating' sign, the notion of the 'determined' sign, and the role of the 'object' in his triadic structure. Moreover, the reference point of Hegel creates an opportunity to re-evaluate Peirce's icon, index and symbol.

Hegel's influence on Vygotsky is more frequently acknowledged, but seldom pursued in detail by commentators who often draw Vygotsky into a more social account of meaning construction. Full recognition of Hegel's influence on Vygotsky, however, has the effect of reframing his notion of 'mediation', and making his account of concept formation less focused on the social dimension than is commonly recognised.

The overall effect of these arguments is to reposition Vygotsky's 'natural history of the sign' in a framework that parallels Peirce's own account of sign formation. There remain, of course, important differences in the approaches of Peirce and Vygotsky, and these will be highlighted in the course of the discussion. But the broader perspective outlined below suggests that there should be greater recognition of their philosophical similarities.

Impact Statement

This thesis seeks, primarily, to re-evaluate the work Peirce and to provide a broader understanding of his contribution to semiotics. It is argued that greater recognition of the influence of Hegel on Peirce has the potential to bring new perspectives to his treatment of the sign, the role of the icon, index, and symbol, and the semiotic terminology that he employs. But this re-evaluation of Peirce can equally contribute to our understanding of Vygotsky because their positions emerge as closer to each other than is commonly understood.

The similarities between Peirce and Vygotsky have the considerable benefit of bringing Peirce more into the mainstream of educational thinking. Vygotsky is, justifiably, held up as a key source in the philosophy of education. This status derives from his account of concept formation and the mental processes that this involves. This thesis suggests that Peirce should be considered in this same light, and that his semiotic thinking is designed to show how our concepts are formed.

This revisionary account of Peirce can also be compared with the thinking of Vygotsky. Although the influence of Hegel on Vygotsky is often noted, its full extent is seldom fully acknowledged because commentators fail to recognise the underlying Hegelian template that he is adopting. This can lead to misunderstandings of Vygotsky's concepts of dialecticism, and mediation, and often results in an overly 'social' account of meaning construction. This thesis outlines, in contrast, a more Hegelian account of Vygotsky which builds parallels with Peirce in a number of areas.

Beyond the scope of Peircean and Vygotskian exegesis, this thesis necessarily involves an account of concept formation and how meaning, itself, is constructed. This inevitably has implications in many theoretical fields – including the philosophy of education and the broader spheres of philosophy and psychology. In particular, Peirce's non-referential concept of meaning is explored, and the implications for his concept of truth are discussed in detail. This raises important questions for the social, and linguistic, accounts of meaning construction that have been dominant in twentieth century philosophy.

This thesis builds upon papers that I have published in the International Journal of Market Research - looking at how meaning is created by brands using hierarchies (Barnham: 2009: 593-610), and how such meaning constructions can be explored using qualitative research (Barnham: 2015: 837-854). These have been written for a very different audience – in market research and marketing - but they indicate how the thinking of this thesis can be utilised in other theoretical fields.

Contents

1) Introduction

1.1) The Purpose and Scope of this Thesis

Peirce and Vygotsky are infrequently associated with each other in relation to the learning process. The purpose of this thesis is to demonstrate some of the theoretical links that exist between them and to show how each can contribute to a better understanding of the other.

At first sight, these two thinkers seem to be strange bedfellows. Vygotsky is viewed primarily as a child psychologist who is concerned with the processes involved in child development. He occasionally uses the terminology of signs, but he is hardly ever associated with semiotics *per se*. Moreover, in the secondary literature, he is frequently viewed by commentators as a 'social constructionist' who sees the social dimension as being critical in the formation of concepts.

Peirce, on the other hand, is seen mainly as a philosopher and as a logician. He is recognised as one of the founding fathers of semiotics, and also of pragmatism, but he is neither associated with modern psychology, nor, specifically, with child development. His work seems more concerned with addressing epistemological problems of knowledge and he adopts a system of signs to tackle these issues.

The bridge, however, that potentially exists between Vygotsky and Peirce is one based on their account of concept formation. Vygotsky is well known as a thinker on this particular issue, but Peirce is seldom viewed in this specific light. The reasons for this will be discussed in due course, but it will be argued that Vygotsky's account of concept development shares important similarities with Peirce's account of sign formation. We will explore, as a result of this, how Peirce's account of signs parallels Vygotsky's treatment of concepts.

Is there an underlying theoretical framework that underpins these potential similarities between Vygotsky and Peirce? It will be argued that the underlying template that enables these connections to be made can be found in the writings of Hegel. This aspect of Vygotsky's writings are often recognised in secondary texts (e.g. Derry: 2013; Van der Veer and Valsiner 1991), but the Hegelian foundations of Peircean thought are seldom identified. Indeed, Peirce is often construed as being a critic of Hegel. One of the key themes of this thesis will be to evaluate the Hegelian roots of Peircean thought and to show that the latter is, in fact, developing Hegel's thinking - rather than rejecting it. And, as we shall see, it is precisely within

the Hegelian aspects of Peirce's semiotics that we will discover the links between Peirce and Vygotsky.

In terms of the balance of this thesis, its main focus will be on Peirce. The reason for this is that the following exegesis of his thought has the most revisionary aspects to it. In contrast, the treatment, here, of Vygotsky is much closer to other commentators in the secondary literature.

However, the following discussion of Vygotsky's thought is still central to this thesis for a number of key reasons. Firstly, Vygotsky provides us with a highly influential account of concept formation that demonstrates the influence of Hegelian thinking on this issue. As such, he provides us with a useful template against which a more Hegelian interpretation of Peirce can be evaluated. Secondly, Vygotsky has achieved a very considerable status in the philosophy of education - based on his account of concept formation. The opportunity exists, therefore, to place Peirce on a similar footing amongst educationalists and in relation to the learning process. This has the potential benefit of positioning Peirce more in the educational mainstream. Peirce is often seen as being more on the periphery of the philosophy of learning - despite the progress made in Edusemiotics (Stables: 2005; Stables and Semetsky: 2015). One of the benefits of highlighting the theoretical proximity of Peirce and Vygotsky, is, therefore, to demonstrate how Peirce can be drawn into the philosophy of the learning process. This will have benefits for educationalists and semioticians alike.

Overall, there are three main objectives of this thesis.

- The first is to explore the influence of Hegel on the work of Peirce and Vygotsky, and to show that this results in revisionary exegeses of both writers and, in particular, of Peirce. In this discussion, the writings of Hegel will be placed in the broader context of German Philosophy. This will also involve a short discussion of the influence of Spinoza and Leibniz on Hegel. We will see that these two early modern philosophers had a more circuitous impact on Peirce and Vygotsky because they helped inform the philosophical position that Hegel expounds.
- The second objective, derived from the Hegelian influence established above, is to identify the underlying similarities between Peirce and Vygotsky. As noted above, this area is largely unexplored in the secondary literature and it can provide useful learnings in relation to both thinkers.
- The third objective relates to our understanding of the learning process. As highlighted, Vygotsky is already established in this respect, but the potential to construe Peirce as central thinker in this area will be discussed at the end of this thesis.

1.2) The Concept and the Sign

The assertion that signs are involved in concept formation – a claim that is at the heart of this evaluation of Peirce - may strike the reader as a surprising one. It might be suggested, for example, that two separate, and quite distinct, dimensions are being conflated here. Signs are often seen as entities that we experience, whilst concepts are construed as being strictly formed by our minds. These two phenomena – signs and concepts - are thus categorised as being quite different kinds of things. The former are external and experiential, whilst the latter are internal and mental. It is important to begin this thesis by clarifying some of the issues that are at stake here and how Peirce, in particular, views these problems.

At a simplistic level, of course, our experiences do contribute to the formation of our concepts. This is because these experiences provide the basic raw materials from which our empirical concepts are formed. This point is not at issue here; what needs to be debated is the much stronger claim that the 'world' has an active role in the construction of our concepts and that there is, as a result, a 'bridge' between the sensory and the intellectual in their formation. This claim is at the heart of Peirce's semiotics and it is also central to this thesis.

However, the basic argument that our sensory inputs provide the raw materials for our concepts can easily elide into the much stronger position that our senses can *only* have this very limited role in the formation of our concepts. In the next sub-section we will discuss how this slippage has taken place and how the quite simple claim (about mental 'raw materials') has evolved into a central feature of modern philosophy. We will see that what is a non-contentious claim about the status of our sense data has evolved into an implicit model of the mind.

In addition, we will see that semioticians have, in some cases, adopted this model of the mind – insisting that signs (and their meanings) are separated from each other (along an experiential/meaning giving axis). Nöth, for example, explains the structure of the sign in the following terms:

> In this handbook, the concept of sign is generally used in its broadest sense of a natural or conventional semiotic entity consisting of a sign vehicle connected with meaning.
>
> (Nöth: 1990: 79)

In this account, the sign is depicted as something that we first experience and its 'meaning' is what the mind then attaches to this 'sign vehicle' in an act of semiotic interpretation. The combination of these two elements forms a signifying act. This is an vision of the sign that is widespread in much of

semiotic literature. Saussure, to take just the most influential example, advocates a binary structure of the 'signifier' and the 'signified' (Saussure: 2012) that reflects this account.

Central to this thesis is the contention that Peirce rejects this underlying structure of the sign. He sees such a structure as being fraught with potential contradictions and, as a result, he proposes an account of the sign which is triadic, rather than binary, in nature. As we shall see, this Peircean model involves the notion of a *mediating* structure within the sign that intervenes between the initial, and experiential, dimension and the ultimate meaning created in the sign. It will be argued that this mediating structure is the 'object' of the sign. We will see that it is this 'object' in the sign that, for Peirce, transforms the raw material of perception (the 'representamen') and leads to the creation of meaning (the 'interpretant'). This triadic account of the structure of the sign is also critical to establishing potential bridges to Vygotsky. This is because Vygotsky has his own version of the mediating 'object' in the sign (which he calls *'word meaning'*) and, as a result, he proposes a triadic model of concept formation which has Hegelian roots.

At this early stage of this thesis, it could be argued, of course, that there is a central flaw in the argument that is being proposed here. For Peirce hardly ever uses the term 'concept' in his writings. It seems very difficult, as a result, to position him as working to the same template of concept development as either Hegel, or Vygotsky. We need to address this potential criticism at this point in this thesis.

Hegel is well known for his account of the nature of the concept (begriff). They are central to his argument that human knowledge is evolving towards 'The Absolute'. Hegel defines the concept, or what he calls the 'Notion', as follows:

> In the logic of understanding the notion is generally reckoned a mere form of thought, and treated as a general conception. It is to this inferior view of the notion that the assertion refers…that notions as such are something dead, empty and abstract. The case is really quite the reverse. The notion is, on the contrary, the principle of all life, and thus possesses at the same time a character of thorough concreteness….. the notion is a true concrete; for the reason that it involves Being and Essence, and the total wealth of these two spheres with them, merged in a unity of thought.
>
> (Hegel: 1892/2014: 187-8)

We should note, at this point, that the Hegelian 'Notion' is more than a *'mere form of thought'*. The latter would be simply a phenomenon that is present 'in' the mind. In contrast, a 'Notion' is viewed by Hegel almost as a technical term. It is a mental entity that fuses *'two spheres'* – the experiential and the logical together. These are conjoined *'in a unity of thought'* and this unity includes a concept's relationships with other

concepts. Vygotsky, following Hegel, provides further definitions of a concept:

> A real concept is an image of an objective thing in its complexity. Only when we recognise the thing in all its connections and relations, only when this diversity is synthesised in a word, in an integral image through a multitude of determinations, do we develop a concept.
>
> (Vygotsky: 1998: 53)

> A concept is filled with definitions of the object; it is the result of rational processing of our experience, and it is mediated knowledge of the object. To think of some object with the help of a concept means to include the given object in a complex system of mediating connections and relations disclosed in the determinations of the concept.
>
> (ibid: 55)

Again, there are terms here that we will return to later. But it is clear that a concept, for both Hegel and Vygotsky, is, firstly, rooted in our experience of the world and, secondly, connected with other concepts. To take an example, the concept of a 'table' is more than the perception, or the idea, of a particular object – it is the set of properties that we associate with it; we can put things on it, it is something we find in dining rooms, and we are able to distinguish it from other objects of furniture, such as chairs and desks. Such a concept, so defined, becomes, for Hegel and Vygotsky, the basis of our empirical knowledge; it is embedded in a wider system of other concepts.

The reader will notice, in the above discussion, that no mention has been made of Peirce. Does Peirce view the 'concept' in the same way? As noted, one of the interesting aspects of Peirce's work is that he seldom uses the term 'concept' itself. But there is a very important reason for this. As we shall see, he is primarily concerned with showing how we establish empirical knowledge *on the basis of signs*. Signs are the very mechanisms that help us form concepts. As a result, he, in fact, uses the notion of the 'sign' in much the same way as Hegel and Vygotsky use the term 'concept'. Indeed, Peirce goes so far as to argue that '*we think only in signs'* (CP2: 397).

This Peircean emphasis on signs as the mechanisms of concept formation creates a significant trap for the unwary. If we read his work, armed with assumptions regarding a binary distinction between signs (as experiential entities) and concepts (as mental entities), it becomes relatively easy to assume that signs, for Peirce, are simply experiential phenomena. It will be argued, however, that this is not the case. Signs, for Peirce, are the very point at which the empirical and the logical meet – as they do in the 'Notion' for Hegel. Peirce thus asserts that signs are his equivalent of the Hegelian concept - and he sees the action of signs, as a result, as an effective way to understand how concepts evolve.

There is, however, an additional, and historical, aspect to the apparent absence of the term ‘concept’ in Peirce’s writing. Widespread use of the term ‘concept’ is, in fact, a relatively modern phenomenon. This may be a reason why Peirce employs it so infrequently. Although the word had been in circulation for several centuries, it was only in the twentieth century that it becomes more prevalent. The Google dictionary, for example, shows that usage of the term accelerates sharply in the early decades of the last century. In this context, it is, perhaps, noteworthy that Peirce’s employment of the word occurs mostly in the later years of his career (and in specifically relation to his pragmatism). This may explain the relative lack of his use of the term in the early years of his career.

This historical dimension is often disguised for the modern reader because we find Hegel’s apparent use of the term in modern translations of his work. In these editions of Hegel, the term *‘begriff’* is almost always construed as ‘concept’, as is Kant’s usage of the same term in modern versions of the *‘Critique of Pure Reason’* (Kant: 1781/2007). These translations have the effect of erroneously suggesting that the term ‘concept’ was in widespread circulation in the nineteenth century. But it is of some interest that older translations of Hegel (for example, Wallace’s translation of ‘*The Science of Logic’* in 1892), use the alternative term *‘Notion’*.

The Hegelian ‘Notion’ should thus be treated as being the equivalent of the ‘concept’. But if we simply translate the term *‘begriff’* as ‘concept’ then we run the risk of losing the Hegelian understanding of what it is to be a concept (as outlined in the quotation above). The Hegelian ‘Notion’ is equivalent to the Hegelian ‘concept’, but only if we recognise that the Hegelian ‘concept’ is very different from modern interpretations of the term.

So there are two converging puzzles here. On the one hand, we have the question of why the potential links between Peirce and Hegel are not fully recognised in the literature. On the other hand, we have the question of why Peirce’s account of signs is not interpreted as relating to *concept* formation.

The answers to both of these questions can be found in the fact that Peirce seeks to provide an account of concept formation that is similar to Hegel, but with one critical difference. Whilst sharing his conviction that concept formation is a central issue in philosophy, Peirce rejects Hegel’s dialectical approach to this problem and *replaces it with a system based on sign development*. For Peirce, concepts are formed, therefore, through the action of signs combining with each other, rather than through Hegelian dialectics. His insistence on the role of signs, and his parallel lack of usage of the term ‘concept’, has the effect of making him appear at some distance

from accounts of concept formation offered by Hegel and Vygotsky. But once we recognise that the Peircean sign includes both an empirical and a mental component, then it exhibits strong similarities with the Hegelian 'Notion' and the Vygotskian 'concept'. This view will underpin the account of Peircean sign put forward in this thesis.

Is there any evidence for this claim? It is important to clarify that this claim is not simply an interpretation on my part – it is something that Peirce, himself, actually asserts in his writings. Hegel's analysis of the stages of concept formation are outlined in *'The Science of Logic'* (Hegel: 1892/2014) and they are defined as the *'objective logic' (footnote 1)*. Peirce states:

> *But now we have to examine whether there be a doctrine of signs corresponding to Hegel's objective logic; that is to say, whether there be a life in Signs*, so that – the requisite vehicle being present - they will go through a certain order of development, and if so, whether this development be merely of such a nature that the same round of changes of form is described over and over again whatever be the matter of the thought, or whether, in addition to such a repetitive order, there be also a greater life-history that every symbol furnished with a vehicle of life goes through, and what is the nature of it (my italics).
>
> (CP2: 111)

This quotation both shows that Peirce endeavours to follow Hegel, and also that Peirce conceives signs as an alternative mechanism for concept formation. He asserts that a symbol needs to be *'furnished with a vehicle of life'* – which is the concept that underlies it. Peirce certainly rejects Hegelian dialecticism, but it seems clear that Hegel's *'objective logic'* still provides him with an underlying template for concept formation. In the quotation above, Peirce calls this process *'a life in Signs'*. Interestingly, Vygotsky describes concept formation in a parallel manner – describing it as *'the natural history of the sign'* (Vygotsky: 1978: 45). This, of course, raises the question of what sort of process is involved in this *'life in Signs',* or *'the natural history of the sign'*? The answers to these questions are slightly different for Hegel and Peirce, on the one hand, and Vygotsky, on the other.

Hegel and Peirce are working in a philosophical culture that is still dominated by the thinking of Kant and his attempts to show that empirical knowledge is achievable despite the problems of Cartesian Dualism (Descartes: 1985). They want to show, as Kant tried to do, that is possible to move from our sensory experience of the world to knowledge of it (e.g. from the 'phenomenal' to the 'noumenal'). They adopt different strategies compared with Kant, but this does not disguise the fact that they are focused on this same philosophical project. As such, both Hegel and Peirce are dealing, fundamentally, with epistemology - and they view the process of concept formation as providing a potential solution to epistemological questions. They are trying to establish, in their different ways, an account of how the human mind moves from raw 'sense data' to the possession of

concepts involving a synthetic mixture of the empirical and the logical (*footnote 2*).

In the case of Vygotsky the *'natural history'* is a little different, because he is less concerned with purely epistemological issues. As a result, his remit is generally narrower. Nevertheless, he still seeks to demonstrate how the mind moves from its sensory inputs, which he calls *'natural perceptions',* to the concepts present in the *'higher psychological processes'* (Vygotsky: 1978). In his own *'natural history of the sign'* Vygotsky adopts an Hegelian template, but he uses it simply to understand the learning processes - rather than to demonstrate how a general account of how empirical knowledge can be established.

From this brief discussion, it is already clear that the account of signs being proposed in this thesis extends beyond the usual scope of modern semiotics. It is important, therefore, to give some indication of its key themes, and to position these within a wider perspective.

As noted above, the arguments, presented here, seek to place signs in an *epistemological* context. In the hands of Peirce, signs are not phenomena which require, or demand, 'interpretation' (as they would in the binary model). They are, instead, the very mechanisms through which the human mind develops the conceptual tools for knowledge of the world. This places Peircean signs in a context that moves them some distance away from semiotic discussions that tend to focus on culture, the philosophy of language, or questions of communication.

Closely linked to this epistemological focus is the fact that Hegel's, and Peirce's, account of concept formation evolves, in important respects, from their *philosophy of perception*. Indeed, for Peirce, his semiotics should be viewed as a systematic attempt to address the consequences of his theory of perception. This, again, shifts the focus of Peircean thought away from the usual domains of semiotics. For many semioticians, issues raised by the philosophy of perception barely register in their thinking. They take the sensory world as they find it and they are more focused, instead, on how semiotics works at a 'cultural' level. This is not, however, how Peirce comprehends the activity of sign formation – he sees perception as being foundational in this process.

This thesis will, therefore, consider signs, and signification, from a perspective that is infrequently adopted in semiotics. This is not to say that the issues of culture and language are not touched upon in the following discussion (and particularly with reference to Vygotsky). Rather, we will approach these specific topics from directions that do not place them centre

stage. And this will correspond with an account of Peircean sign action that seeks to draw out its Hegelian roots.

In this respect, it is also important to explore how Peirce's account of signs, and concept formation, differs from the 'social' accounts of meaning creation that have been dominant in the twentieth century. This is also important in relation to our later discussions of Vygotsky. The latter is often understood as giving a central role to the 'social dimension' in meaning creation. Indeed, he is frequently held up as being a pioneer in this area. But we will see that his account of meaning creation is not as avowedly 'social' as is often claimed. We will see that its roots in Hegelian thought pull it back from a *wholly* social account of how meaning is created. And, again, we will see that it has more in common with Peirce than is commonly acknowledged. In this respect, a clear understanding of Vygotsky's Hegelian influences are thus instructive because they temper the more 'social constructionist' interpretations of Vygotsky which are encountered in the secondary literature.

In the following sub-sections, therefore, we will explore two areas. Firstly, we will consider, in more detail, the model of meaning construction that underpins the binary account of the sign which is commonly found in modern semiotics. Secondly, we will look at how this model has also become central to the 'social' models of meaning creation that have been dominant in twentieth century.

1.3) Dualism and the Sign

1.3.1) Dualism and 'Mediation'

We have seen that if the sign is construed as a sensory input, combined with an 'interpretation' that gives it meaning, then it will possess a binary quality. In this section we will consider where this binary model of the sign comes from and the factors that have influenced its impact on semiotics.

It is clear, from the outset, that there is an implicit dualism present in this model. The notion of 'dualism' is one that is well recognised in modern philosophy. Descartes' form of dualism is widely acknowledged as dividing the world into two halves - the 'internal' mental world of *'res cogitans'* and 'external' world of *'res extensa'* (Descartes: 1985). As many philosophers have shown (e.g. Hume: 1985), such dualism makes it very difficult to show how valid empirical knowledge might be achievable - because the dualism isolates the mind from reality. Whatever is in the mind, at a sensory level, cannot be known by the mind to exist in reality itself, if only because our sense data is construed as simply existing within the mind. Kant reinforced this view by dividing reality into the 'phenomenal' and the 'noumenal'. The former is what we experience directly, whilst the latter is thought to only exist behind a Kantian 'veil of perception' (Kant: 1781/ 2007). As Peirce observes, this kind of dualism leads to philosophy that '*performs its analyses with an axe'* (EP2: 2).

This thesis takes an anti-dualist stance. A full discussion of whether dualism is fundamentally flawed lies outside of the scope of this thesis. But we will see, in due course, that Hegel, Peirce, and Vygotsky share the view that dualism is a philosophical mistake. And when adopting this view, all three thinkers are also reflecting the legacy of Spinoza and Leibniz - who were the first to attack Descartes' original position. The rejection of dualism, therefore, is a theme that runs throughout this thesis and it is one that we will return to in the course of our discussion.

As noted earlier, Peirce follows Hegel in putting forward the view that the Cartesian Dualism can be overcome if the mind is able to bridge its apparent divide through a *mediating* entity. As we shall see, in the case of Hegel, this mediating entity is the 'Essence' that is first posited, and then formed into a 'Notion', through Hegel's dialectics. In the case of Peirce the mediating entity is the 'object' in the triadic sign which evolves to eventually form a symbol. And, in the case of Vygotsky, he proposes the idea of 'word meaning' as a form of mediating entity which fuses the empirical and the intellectual.

Mediation is, therefore, how all three thinkers believe we can overcome the dangers of Cartesian Dualism. How such mediation works will be discussed, in detail, in this thesis; it will form a central theme of our discussions. Such analysis will include detailed discussion of how the mediating entity is initially formed and how it subsequently evolves. We will also consider how the idea of 'mediation' has been interpreted (and possibly misinterpreted) as a 'social' phenomenon, in Vygotskian literature.

But at this stage, we should highlight that the idea of some kind of initial sensory input (which is fully accepted by Hegel, Peirce and Vygotsky) does not commit them to dualism. All three accept that we do, in fact, experience such sensory input. We could call this the 'world', for the sake of argument, but, if we use such term, we must be clear that we are *not* implying the existence of a Kantian 'noumenal' reality. In fact, Peirce deliberately uses the term 'Phaneron', on some occasions, to avoid such an implication. All three thinkers, therefore, simply accept that we do have some kind of sensory input - of whatever kind that may be.

But even this position can easily be interpreted as a form of dualism. It can easily slip into a phenomenological claim that all we possess are our mental experiences – that 'reality' is no more than a collection of our sense data. Why is this alternative view intrinsically dualist? It is so because it still assumes that 'one leg' of the dualist position is, in fact, true – that there are such things as 'sense data' existing in a mental 'space'. Such a position is certainly a denial of objective reality, but it is still, implicitly, an acceptance of a dualist division of reality.

In contrast to this, as we shall see, Hegel and Peirce argue that we do not *know* the nature of our sense data. They are both non-committal on this key point and they assume that what we experience is only 'vague' or 'indeterminate'. Likewise, Vygotsky, whilst he is generally less concerned with these philosophical issues, still tends to view our perceptions as 'vague'.

Where Vygotsky is certainly different from both Hegel and Peirce is in the role he gives to the social dimension. This is where the question of 'mediation' is, once more, of importance. One of the issues that we will discuss, later in this thesis, is how mediation can be mis-interpreted in relation to the social aspects of meaning creation. Some commentators argue that social mediation between individuals within a society is how meaning is created. I would argue that this is a misrepresentation of Vygotsky's views, and, also, that it re-introduces a form of dualism. For if meaning is created *within* a society, then this is necessarily *separate* from the mind of the individual. And the question then remains as to how such

socially created meaning can be transferred to the mind – an issue that Bruner has called the *'problem of interiorisation'* (Bruner: 2001: 202).

One of the arguments of this thesis, however, is that Vygotsky does not see the social dimension as being one in which meaning is first created, and transferred to the mind of the individual. Instead, he sees the social realm as simply providing another *sensory input* into the process of concept and meaning formation. The social dimension does this by providing a 'word' that the child can decide to use as a way of understanding his, or her, experience. The meaning that is created by the child is, therefore, entirely the product of the child's own mind. It is in the child's mind that meaning is made – rather than in the social realm. It is important to emphasis this point because this interpretation of Vygotsky brings him closer to Hegel, and to Peirce, and serves to distance him from the social constructionist positions of the twentieth century. And this conclusion is not, it turns out, a denial of 'mediation' because the concept, formed in the mind, is still construed by Vygotsky as a mediating entity.

So, to summarise, the three main thinkers in this thesis – Hegel, Peirce and Vygotsky – share the view that dualism is a philosophical mistake. They seek to overcome the problems that it causes by adopting a model of cognition that involves a 'mediating' entity. How they construe this entity varies from thinker to thinker, but this feature is critical to the assertion that they share a broadly similar perspective on concept formation.

1.3.2) 'Secondary Dualism'

Besides the difficult questions raised by Cartesian Dualism, there is also another, more subtle, form of philosophical dualism that exists and which is central to our current understanding of the sign.

For the purposes of this thesis, let us call this *'secondary dualism'.* In this form of dualism we accept that our minds do not have access to a 'noumenal' world 'behind' our perceptions, but we still claim that we have *direct access to our sense data*. This philosophical position, if adopted, has the effect of transforming the underlying status of our sensory experiences. In this new framework, our sense data now become entities that 'exist' only in the mind. These *'sense impressions'* (Hume: 1985) are separated from reality, but they can, at least, be interrogated just as they appear to us – as sense data.

In this model of 'secondary dualism', what has happened is that the location of dualism has been shifted to an *internal division* that takes place within the mind; it now exists between our sense data and the intellect. In many accounts, these 'isolated' sense data in the mind are deemed to be

'representational', or 'foundational', in nature, and they underpin the *'representational paradigm'* which is dominant in much of contemporary thought (Derry: 2013: 126-132).

In this cognitive structure, our sense data are construed as providing experiential 'content'. This content also seems to be 'fixed', if for no other reason than that it has been 'given' to us by reality. When confronted with this content, the mind considers the similarities, the differences, and the connections, which may exist between its individual elements. And, in particular, it is claimed that the mind is able to create 'general terms', or 'universals', from these elements. It does this by identifying the similarities that it observes and by 'abstracting' them (Locke: 1690/1981: 297). Equally, it is asserted that the mind is able to identify causal connections between its sense data on the basis of the *'constant conjunctions'* it observes (Hume: 1985). Critically, this results in a framework in which the mind brings meaning and interpretation to the 'content' that is provided by the senses.

This model also leads to the assertion that rational thought is 'separated' from reality and that, by itself, it cannot inform our understanding of the world. This, in turn, leads to a belief, in the empiricist tradition, that rationalism is *'decontextualised'* (Wertsch: 1996: 30). It also has the effect of relativising our knowledge (Derry: 2013: 47).

'Secondary dualism' is thus a more implicit, but very powerful, form of dualism. On one side, we have our 'received' sense data and, on the other, our acts of mental 'interpretation'. Rorty describes this particular dualism in evocative terms – as the mind being like a *'Mirror of Nature'* - with an 'inner eye' that stands back and considers its sense data (Rorty: 1980: 47). Semetsky calls this the *'spectator theory of knowledge'* (Semetsky: 2010: 54), and, likewise, McDowell calls it a *'sideways on picture of the understanding'* (McDowell: 1994: 82). Davidson refers to it as the third *'dogma of empiricism'* (Davidson: 1973). Pikkarainen argues that it is a model of cognition that should be resisted:

> According to this model the form (or essence or feature as part of essence) is somehow copied from the original object to the mind of the subject in the event of perception. This model is an attractive analogy of a reflection of the image via a mirror or lens but it should be resisted.
>
> (Pikkarainen: 2016: 29-30)

This model is highly relevant to our discussion of the sign because it is this precisely the structure of 'secondary dualism' which underpins the binary model of it. In this account, we have, on the one hand, the sensory input 'in the mirror' (often called the 'signifier' or 'sign vehicle'); on the other, we have an 'interpretation' producing meaning (the 'signified'). 'Secondary dualism', therefore, seems to inform this account of the sign.

If we consider this model, however, in any detail, it is evident that there is a fundamental contradiction at its very heart. For what it wishes to assert is that the mind has an *interpretative* role in relation to its sense data. But this conclusion, it turns out, is predicated on the tacit assumption that we must already 'know' the identity of that sense data. For if this premise is not implicitly accepted, then the 'interpretations' of our sense data could not possibly be construed *as interpretations*. It follows from this that the 'interpretative' model of 'secondary dualism' is actually founded on an implicit assumption of prior knowledge. An interpretation, after all, has to be an interpretation *of something*. The 'secondary dualist', therefore, wants to claim that our knowledge of the world is *only* 'interpretative', whilst simultaneously maintaining that we do, in fact, know the initial identity of our sense data. This position is clearly fallacious; he, or she, cannot have it both ways.

It would be acceptable, of course, if the 'secondary dualist' acknowledged that we do *not* know the initial identity of our sense data. But what he, or she, cannot maintain is that we only possess 'interpretations' of such data. In due course, we will see that Hegel and Peirce do not encounter these philosophical difficulties. This is because they reject the model of 'secondary dualism' itself, and they also refute the view that we can 'know' the content of our sense impressions. Instead, they argue, more correctly, that we can only experience *'indeterminate'* perceptions and that we cannot, as a result, make 'interpretations' of them.

This model of 'secondary dualism' has many consequences. One of the main ones is the belief that our accounts of 'reality' are relativistic. If our knowledge of 'the world' is, necessarily, a result of 'interpretation', then it follows that different interpretations are always possible and that they are relative to each other. When taken to extremes, this position negates the possibility of any form of 'valid' empirical knowledge. Gergen, for example, suggests that:

> We must suppose that everything that we have learned about our world and ourselves – that gravity holds us to the earth, people cannot fly like birds, cancer kills, or that punishment deters bad behaviour – could be otherwise. There is nothing about 'what there is' that demands these particular accounts; we could use our language to construct alternative worlds in which there is no gravity or cancer, or in which persons and birds are equivalent, and punishment adored.
>
> (Gergen: 1999: 47)

In this view, 'secondary dualism' prevents us from achieving any knowledge that is objectively rooted in the world. This is due, of course, to the fact that it implicitly accepts that our *internal* sense data are detached from any putative 'reality'. And, as Gergen amply demonstrates, language then becomes the main mechanism through which we may 'construct' the world.

This conclusion is of significant relevance to this thesis. If semiotics implicitly adopts the underlying template of 'secondary dualism', then it follows that semiotics will always involve some kind of *interpretation* of reality. This means that the action of the sign will result in some kind of 'distortion' of 'reality' because our interpretations will determine how our meanings are constructed. Eco clearly illustrates where this kind of thinking can lead:

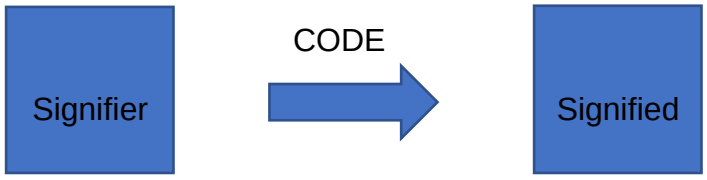
> Semiotics is in principle the discipline studying everything which can be used in order to lie.
>
> (Eco: 1976: 7)

And in the hands of writers, like Volosinov (1973: 10), it results in the assertion that semiotics is *'ideological'* (see section 1.3).

The semiotics of Peirce, however, rejects the implicit assumptions of 'secondary dualism'. Instead, Peirce proposes an alternative model of human experience that construes the human mind as being immersed in signs. As a result, there is no 'mirror', and no 'inspecting eye', in his account of cognition. This enables Peirce to adopt an entirely different sign structure and, critically, it is one that is not based on the notion of 'interpretation'. As Greenlee remarks, Peircean semiotics seeks the *'elimination of the 'psychological' element'* (Greenlee: 1973: 42).

The most effective way to explain the differences between the binary model of the sign and the Peircean model of the sign is to consider them diagrammatically. We have noted that the binary model involves the transformation of the signifier into a signified along lines suggested by secondary dualism. This can be depicted as follows:

Fig 1:

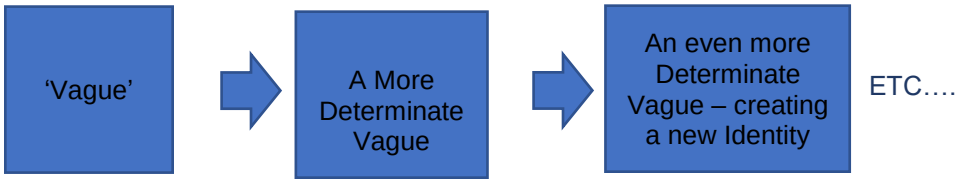


In this model, the identity of the signifier itself is *a)* known and *b)* its actual identity (in reality) does not change in the semiotic process. The transformatory effect of the sign is, as a result, provided by the action of a 'code' that acts between them. And because the 'code' is an 'interpretation' (either individual, or cultural) it follows that the meaning of a sign (the

signified) involves a new meaning being *given* (or added*)* to the signifier by the mind.

This model is entirely refuted by Peirce. Firstly, he rejects the claim that we can 'know' the initial identity of the signifier; for him the initial perception is a *'vague'*. Secondly, and as a result of this, he proposes a different kind of transformation in the sign. In a process that we will discuss in due course, the initially 'vague' perception (or *'representamen'*) is transformed, through a process of determination, into a new *identity* (e.g. an *interpretant*). And critically, this new identity is construed by Peirce *as also existing in the world*:

Fig 2:



This model - of successive determinations - is key to understanding Peircean semiotics. It entails a never-ending activity of *'semiosis'* (EP2: 411) – a point that is highlighted by Stables in his view that Edusemiotics is *'process semiotics'* (Stables: 2016: 45; Stables: 2018: 31). In this process signs enable us to move from 'indeterminate' (and 'vague') perceptions to ones which are more 'determinate'. And it is through this activity that the sign develops into an emergent *concept* - by becoming more 'determined'. As Engel–Tiercelin argues:

> What Peirce has in mind when he talks about a 'logic of vagueness' is, in a broader sense, the formal study of signs, namely what he calls 'significs'.
>
> (Engel-Tiercelin: 1992: 66)

So signs, in this Peircean model, do not connect a *known* identity and an interpretative 'meaning' ('a red light' and 'stop!', for example). Instead, signs provide a mechanism that enables our perceptions to evolve into our concepts. And because these signs are thought to exist in the world (as 'interpretants') they are also things that we can subsequently perceive. As noted, it is widely recognised that Peirce claims that all thought is *'in signs'*:

> The only thought, then, which can possibly be cognized, is thought in signs. But thought which cannot be cognized does not exist. All thought, therefore, must necessarily be in signs.
>
> (CP5: 251)

This can easily be understood as a claim that we cannot think without some prior experiential input (an essentially Lockean interpretation (Locke:

1690/19810), but it is now evident that, for Peirce, it represents the much stronger claim that signs are involved in the creation of our concepts.

So, to summarise, Cartesian Dualism is able to exert its influence in ways that stretch well beyond a basic dualism of *'res cogitans'* and *'res extensa'*. Of particular relevance to the discipline of semiotics is the way that a form of dualism – which we have called 'secondary dualism' –informs one of the dominant ways in which the sign is conventionally structured.

At this stage in our discussion, I have simply highlighted that this binary model - of 'known' sense data, and an interpretative mind - is not one that Peirce subscribes to. He rejects the idea that we have knowledge of such 'foundational' types of sense data and he seeks, instead, to understand how we move from 'vague' perceptions to empirical knowledge.

The specific claim, however, that we 'know' the nature of our perceptions is an aspect of the model that we need to consider in more detail. And it is to this that we shall now turn.

1.3.3) The *'Myth of the Given'*

When first encountered, the cognitive model of 'secondary dualism' seems to offer a potential solution to the epistemological 'problem of knowledge'. For it suggests that, even if we cannot see 'behind' the Kantian 'veil of perception', we are able, at the very least, to 'know' the character of our 'sense impressions'. In otherwords, even if we do not know whether something is really 'red' (in some 'noumenal' reality), we can know, at least, that we have a sense datum of 'red' in our minds.

This claim is, as noted, a key aspect of 'secondary dualism'. For this model not only separates our sense data from our interpretations of them, but, as we saw above, it also asserts that we have direct access to our sense data and that we can, as a result, know their qualities.

This position, however, is rejected by philosophers, such as Sellars (1956), who call this particular assertion the '*Myth of the Given'*. Sellars argues that we cannot possess this type of 'direct' experiential knowledge. He maintains that our knowledge of our sense perceptions necessarily involves some form of comparison between them. As a result of this, he argues, our sense data cannot be the source of direct, non-inferential, knowledge.

This seminal attack on the *'Myth of the Given'* is, of course, prefigured by Peirce *('colour is not an impression, but an inference'* quoted in Murphey: 1993: 415). As we have noted above, Peirce claims that we can only experience 'indeterminate' vagues. He does not, therefore, fall into the trap

of the *'Myth of the Given'*. He claims, instead, that we cannot know the identities and his model of the sign works, instead, on the very basis that we can never possess such knowledge.

And, if we look at the historic roots of Sellars' and Peirce's position, we find that the Hegel agrees with them about the indeterminacy of our sense data. Indeed, Hegel goes further and he specifically rejects the underlying structure of 'secondary dualism' itself:

> It is a mistake to assume that, first of all, there are objects which form the content of our representations, and then our subjective activity comes in afterwards to form concepts of them, through the operation of abstracting that we spoke of earlier, and by summarising what the objects have in common.
>
> (Hegel:1830/1991: 241)

Importantly, we can also identify how the *'Myth of the Given'* is closely connected with our discussion of the sign. For the binary model of the sign, comprising sense data and mental interpretation, insists that we *know* the initial identity of the signifier. This is what leads the binary model to require a mechanism (e.g. a 'code') to explain the creation of meaning. In contrast to this, Peirce and Hegel, in rejecting the *'Myth of the Given',* and in maintaining that our perceptions are 'indeterminate', have a requirement for a 'code'. This is because our initial perceptions do not represent a form of 'direct' knowledge.

To summarise this sub-section, therefore, Peirce rejects both the model of 'secondary dualism' and the *'Myth of the Given'*. Both of these positions underpin the binary model of the sign that posits a 'sign vehicle' and a meaning attached to it. This is the model that we find, most famously, in the Saussurian model of the sign (his 'signifier' and his 'signified'). In contrast, Peirce, following Hegel, argues that we *cannot* know the identity of our perceptions - they are 'vagues'.

This philosophical position opens up the possibility of an alternative approach to the structure of the sign based on progressive determinations of our 'indeterminate' sense data. How this position is defended by Peirce will form a major theme of this thesis. In the next section, however, we must briefly consider how the binary structure of 'secondary dualism' also impacts extensively on the social accounts of meaning creation that have dominated the twentieth century.

1.4) The Social Creation of Meaning

In this section we will evaluate the assertion, common in the twentieth century, that meaning is, and, indeed, can only be, created in the social domain. This discussion is, by its very nature, summary in scope, but it seeks to outline some of the themes that we will encounter later. In relation to these issues, we will consider the work of Wittgenstein (2009), Geertz (1973), Barthes (2009), and Volosinov (1973), some of the key arguments of Social Constructionism (Gergen: 1999; Burr: 1995), and also, briefly, the discipline of Social Semiotics (Hodge and Kress: 1988). This discussion also outlines how the positions of Peirce and Vygotsky compare with these social accounts of meaning creation.

The basic starting point for the view that meaning is created socially is the tacit assumption that meaning cannot exist, as meaning, in the world. This view is implicit in much of modern culture, and, indeed, in much of semiotics itself. This leads to the assertion that meaning can *only* be created by the human mind. As we have just seen, in the model of 'secondary dualism', it is maintained, for example, that reality provides our raw empirical experiences, but that these are *given* meaning subsequently by our interpretative mind.

One of the important questions that we will encounter in this thesis is whether, in this context, meaning can be created by the mind *alone*, or whether it is, necessarily, a *social* construct. In this respect, I will argue that both Hegel and Peirce, following a Kantian tradition, are constructionists, but *not* social constructionists. They believe that meaning can be created by the mind (in conjunction with its experiential input) and that, whilst a social dimension does become involved at later stages, it is not required to create meaning from the outset. This is contrast to modern social constructionists who generally believe that meaning can *only* be created at a social level. As we shall see, the position of Vygotsky is instructive here because he sits on the boundary between these two schools of thought. He certainly argues that a social input is required for concept formation, but his Hegelian roots prevent him from being a full social constructionist – despite the inclinations of some commentators to view him in this way (Phillips: 1995).

The argument that meaning is wholly formed in the social dimension finds its most influential expression in Wittgenstein's *Philosophical Investigations* (Wittgenstein: 2009). Interestingly, Wittgenstein actually shares a number of important views with Peirce. One of these is that meaning cannot be established on the basis of reference. For example, Wittgenstein argues that *'The red that you imagine is surely not the same (not the same thing) as the red which you see in front of you; so how can you say that it is what you imagined?'* (Wittgenstein: 2009: 443). Wittgenstein concludes, as a

result of this, that we must work within a framework of *'family resemblances'* (ibid: 67). On this point, Peirce would entirely agree with Wittgenstein about the inherent 'vagueness' of our perceptions, but he would not conclude that meaning is, as a consequence, socially created. As we shall see, Peirce argues that our perceptions are experienced as 'classes', but he construes this as an indication of their 'indeterminacy', rather than as a need to invoke a social account of meaning creation.

Wittgenstein also describes his 'mind game' of the beetles in different boxes - when discussing whether we can have access to the sensations of others. He argues that our sensations of pain, for example, are like a beetle in a box that only we can inspect. We do not know what is in other people's boxes and they may have something quite different (which they call a 'beetle), or nothing at all, in their boxes. As a result of this, Wittgenstein argues that meaning cannot be determined *'on the model of 'object and name'* because *'the object drops out of consideration as irrelevant'* (ibid: 293). As such, a *'private language'* is not possible because meaning can only be created at a social level.

Again, Peirce would agree with Wittgenstein's premiss, but not with his conclusion. He would accept that meanings are often not referenced on the objects that we experience. But, instead of taking this as an indication that meaning can be formed only in the social domain, Peirce argues that our minds adopt quite a different strategy. As we shall see, Peirce argues that our minds create 'objects of thought' (such as unicorns) which may not exist (as reference points) in the world, but which still possess meaning. Meaning is created through these 'objects of thought' and yet it is not dependent on the existence of reference points that exist in the world.

Wittgenstein's position is foreshadowed, in some respects, by Frege who makes a distinction between 'reference' and 'sense'. The latter is viewed by Frege as being a mechanism that allows sentences to create meaning. He argues that 'sense' involves *'expression',* and that this, again, creates meaning without need for reference:

> A proper name (word, sign, sign combination, expression) *expresses* its sense, *stands for* or *designates* its reference. By means of a sign we express its sense and designate its reference.
>
> (Frege: 1892/1997)

When comparing this position with that of Peirce, we can discern, here, a fork in the road within nineteenth century philosophy. Frege adopts the notions of 'sense' and 'expression' as ways of explaining meaning without reference. But, in contrast, Peirce adopts the much older solution of an 'object of thought' being present in the mind.

Having concluded that words cannot achieve their meanings through an act of reference, Wittgenstein argues that meaning must be created through *'language games'* (ibid: 7), or through social *'conventions'* (ibid: 355). He cites the example of builders using single words to communicate to each other what materials they need. He argues that when we look for the meaning of a word we should consider, not its reference, but how it is used:

> For a *large* class of cases of the employment of the word 'meaning' – though not *all* – this word can be explained in this way: the meaning of a word is its use in the language.
>
> (ibid: 43)

> Regard the sentence as an instrument, and its sense as its employment.
>
> (ibid: 421)

For Wittgenstein, this linguistic perspective transforms the role of words. They become 'tools' in a *'tool box'* (ibid: 11) and, rather than 'representing' something (referentially), words are now viewed as a *'means of representation'* in our 'language games' (ibid: 50). The meanings of words thus derive from how they are used - not from what they 'stand for'.

This is not the place to evaluate whether Wittgenstein is correct in his analysis of meaning creation *(footnote 3*), but his views have certainly been highly influential. One of its key effects of such a position, however, is to render meaning relative. If meaning is created through our *'language games',* then it follows that differing meanings will be created by different social groups. This introduces the concept of 'culture' into our discussion – and the allied belief that we must understand different cultures in their own terms.

In focusing on this issue, Geertz, in his *'The Interpretation of Cultures'* takes the view that anthropologists must enter into the world of their 'subjects' in order to understand their socially constructed meanings. This avoids any troubling questions with reference, and the possible 'objectivity' of those views:

> The whole point of a semiotic approach to culture is, as I have said, to aid us in gaining access to the conceptual world in which our subjects live so that we can, in some extended sense of the term, converse with them.
>
> (Geertz: 1973: 24)

Geertz suggests, therefore, that we can, through a *'semiotic approach'*, gain access to a cultural world and he stipulates, following Wittgenstein, that:

> Culture is public because meaning is.
>
> (ibid: 12)

And in the same chapter, quoting Weber, Geertz states that:

> The concept of culture that I espouse, and whose utility the essays below attempt to demonstrate, is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretative one in search of meaning.
>
> (ibid: 5)

In these comments, it is clear that Geertz is committed to the 'interpretative' stance outlined in our account of 'secondary dualism'. And his borrowed metaphor of Man being *'suspended in webs of significance'* indicates that he accepts that there must be a certain disconnection between reality and culture. When working with meaning, there is no 'objectivity' in what we observe, but only the reality that is interpreted by a particular culture. As Geertz aptly states, we only have *'our own constructions of other people's constructions of what they and their compatriots are up to'* (ibid: 9).

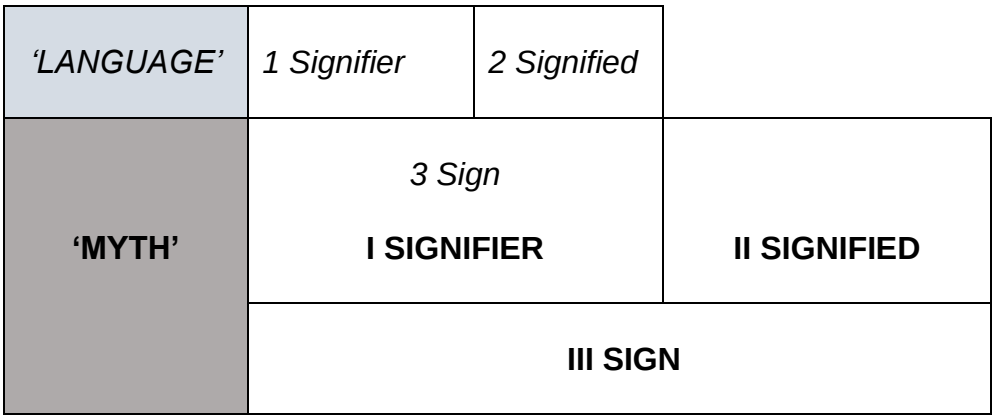
It is pertinent to this thesis that Geertz sees this approach as *'semiotic'*. He argues that such a stance should be adopted because we are dealing with the socially constructed meaning of signs. And, although he attacks the formalism in some approaches (e.g. Saussure), he argues that an understanding of *symbols* is central to cultural study:

> In the study of culture the signifiers are not symptoms or clusters of symptoms, but symbolic acts of clusters of symbolic acts, and the aim is not therapy, but the analysis of social discourse.
>
> (ibid: 26)

Geertz thus sees cultural meaning as being socially constructed and as entailing a semiotic system of cultural symbols. The task of the ethnographer, he concludes, is to understand (or 'de-code') these symbols and these constructions.

In the case of Barthes we can identify the same broad approach as Geertz, but it is now framed in semiotic terms. In his '*Mythologies'*, Barthes (2009) takes the Saussurian sign and develops his notion of the 'myth'. Barthes still insists that the basic structure of the sign remains dyadic, and arbitrary, in character, but he now introduces a further layer of meaning creation:

Fig 3



(ibid: 138)

In this model, each arbitrarily formed sign (at '3') forms the potential starting point of further signs (or 'myths') at a higher level (at III).

For Barthes, the creation of *'myths'* entails the creation of new identities within a specific culture. Barthes describes these as *'essences'* or *'forms'*. He provides the examples of 'Frenchness' and 'militariness' (ibid: 139-40). However, because the originating sign is created arbitrarily, this means that any new identity, created at the level of a 'myth', is necessarily different from what may exist in 'reality' itself. Barthes, for example, discusses the *'basquity'* of a house in Paris based on its similarity to houses in northern Spain. He sees this essence, however, not as a naturally occurring phenomenon in the world, but one that is the creation of our culture. As a result, he depicts the 'myth' of 'Basquity' as a *'distortion',* or a *'deformation'* (ibid: 146), of reality.

So, again, we find Barthes suggesting that, when we enter a semiotic framework, we are dealing with a form of cultural 'reality' that must be 'constructed'. The use of signs entails a 'refraction' of reality predicated on the assertion that they involve cultural interpretation.

If we now turn to Volosinov, we find a similar insistence on the role of the social in meaning creation – but now expressed in even stronger terms. In line with Geertz, Volosinov asserts that once we enter the social domain we are working within a cultural framework. For Volosinov the social realm must be, as a result, *'ideological'* because it involves 'refractions' of the world:

> Any ideological product is not only itself a part of a reality (natural or social), just as is any physical body, any instrument of production, or any other product for consumption. It also, in contradistinction to these other phenomena, reflects and

> refracts another reality outside itself. Everything ideological possesses *meaning*: it represents, depicts, or stands for something outside itself. In other words, it is a *sign*. *Without signs there is no ideology.*
>
> (ibid: 9)

And Volosinov equates the 'ideological' with both the social, and the semiotic:

> This ideological chain stretches from individual consciousness to individual consciousness, connecting them together. Signs emerge, after all, only in the process of interaction between one individual consciousness and another. And the individual consciousness itself is filled with signs. Consciousness becomes consciousness only once it has been filled with ideological (semiotic) content, consequently, only in the process of social interaction.
>
> (ibid: 11)

Volosinov argues here, concurring with Barthes, that what we understand is always *'refracted'* in some manner. This means that we cannot have true access to putative reality – it is always framed through our interpretations. Secondly, Volosinov is also making the much stronger claim that our consciousness *itself* is ideological because it must involve signs. He suggests that we only possess consciousness when the mind *'has been filled with ideological (semiotic) content'*. And, on this basis, he claims that consciousness is only achievable through the social dimension.

It is clear that Volosinov is moving from the widely accepted view that *meaning is created in the mind* to the much stronger claim that our consciousness *itself* is the product of meaning making. Indeed, Volosinov goes on to state that:

> If we deprive consciousness of semiotic, ideological content, it would have absolutely nothing left.
>
> (ibid: 13)

This claim suggests that we cannot possess anything in our consciousness that has not already become meaningful (and 'refracted') in some way. In other words, the contents of our mind are, by their very nature, interpretative. Volosinov, however, only reaches this conclusion by assuming that perception is unable to provide us with 'content' untainted by 'interpretation'. And it is worth highlighting that Volosinov is not just saying that just our experience of the *social* dimension is interpretive – all of our perceptions (including those of the physical world) are the result of interpretation too.

As we shall see, neither Peirce, nor Vygotsky, would accept Volosinov's view. They both have a place, in their accounts of meaning-making, for some form of mental 'content' that does not possess intrinsic meaning. Peirce, as we shall see, has the 'percept' and Vygotsky maintains a role for his 'natural perceptions'. And they both agree that meaning is constructed

upon the foundations of such mental content. Peirce views meaning as being created via 'thirds', whilst Vygotsky contends that meaning is achieved within the *'higher psychological processes'*. But neither of them go so far as to conclude that such meanings entirely exhaust the mental. As Bakhurst points out, quoting Bruner, *'meaning must be made'* (Bakhurst: 2011: 35); but this does not entail that everything in our minds must contain meaning.

Social Constructionism accepts many of the arguments so far discussed, and it accepts the main tenets of what I have termed 'secondary dualism'. It is acknowledged as a very broad theoretical church and one that has achieved a certain status in modern social theory. As Phillips also observes, it '*has become something akin to a secular religion'* in educational theory (Phillips: 1995: 5).

Social Constructionism insists that we do not have direct knowledge of empirical reality and it argues, too, that our knowledge of the world is always 'refracted'. As such, it rejects the view that *'knowledge is based upon objective, unbiased observation of the world'* (Burr: 1995: 3). Instead, it maintains that '*the ways in which we commonly understand the world, the categories and concepts we use, are historically and culturally specific'* (ibid). Social Constructionism, therefore, often views reality as being a 'discourse', and that we make our own categorisations of the world. Either individually, or collectively, we create our meanings and reality has little say in the matter. Indeed, some social constructionists go so far as to argue that our constructions become *'objectifications'* themselves (Berger and Luckmann: 1967).

The role of language is clearly seen as critical in this process. Words are viewed as being the mechanisms which enable us to classify the world along culturally determined lines:

> Constructionists tend to maintain that classifications are not determined by how the world is, but are convenient ways in which to represent it. They maintain that the world does not come quietly wrapped up in facts. Facts are the consequences of ways in which we represent the world. The constructionist vision here is splendidly old-fashioned. It is a species of nominalism.
>
> (Hacking: 1999: 33)

Again, some social constructionists, such as Berger and Luckmann, go still further and claim that the shared nature of language, in itself, results in a 'quasi-objective' status for these linguistic constructions. And they also see these as having a semiotic component:

> The common objectivations of everyday life are maintained primarily by linguistic signification.
>
> (Berger and Luckmann: 1967: 39-40)

The idea that language structures our world, and gives it meaning, clearly finds its origins in the model of 'secondary dualism' that we discussed earlier. If language plays the part of providing 'form' to the 'content' delivered by our senses, then language is construed as having the 'refracting' effects noted earlier. As we shall see, this position would have been attacked by Peirce. He argues that, far from language determining meaning, the relationship is, in fact, the other way round – words simply capture (via symbols) the meanings that have already been formed in our minds (as concepts) through signs.

Another common theme in Social Constructionism is the view that we not only construct the world, but that we also construct ourselves and each other. This leads to the rejection of what social constructionists sometimes call *'essentialism'.* They argue that, as 'fragmented' beings, we have no fixed identity which is able to explain our thoughts and our actions. Our identity is entirely dependent on context. As Burr explains:

> Instead, then, of people having single, unified and fixed selves, perhaps we are fragmented, having a multiplicity of potential selves which are not necessarily consistent with each other. The self is constantly on the move, changing from situation to situation, is contrasted with the traditional view of the stable, unchanging personality.
>
> (Burr: 1995: 29)

And, corresponding to this view, some also argue that we construct our emotions, and even our ethics, on this relational basis:

> From the constructionist standpoint, it is through relationships that we construct worlds of good and evil, joy and sorrow, happiness and despair.
>
> (Gergen: 1999: 106-7)

Once again, Peirce would have rejected this conclusion and would have argued for precisely the opposite position. When we discuss his pragmaticism, in chapter seven, we will see that what the social constructionist can only view as a contextual problem is, it turns out, the very basis of Peirce's account of relational truth.

When we compare Social Constructionism with Hegel, we find that he adopts the same position as Peirce. Whilst accepting that the mind plays a key role in meaning construction, Hegel is adamant that we cannot construct reality in isolation from it. Writing in the early nineteenth century, he is fully aware of where such arguments might take us. Reality, so construed, is in danger of becoming founded on the *'fancy and discretion of the observer'*, and, over a century ahead of the rise of twentieth century constructionism, Hegel even rejects the very term itself:

> The abuses which these methods with their formalism once led to in philosophy and science have in modern times been followed by the abuses of what is called 'Construction'. …..The name 'Construction of notions' has since been given to a sketch or statement of sensible attributes which were picked up from perception, quite guiltless of any influence of the notion, and to the additional formalism of classifying scientific and philosophical objects in a tabular form on some presupposed rubric, but in other respects at the fancy and discretion of the observer.
>
> (Hegel: 1892/2014: 239)

Lastly, the discipline of Social Semiotics agrees with many of the assumptions of Social Constructionism and, as its name implies, it is specifically concerned with the social creation of meaning. It maintains that meaning is *constructed* by sign users with the purpose of portraying reality in a particular (and usually advantageous) way. It rejects, however, the Saussurian view that signs are arbitrary and it maintains that signs are formed by users in *both* a motivated and conventional manner (Kress and Van Leeuwen: 1996: 8). The motivational element of the sign stems from the sign user's agenda and the desire to convey a particular meaning. The element of conventionality derives from the fact that the user selects the culturally most effective signifying tools to achieve their goal.

Social Semiotics, therefore, frames signs as social *resources* for meaning-making. Van Leeuwen views these as follows:

> So in social semiotics resources are signifiers, observable actions and objects that have been drawn into the domain of social communication and that have a *theoretical* semiotic potential constituted by all their past uses and all their potential uses and an *actual* semiotic potential constituted by those past uses that are known to and considered relevant by the users of the resource and by such potential uses as might be uncovered by users on the basis of their specific needs and interests.
>
> (Van Leeuwen: 2005: 4)

In Social Semiotics, these 'resources' are viewed as *already* endowed with the meanings that derive from their previous cultural manifestations. Van Leeuwen argues that:

> Studying the semiotic potential of a given semiotic resource is studying how that resource has been, is, and can be used for purposes of communication, it is drawing up an inventory of past and present and maybe also future resources and their uses.
>
> (ibid: 5)

Social Semiotics also views signs, because they are socially motivated, as necessarily involving a 'distortion' of reality. Kress and Van Leeuwen, for example, state:

> From the point of view of social semiotics, truth is a construct of semiosis, and as such the truth of a particular social group arises from the values and beliefs of that group.
>
> (Kress and Van Leeuwen: 1996: 154-55)

This is a theme that we have already encountered. It follows directly from the model of 'secondary dualism'. For the conclusion that our interpretations of our sense data have a distorting effect can only be reached if we first assume that there is something *fixed* that can then be 'distorted' by our interpretative minds. And, of course, this essential part of the argument is supplied by the tacit belief that our sense impressions provide a form of 'direct' knowledge. The Rortian 'mirror' is, it turns out, the very thing which provides a platform for the overt belief that our interpretations 'distort' experience.

Finally, we should conclude this sub-section with a discussion of how Peirce and Vygotsky view the idea that meaning is socially created. We will discuss this issue in more detail in later chapters, but it is useful, at this point, to outline their respective positions.

Peirce wrote in an age where the social dimension was yet to become a central feature of philosophical debate. As such, he sees it as having only a minimal role in the construction of meaning. Meaning is mainly created, for Peirce, at an individual level and this would take place even for an individual isolated on a desert island. This is not to say, however, that Peirce does not see a role for the social dimension *once* some level of meaning has been created by the individual. Peirce accepts that if we converse with others we may find that our own meanings do not correspond with theirs. In such scenarios, the social dimension is a sphere where we do qualify our meanings and adjust their *'breadth and depth'* (EP2: 394). But this is certainly not the same as the claim, made by Barthes, Geertz and Volosinov, that the social is where meaning must originate.

The question of the social is more complex in the case of Vygotsky. He is well known for asserting the role of the social in the development of meaning. But the key question is this: does he subscribe to the thorough-going accounts of social meaning construction that we have just encountered in Social Constructionism? It will be argued that Vygotsky's position is different from these other accounts. Vygotsky does, indeed, see the social dimension as playing a major role in the creation of meaning, but he does not assert that meaning is *wholly* created within the social domain. This is because he still envisages concept formation, like Peirce, as taking place largely within the mind of the individual. Vygotsky does believe that a social input is involved in this activity, but he does not see this element as wholly accounting for meaning creation. And it will be argued that it is his

Hegelian heritage which leads Vygotsky to this conclusion - and which distances him from thinkers such as Volosinov.

It is also worth highlighting that Hegel and Peirce also differ from modern 'constructionist' theories of meaning creation in another way too. They not only have a minimal role for the social dimension, but they also advocate *an enhanced role* for 'reality' in the meaning making process itself. Importantly, they are constructionists, but reality, for them, also has a role to play in concept formation. As such, they neither accept that the human mind is free to make meaning, nor do they agree that the social dimension is fundamental to the process. They both subscribe, instead, to the much older philosophical claim, inherited from Kant, that reality is constructed as a synthetic entity.

To summarise, we can discern a relatively consistent position, across a spectrum of twentieth century thinkers, that maintains that meaning is, and must be, socially constructed. These writers tend to adopt a cognitive model, following the assumptions of 'secondary dualism', that construes the human mind as 'interpreting' its 'known' sense data. They often conclude that this must inevitably involve a degree of relativism and a 'distortion' of reality. The outcome of such interpretative activity is often construed in ideological, cultural, or semiotic terms.

What is common to these accounts, however, is a vision of human knowledge that is different from the one proposed by Peirce. Central to this is the fact that Peirce construes signs as the mechanisms which enable us to form concepts, and, thereby, establish knowledge of a synthetically formed reality. Twentieth century thinkers such as Wittgenstein, Geertz, Barthes and Volosinov reject this Peircean position. They do not view it as a credible position to hold – because they assume, based on their implicit acceptance of 'secondary dualism', that such knowledge is unachievable.

1.5) Thesis Structure

In the light of the above discussion, it is clear that this account of Peirce and Vygotsky seeks to establish parallels between them which are seldom discussed in the secondary literature. The main focus of this thesis will be the ways in which they understand concept formation - and the influence of Hegel in this respect. This involves a considerable reframing of Peirce and an approach which places epistemological issues at the heart of his semiotics.

This thesis is intended to represent an exegesis of Peirce and Vygotsky – and one that interprets them both in an Hegelian light. At some points in the discussion, I will evaluate whether Peirce and Vygotsky are mistaken on certain points, but the focus will remain primarily on an explication of both thinkers. This apparently straightforward task will, however, result in a revisionary analysis that is potentially interesting for other commentators – if only because the Hegelian perspective that it adopts is seldom discussed.

We begin with brief, and summary, account of Hegel's description of concept formation. This is designed, at the outset of this thesis, to establish the underlying template, that is shared by Peirce and Vygotsky, and which they inherit from Hegel. We will also look, briefly, at the influence of Spinoza and Leibniz on this tradition of German Idealism. This analysis will be followed by a discussion of Hegel's account of perception, and this will compared with similar treatments by Peirce and Vygotsky.

The main sections of this thesis then consider Peirce's treatment of the sign. In chapter three, we will consider how Peirce believes we experience the world through his categories of firstness, secondness, and thirdness. In chapter four, the structure of the Peircean sign will be explored. In particular, discussion will focus on the specific concepts that Peirce employs when describing sign action. These include a number which have Hegelian roots – for example, the 'object' and 'determination'. These terms often cause confusion in the secondary literature on Peirce, but their meaning become clear once they are understood in Hegelian terms.

Having outlined the underlying structure of the sign, we will then consider, in chapters five and six, Peirce's account of concept formation itself. As noted earlier, this involves signs combining with each other in a manner that parallels Hegel's dialectics. In chapter six, specifically, we look at how Peirce's icon, index, and symbol, are enrolled into this semiotic activity. These sign types are ones for which Peirce is most well-known, but it is useful to consider them within their intended context - that of concept formation.

In chapter seven, Peirce's view of the concept is discussed in relation to his accounts of truth and meaning. In particular, we will see how Peirce's treatment of the 'concept' converges with his pragmatism. Peirce is well-known for his original thinking in semiotics, and as being the founder of pragmatism, but we will see that, when the former is construed as an account of concept formation, it is possible to forge new, and important, links between these aspects of his thought.

A greater understanding of the Hegelian context of Peirce also has benefits when, in chapter eight, we consider Vygotsky. Vygotsky is well known for maintaining that the social has a role in meaning creation, but we will see how recognition of his Hegelian influences position him at some distance from purely social accounts of this process. At the same time, now equipped with a revised interpretation of Peirce, we will evaluate Vygotsky's thought and consider how the two thinkers are, in fact, much closer to each other than is commonly recognised. In particular, we will consider Vygotsky's notion of the ZPD and identify potential parallels that may exist in relation to Peirce.

The concluding chapter of this thesis will identify how Peirce and Vygotsky may be drawn closer together. This analysis has the potential benefit of bringing Peirce further into the educational mainstream. Such an outcome can only ameliorate our understanding of the learning process in an educational context.

2) Hegel's Influence on Peirce and Vygotsky

2.1) The Hegelian Background

This purpose of this chapter is to provide a brief introduction to Hegel's thought. This is clearly an important requirement if we are, first, to establish the links that exist between Peirce and Hegel and, secondly, those that occur, at a deeper level, between Peirce and Vygotsky through their influence from Hegel.

In this discussion we will look, to begin with, at some of the roots of Hegel's own thinking. These can be found in the early modern writings of Spinoza and Leibniz. Indeed, in his *'History of Philosophy'* Hegel states that *'you are either a Spinozist, or not a philosopher at all'* (Hegel: 1995: 283). These two philosophers are important to this thesis because they also have a secondary impact on the work of Peirce and Vygotsky. The ways in which Vygotsky's work is influenced by Spinoza is already relatively well established in the secondary literature. Commentators such as Derry (2013: 110-111) have highlighted the Spinozist background to Vygotsky (e.g. Vygotsky: 1999: 219-20) and this influence is also referenced by Van der Veer (1984), and Van der Veer and Valsiner (1991). The way in which Leibniz also plays a role the development of the Peircean thought is, however, much less recognised – and it is one of the themes of this thesis.

Secondly, this introductory section on Hegel will also consider, in summary detail, the underlying template that Hegel develops for his account of concept formation. This, as we shall see, is critical in understanding the way in which Peircean semiotics should be understood. It will be argued that this template has implications for how we should construe the Peircean sign.

Overall, from the perspective of the early 21st century, it is quite difficult to grasp the full extent of Hegel's impact on nineteenth century philosophy. His immense influence on European philosophy is well documented, but its effects were as strong in England and America as they were in Europe. Bernstein highlights the fact that under philosophers, such as the Hegelian Josiah Royce, *'absolute idealism flourished in both the United States and Britain'* (Bernstein: 2013: 105) in the late nineteenth century. Likewise, Kaag argues that '*Hegel's followers invaded Harvard and MIT in the 1870's and 1880's',* resulting in their *'total dominance of the philosophical field'* (Kaag: 2011: 557-75). However, Hegel's reputation tended to peak in the Anglo-Saxon world at the end of the nineteenth century and it declined substantially in the course of the twentieth century. These changes took place for reasons that are outside the scope of this thesis, but, arguably,

they were impacted by the politics of the time - as the academic world reacted to two world wars and the rise of communism in 1918. Karl Popper, for example, illustrates the disrepute into which Hegel fell, and hints at the possible reasons for it:

> I have tried to show the identity of Hegelian historicism with the philosophy of modern totalitarianism.
>
> (Popper: 1945: 78)

In the later twentieth century, however, there has been a revival of interest in Hegelian thought. Bernstein highlights two aspects of this (Bernstein: 2013: 111-121) – the work of Sellars (1956), in the mid-century, and also that of McDowell (1994) and Brandom (2000). We will return to these philosophers in due course.

The nineteenth century dominance, and subsequent decline, in Hegelian philosophy are important in the context of this thesis. With the decline of Hegel in the twentieth century it has become relatively easy to lose sight of his impact on Peirce and Vygotsky and, as a result, to overlook the Hegelian context in which they were writing. Peirce died in 1914 - before the assault on Hegelian thought really gathered pace - whilst Vygotsky, writing in the Soviet Union in the 1920's and 1930's, was still working in an environment dominated by ways of thinking influenced by Hegel.

2.2) Spinoza and Leibniz

There is little scope, within this thesis, to look in detail at the relationship between the philosophy of Spinoza and Leibniz and their relationship with Hegel. But both philosophers can be viewed as important, and highly influential, in the rise of German Idealism. When Hegel sought to reject the direction in which Kant had taken European philosophy it was to these two philosophers that he often turned. For they provided him with an effective basis to undermine the fundamentally dualist account that Kant was proposing. This was the case because both Spinoza and Leibniz suggest an account of reality that is non-dualistic, and relational, in character. These two aspects of their thought appealed to Hegel in his project to establish an account of human knowledge that is neither 'synthetic', nor based on a Kantian assumption of *a priori* knowledge. And, as we shall see, these are arguments which are endorsed, later in the nineteenth century, by Peirce in his own account of sign formation

Spinoza is a 'monist' (Spinoza: 1677/1996: 71) and, as a result, he rejects Cartesian Dualism. This means that, when Spinoza talks about the 'world', he is not discussing an objective 'reality'. What he is describing is a relational structure that is neither 'objective', nor 'subjective', in the modern sense. Indeed, it makes no sense to think about Spinoza's concept of

‘reality’ in these terms – for they only came to have their current meanings in the centuries after his death. In contrast, Spinoza views ‘reality’ as a structure that is implicitly known by God, but which is also potentially knowable by the human mind. It is tempting, of course, to view this account of reality in quite ‘metaphysical’ terms, but this is an effect of our modern belief that an objective reality exists ‘behind’ our perceptions. Spinoza would not subscribe to such an interpretation because he is not a dualist to begin with.

The *relational* view of the universe that Spinoza proposes, has clear implications for his treatment of human knowledge. For him, when we perceive something we only perceive what it is *partially* because we only experience *some* of the potentially infinite relational connections that it possesses with the rest of the universe. As a result, we do not immediately know what something is, because to do so would entail knowing all of these potential connections. Our knowledge begins, therefore, for Spinoza, as a collection of *‘confused ideas’* (Spinoza: 1677/1996: 51). This is in clear contrast to the model of ‘secondary dualism’ where it is readily assumed that we immediately know the identity of our ‘sense impressions’.

In this epistemological context, Spinoza makes a useful distinction between *‘inadequate’* and *‘adequate ideas’* (Spinoza: ibid: 69). An *‘adequate idea’* is one formed by the human mind when we understand enough of the intrinsic empirical connections of a thing to make sense of what it entails. An *‘inadequate idea’*, in contrast, is one that has not achieved this clarity in our thought. Understanding the nature of something is determined, as a result, by our grasping the relationships that are contained within the concept of a thing. When we have developed such a concept it has the potential to act as an *‘instrument’* of thought (Spinoza: 1955: 12) because our concept then contains some knowledge of how an object will behave in the future.

As our knowledge of the world becomes more detailed, and more extensive, Spinoza argues that we establish linkages between our ‘adequate ideas’ and they begin to form a whole. The growth of human knowledge is thus depicted as an *evolutionary process* in which our understanding builds incrementally upon itself. This is a theme that has parallels in the philosophy of both Hegel and Peirce. Human knowledge is viewed, by both, following Spinoza, as something that is initially ‘confused’, but which becomes progressively more *‘adequate’* as our concepts develop. The actual processes through which such ‘clarity’ is achieved are often different for these three philosophers, but the template of transition from ‘confusion’ to ‘clarity’ is one that they all subscribe to.

Turning to Leibniz, we find that his views on the nature of reality, and of human knowledge, strongly reflect those of Spinoza. Leibniz, like Spinoza, rejects Cartesian Dualism and he also construes the Universe as

fundamentally relational. Where Leibniz differs from Spinoza, however, is in his rejection of Spinoza's underlying 'monism'. In its place, Leibniz maintains that reality is a web of individual identities that he calls 'monads'. These, as we shall see, have many similarities with Hegel's 'sublated' Notions. Leibniz's monads are relational in character and the properties of each individual monad is defined by its position within the web of the Universe (Leibniz: 1714/1951: 523).

If we apply this way of thinking to the specific issue of identity, we find that identities are formed, according to Leibniz, by the relationships that define their unique perspective in the relational universe. As such, they have no separate identity of their own, but are, instead, defined by the sum of their relationships with everything else. This creates a web of existence involving everything defining everything else. Leibniz inherits this notion from Spinoza and for both of them God is involved in this web of being.

For Hegel and Peirce, the question is more nuanced – they both need to account for how these perspectival points are formed without recourse to God. They do this in different ways – Hegel sees the mind as positing Essences (which then develop into 'Notions') to fulfill this role. Peirce takes a different route and sees icons as performing this task at the beginning of sign formation. In both their cases, however, they still borrow the Leibnizian idea that identities are relationally formed. Peirce can thus be seen to subscribe to a vision of identity that involves the creation of 'placeholders' by the mind – this is a Kripkean notion that we will return to later.

To illustrate Hegel's specific position on this important issue, he talks of 'existence' in the following terms:

> Existence is the immediate unity of reflection-into-self and reflection-into-another. It follows from this that existence is the indefinite multitude of existents as reflected-into-themselves, which at the same time equally throw light upon one another, - which, in short, are co-relative, and form a world of reciprocal dependence and of infinite interconnection between grounds and consequents.
>
> (Hegel: 1892/2014: 149)

Leibniz also inherits Spinoza's views on human knowledge and agrees that it admits of 'degrees'. As we shall see later, this is relevant to our discussion of Peirce because parallels exist between Leibniz's account of knowledge and Peirce's vision of sign development. Leibniz, following Spinoza, begins with the assertion that we initially experience 'confused ideas' and he agrees that we develop *'adequate ideas'*. Leibniz, however, breaks this particular concept down into two types of idea - *'clear'* and *'distinct'* ideas *(footnote 4)*. He argues that when we apply our reason to 'confused' ideas we first attain *'clear ideas*':

> I say, then, that an idea is clear when it enables one to recognise the thing and distinguish it from other things.
>
> (Leibniz: 1996: 254)

What defines a *'clear idea'*, therefore, is the fact that we are able to 'distinguish' it from others. This is achieved on the basis of *recognition* – we sense that something is *similar* to something else. The next stage in the development of knowledge is a *'distinct idea'*. When differentiating 'clear' from 'distinct' ideas, Leibniz argues that:

> They are clear, because we recognise them and easily tell them from one another; but they are not distinct, *because we cannot distinguish their contents* (my italics).
>
> (ibid: 255)

What renders an idea 'distinct', therefore, is the fact that we can identify its 'contents'. By this, Leibniz means that we understand the nature of its connections with the world – what is *contained* within its idea and also what is *not contained* within it.

Leibniz agrees with Spinoza that our ultimate goal is to have 'perfect ideas', but he accepts that this is only really achievable by God. One of the arguments of this thesis is that Peirce's account of the evolution of the sign (from icon, to index, and to symbol) parallels this Leibnizian 'hierarchy of ideas'. It should be noted, for example, that 'clear ideas' are established on the basis of similarity – echoing Peircean icons.

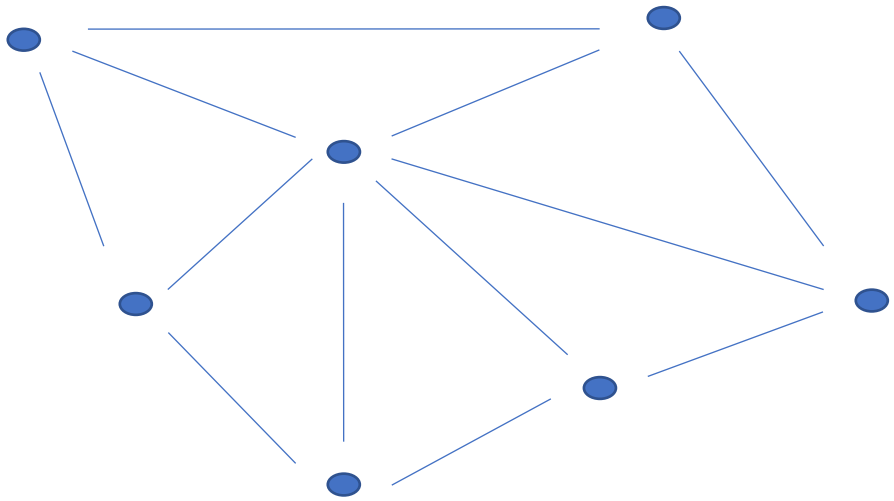
Other aspects of Leibnizian thinking also emerge in Peirce's work. Leibniz argues that, when we have a 'working' (but partial) knowledge of an object, we have a *'nominal definition'* of it. When we know more about it, we come closer to its *'real definition'*. Of course, as with 'perfect ideas', we cannot achieve the full perspective possessed by God (and know the entirety of a 'real definition'), but we can, at least, strive to improve the quality of our 'nominal definitions'. As we shall see, in section 5.2.4, Peirce uses this Leibnizian template in relation to the 'object' in the sign – making a distinction between 'immediate' and 'dynamic objects' – which parallels Leibniz's 'nominal' and 'real' definitions.

The model of the universe that is adopted by both Spinoza and Leibniz can be outlined in diagrammatical terms. In this model (Fig: 4) we have a relational structure of interrelated *'monads'* (to use Leibniz's term). The identities of these monads, because they are connected to every other monad, are defined by the sum of their relations with each other.

Critically, they also form a type of 'reality' that is non-dualistic in nature. This is because the human soul *itself* is viewed by Leibniz as being simply one monad amongst the many. Of course, the soul has certain characteristics

that make it different from other monads – importantly it has *consciousness* – but this does not detract from the fact that it is also a monad. In such a model there is no place for a 'subjective' or 'objective' stance in relation to the rest of the universe – the soul is immersed in it. This places human consciousness in a very different relationship to the world compared with that suggested by the model of 'secondary dualism' where it is construed as looking in a mirror.

Fig 4: <u>Spinoza and Leibniz: The Relational Model of Reality</u>



It will be argued in the course of this thesis that Peirce's account of signs and how they relate to each other broadly follows this Leibnizian model. We have already noted that Peirce views the human mind as being immersed in signs – and this is what this model implies. Equally, the fact that monads are defined by their relationships with each other (and do not exist and *then have* relationships) is reflected in his view that signs are also relationally defined. As Stables highlights, this means that the distinction between denotation and connation is largely erased:

> It follows from this that, furthermore, there is no clear distinction between denotation and connotation: what the sign stands for is inextricably bound up with what it implies, and what it is in itself is determined by its relationality.
>
> (Stables: 2018: 26)

In this model of the Universe, or sign relations, it is clear that this relational structure is the very basis for the conclusion, by both Spinoza and Leibniz, that everything is known *partially*. Every 'monad' (or sign) is ultimately connected with every other monad (or sign) in the universe and it is infinitely involved in the definition of everything we encounter. As such, we can only know it partially. However, 'adequate' knowledge can still be

achieved by the human mind without a higher (or divine) level of knowledge being established. We are able to grasp how the main characteristics of a monad (or sign) by understanding the most important relational characteristics which define it. Such 'adequate' knowledge is useful, but it is always open to further revision – it remains fundamentally dynamic in nature.

We have seen that there is recognition, in the secondary literature, of the influence of Spinoza on Vygotsky. In terms of the influence of Leibniz on Vygotsky, the latter shows some signs of having read Leibniz (Vygotsky: 1997a), but his comments are marginal in nature. Vygotsky, however, does mention Tarde (Vygotsky: 2012: 255) whose exploration of sociology, in '*Monadologie et Sociologie'* (1893), was informed by Leibniz. So the impact that Leibniz had on Vygotsky may have been via secondary sources.

In terms of Leibniz's influence on Peirce, however, there is surprisingly little recognition of the influence of Leibniz on either Peirce or Vygotsky. An exception is Fisch's article entitled '*Peirce and Leibniz'* (1986a), but even this is a discussion of Peirce's views on Leibniz's status as a philosopher and logician. Fabbrichesi (2011) has also written a short article on the relationship between Peirce and Leibniz's theory of a universal language. The most fruitful discussion of Leibniz's influence on Peirce, however, can be found in a paper by Belluci (2013: 195: 331-355). He recognises some of the parallels that has been drawn here between Leibniz and Peirce – noting some of the similarities in relation to 'clear and distinct' ideas and also to 'nominal' and 'real definitions'. Belluci does not, however, go on to establish any links in relation to Peircean signs and, in particular, to Peirce's icons and indices. Nor does he explore Leibniz's theory of perception and the critical role of 'confused ideas'. Beyond these brief mentions of Leibniz in the Peircean exegesis, one can also find mentions of Peirce in works on Leibniz. The Leibnizian scholar, Loemker, for example, says of Peirce that he '*knew Leibniz better than any other American of his time'* (1989: 57).

It is also important to summarise, in this discussion, the extent to which the secondary literature discusses the influence of Hegel on Peirce and Vygotsky - a central theme of this thesis. Overall, again, there is much more recognition of the influence of Hegel on Vygotsky than is the case with Peirce. Writers such as Van der Veer and Valsiner (1991), for example, recognise that Vygotsky's writings owe much to Hegelian dialectics, but, significantly, they see this process as operating primarily in the social space between the self and others (ibid: 265; 331). They also recognise (ibid: 278, 358) the role of *'sublation'* in Vygotsky, but they only mention it in passing.

Derry (2013) also highlights the dialectical nature of Vygotsky's model of concept formation (ibid: 119). Importantly, she rejects the view of Wertsch that Vygotsky is proposing a form of rationality that is *'decontextualised'*

(Wertsch: 1996) and this draws her account of Vygotsky closer to the Hegelian model. Derry argues, for example, that Vygotsky's sees rationality as *'genetic'* or *'historical'* (Derry: 2013: 113) and, therefore, rooted in reality.

Elsewhere, Blunden (2017: 132-145) provides a detailed account of the similarities between Vygotsky and Hegel and includes a useful discussion of Hegel's *'The Science of Logic'*; he also highlights the debt that Vygotsky owes to Hegel in terms of his units of analysis ('word meanings'). Bakhurst (2007) also highlights the influence of Hegel on Vygotsky and notes that his notion of 'mediation' is inspired by him (ibid: 58), but, like Van der Veer and Valsiner, he still sees Vygotsky's concept of mediation as being largely 'social' in nature. Bakhurst, however, defends Vygotsky against critics who see him as a *'rationalist'* (ibid: 74) and he argues that it would be wrong to dualistically *'deploy a sharp distinction between abstract, general, universal forms of cognition, and concrete, specific situated ways of knowing'* (ibid: 70). Elsewhere, Kozulin (1990) also discusses the *'problem of mediation'* in Vygotsky (ibid: 118-121), and he links this back to Hegel.

Derry is unusual in linking Vygotsky and Hegel at a deeper level – in terms of their shared influence from Spinoza, their mutual rejection of dualism, and their views on mediation. But even her account of Vygotsky leaves room for a more extensive analysis of how Vygotsky views the sign. This also reflects wider issues in the secondary literature. Commentators, such as Wertsch (1996), and Daniels (2016: 15) recognise that Vygotsky views signs as being important, but they generally construe them as external 'social' forms of mediation (i.e. as 'tools' or symbols).

The secondary literature on the potential links between Hegel and Peirce is much more limited. Discussion of the influence of Hegel on Peirce usually amounts to little more than a few paragraphs in most accounts. Moreover, even these mentions tend to focus on the differences between them. This, it is fair to say, is due to Peirce's repeated attempts to distance himself from what he saw as Hegel's *'transcendental'* position (CP2: 35). Commentators have focused, accordingly, on these differences and there are several references to them in the literature (Stjernfelt: 2007; Stern: 2007; Stern: 2009; Feibleman: 1970; Misak: 2013; Rockmore: 1999, Apel: 1981).

But this focus serves, in fact, to hide the deeper *connections* which exist between the two philosophers. Again, Fisch makes a contribution here. He notes the underlying dialectical nature of Peirce's thought and also the occasions on which Peirce refers to Hegel in his early career (Fisch: 1986b). Likewise, Otto-Apel (1981) and Nagl (2014) also make comparisons between Peirce's three categories and the three stages of Hegelian thought. However, Otto-Apel does not attempt to extend this to a discussion of Peircean signs, and Nagl only briefly touches upon such a relationship. Stables also considers some of the parallels between Peirce

and Hegel, in relation to Kant, and concludes that Peirce *'owes many debts to rationalism and can be seen as its heir rather than its successor'* (Stables: 2014: 597). Bernstein provides a useful account of the relationship between Hegel and pragmatism (Bernstein: 2013), bringing Peirce into his discussion, but he does not mention any specific relationship between Hegel and Peirce in relation to signs. Kaag (2011: 557-75) highlights the similarities between Hegel and Peirce in relation to the concept of 'Essence' and he argues that this has potential links to Peirce's idea of secondness. He does not, however, make any mention of Peircean signs.

These more detailed discussions of the influence of Hegel on Peirce, however, are relatively isolated – a surprising fact given that Peirce sometimes references his similarities to Hegel (CP1: 42; CP4: 50; EP2: 144). As a result, several contemporary works lack any substantial discussions of Hegel's influence on Peirce. Short (2007) and Feibleman (1970) hardly mention Hegel, and Stjernfelt's discussion of Hegel in his '*Diagrammatology'* (Stjernfelt: 2007) is very brief indeed. All three discuss the question of whether Peirce's *'Phaneroscopy'* owes anything to Hegel's 'phenomenology' – but this is a relatively minor point. Stjernfelt, in his later work, '*Natural Propositions'* (2014) makes no mention of Hegel at all – which is remarkable given that the eponymous subject of this book has an Hegelian character. This criticism is also true of Murphey's book on *'The Development of Peirce's Philosophy*' (1993) and Forster's *'Peirce and the Threat of Nominalism'* (Forster: 2011). What is more frequently found in the secondary literature is a discussion of the influence of Kant, and of pre-modern philosophers (such as Duns Scotus), on Peirce (Boler: 1963; Feibleman 1970).

As noted above, the issue most notably absent in the secondary literature is any detailed discussion of how Hegel influences Peirce's account of *sign formation*. Even if Hegel is sometimes linked with Peirce, this seldom extends to Peircean semiotics and remains mainly focused on Peirce's phenomenology and his three categories.

The lack of recognition of these links between Hegel and Peirce often emerge in interesting ways. It becomes evident, for example, in semiotic discussions of Peircean terms - such as the *'object'* and *'determination'*. These are commonplace in Hegel and are used by Peirce in an overtly Hegelian manner - but they are seldom interpreted by semioticians in this context. Equally, there is little recognition in the literature that Peircean sign formation involves an act of *'sublation'* (EP2: 177). As we saw, this entails a change in the *identity* of the 'object' in the sign (EP1: 256) and it is one which informs Peirce's concept of the 'interpretant'.

2.3) The Hegelian Template

The works of Hegel are renowned for their complexity. Indeed, one commentator has called *'The Science of Logic'* (1892/2014) '*the single densest book ever written'* (Carlson: 2007). A full account of his thought will not, therefore, be attempted in this section; but his specific views on concept formation will be outlined in brief detail. These will act as a reference point for our later discussions of Peirce and Vygotsky.

Hegel begins his philosophy by rejecting Cartesian dualism, but he recognises that, at first, such dualism does appear to exist. As a result, Hegel, initially identifies both the inner world of the 'Ego' and outer world of 'Being'. For Hegel, however, our experience of 'Being' is of a very particular kind – it is what he describes as *'indeterminate Being'*. This provides us with sensory experiences that appear to have the makings of knowledge, but this *'sense certainty'* is little more than illusion. Hegel argues, however, that we should not relapse, at this point, into scepticism. Instead, he proposes an account of knowledge which overcomes this apparent dualism. He believes that this involves the establishment of synthetic concepts which are rooted in our experience of the world. The process that creates such concepts he sees as dialectical in nature.

It should be recognised that the idea that we can establish such synthetic knowledge has its roots in Kantian philosophy. But Kant's solution resides in the notion of *'a priori synthetic'* truth (Kant: 1781/2007) - which Hegel rejects. Hegel seeks an alternative way of establishing synthetic knowledge and he also criticises other elements of Kant's approach. These include Kant's assertion that we can know the contents of our perceptions, known as '*intuitionism'* (Pinkard: 1990: 832), and also his dualistic distinction between the 'phenomenal' and the 'noumenal' world (Kant: 1781/2007: 251-69). There are, as a result, a number of differences between Kant's and Hegel's approach to knowledge – even though they both seek a 'synthetic' solution to the problem of how it can be established.

To begin our discussion of Hegel, however, we should outline the broad structure of his dialectical model. As noted earlier, he describes this, in his *'The Science of Logic',* as his *'objective logic'*. There are a number of key stages in it:

- Faced with the 'indeterminacy of Being', the Ego posits an 'Essence' as a means of grasping, or fixing, this perceptual indeterminacy. The posited 'Essence' always begins as an approximation to reality.
- The 'Essence', as a result, acts as a working 'hypothesis'. It contains the contents of *'sense certainty'*, but it also possesses inherent contradictions because of the way in which the 'Essence' has been

formed. It is, therefore, wholly inadequate for the task of understanding the world. It does, however, provide an initial *form* (or 'pathway') around which conceptual development may take place.

- In the next stage, the 'Essence' is refined through a dialectical process of thesis, antithesis and synthesis. Hegel sees this as being a strictly *logical* activity and he borrows Kant's concept of the *'Antimonies'* in this context (Hegel: 1892/2014: 62-3). Importantly, his dialecticism involves a reflexive interplay between 'content' and 'form' that is only achievable because the contents of our initial perceptions are not 'fixed' in our experience of indeterminate Being. Hegel sometimes calls the dialectical process *'Becoming'* because the 'Essence' becomes more like the object it 'represents'. In this process the 'Essence' is progressively transformed into a more *'authenticated'* representation of reality (Hegel: 1830/1971: 225). At the same time, and through the same activity, the 'Essence' is adjusted by the mind to fit within a wider (and logical) system of other 'Essences'.
- This dialectical process culminates in the creation of 'Notions' (or concepts) which we can then use to understand the world. These 'Notions' are synthetic in nature because they have been formed from the combination of the empirical contents of 'Being' and the logical workings of the mind. They are also more than the sum of their empirical parts. Notions have now been *sublated* by the mind and they include new concepts, or new identities, which were not initially observable in our sensory experience.
- In the Hegelian model, 'Notions' continue to interrelate with each other until they form the 'Absolute Idea'. This is a rationally constructed representation of reality comprising all of our inter-related Notions, or concepts. This structure, however, is one which is also founded in our experience of the world – because the original 'Essences' are rooted in 'Being'. This forms the basis for Hegel's claim that *'what is reasonable is actual; and what is actual is reasonable'* (Hegel: 1892/2014: 5).

Hegelian dialecticism, itself, is rejected by Peirce. But this Hegelian model is still highly relevant to our understanding of Peirce because Hegel's dialecticism has a *triadic* structure. Its three elements are Being (*sein*), Essence (*wesen*) and Notion (*begriff*). Peirce, as we shall see, uses entirely different terms when describing his sign structure (e.g. representamen, object, interpretant), but the underlying structure of his sign remains triadic in nature. In the secondary literature (e.g. Bernstein: 2013) there is some recognition that Hegel's dialecticism informs Peirce's three *experiential categories* of firstness, secondness, and thirdness. But there is almost no discussion as to whether this triadic model *also* influences Peirce's structure of the sign, or, even more radically, the *different types of sign* that

Peirce proposes (e.g. icons, indices and symbols). We will explore these potential omissions in the secondary literature, in due course.

As noted above, Hegel's dialectical movement culminates in an act of 'sublation' *('aufgehoben')*. This is an Hegelian mechanism that enables the mind to transform the dialectically evolving 'Essence' into a 'Notion'. These 'sublated' entities have three critical features which are important to our understanding of Peirce and Vygotsky.

The first of these is Hegel's contention that these sublated entities are *'mediated'*. They have been synthetically created by the mind as a result of the application of our logic to our sensory data. As such, our concepts are not created by our minds in isolation (as in the model 'secondary dualism'). Instead, they are formed in a manner in which reality has played a role. As a result of this, our concepts are a synthetic mixture of the empirical and the mental. In this context, Peirce describes the outcome of such a synthesis as *'concrete reasonableness'* (CP5: 3); Vygotsky talks of an *'amalgam'* (Vygotsky: 2012: 225). Hegel reaches for the metaphors of '*welding'* (Hegel: 1830/1971: 211) and *'fusion'* (ibid: 212).

Secondly, sublated Notions have a *reflexive* role in perceptual activity. Dialectically created concepts are believed, by Hegel, to inform our subsequent perceptions of the world. We, therefore, experience reality *through* our sublated concepts. This Hegelian position is one that both Peirce and Vygotsky subscribe to - and it contrasts with the strictly linear model of sign reception (in 'secondary dualism') that assumes that we, first, receive sensory input and, second, attach meaning to it. In the model of perception espoused by Hegel, Peirce, and Vygotsky, this order can be reversed; our concepts can sometimes reflexively inform our perceptions. Vygotsky, for example, talks of *'verbalised perceptions'* (Vygotsky: 1994: 125).

The third key aspect of the Hegelian 'Notion' is that acts of 'sublation' produce new *identities.* As a result of this, the Hegelian concept is much more than what is created in a nominalist 'naming' process. When the mind creates a concept, in the final stage of dialecticism, it produces an identity that is deemed, at least contingently, to exist in the world. As a result, our concept of a 'chair' is not simply a *name* that we give to a collection of wood and fabric. It is something that exists, itself, as a synthetic and mediating concept. Hegelian concepts, therefore, are not 'detached' from the world as simple nominalistic 'interpretations' of the mind. Later, we will see how the sublated Hegelian 'Notion' has important parallels with the Peircean 'interpretant' in the sign.

Hegel's model of concept formation also has other parallels with Peircean thought. In a discussion of Hegel's concepts of *'mediation'* and *'immediacy'*, Inwood states (referring to 'sublation' at point three):

> Thus mediation and immediacy form not a dyadic opposition, but a triad:
>
> 1) Bare (but still relative immediacy)
> 2) Mediation
> 3) Mediated Immediacy, in which an entity's mediation is taken up into it
>
> This pattern is repeated. The mediated immediacy that concludes one triad is the bare immediacy that opens the next.
>
> (Inwood: 1992: 185)

In this triadic structure, *'bare immediac*y' is the perceptual state that we encounter when we experience 'Being'. The second stage, that of *'mediation'*, occurs when the posited 'Essence' is dialectically refined. The third stage, as we noted, is that of *'mediated immediacy'* where we reflexively experience reality *through* our concepts. Importantly, this process is also described by Inwood as repeating itself – each new concept that is dialectically created is utilised in subsequent perceptual experience and we may, on occasions, be forced to revise it.

As we shall see, this Hegelian cognitive model has parallels with Peirce's two categories of 'firstness' (*'bare immediacy'*) and 'thirdness' (*'mediated immediacy'*).

But there seems to be an important difference between Hegel and Peirce when we consider the second level of 'mediation'. This is where Peirce interjects his alternative concept of 'secondness' – the disruptive role of reality itself. We will see later that this marks a significant difference between Hegel and Peirce (and one that Peirce is always keen to highlight). Hegel sees the intermediate stage as being purely *logical* in nature and one that the mind is able to conduct by itself. In contrast, Peirce views this stage as involving the 'brute' intervention of reality. It is where the world has a say in determining the meaning (the 'breadth' and 'depth') of our concepts. Peirce claims that this intervention by reality marks a significant difference between himself and Hegel, and we will discuss whether he is correct in making this claim in due course. But what we must also recognise, however, is that Peirce's rejection of Hegelian dialecticism does not also entail a rejection of *the logical nature* of the second stage. Peirce retains the Hegelian belief that the process of 'mediation' has a logical character. From Peirce's point of view, we do not have the luxury of dividing up the world as a matter of choice – the way in which we form concepts is determined by reality itself.

In summary, this sub-section has sought to outline the main facets of Hegel's account of concept formation. Hegel sees this issue as critical to any solution to the problem of how empirical knowledge is formed. The synthetic concepts that emerge from his dialectical process enable us to understand the world.

What is less well recognised is the extent to which Peirce utilises this same Hegelian template. Once this is acknowledged, we will be able to understand Peirce more fully, and see Peirce and Vygotsky in the same theoretical light – with benefits for a philosophy of the learning process.

3) Perception and 'Indeterminacy'

3.1) Hegel on Perception

Hegel's treatment of perception forms the starting point for his account of how knowledge is achieved. Central to Hegel's discussion of perception is his rejection of Kantian *'intuitionism'* – the belief that we are able grasp the immediate content of our perceptions. We have already encountered this rejection of 'intuitionism', in modern form, in Sellars's *'Myth of the Given'*. Over a century earlier, Hegel notes:

> Sense-certainty appears to be the *truest* knowledge; for it has not as yet omitted anything from the object, but it has the object before it in its perfect entirety. But, in the event, this very *certainty* proves itself to be the most abstract and poorest *truth*.
>
> (Hegel: 1977: 58)

In the place of 'intuitionism' Hegel invokes a much older model of perception which states that our perceptions, whilst being immediate, do not constitute a form of immediate *knowledge*. Spinoza and Leibniz describe such perceptions as 'confused ideas' and Hegel advocates this position with his account of 'indeterminate Being'.

> Pure Being makes the beginning: because it is on the one hand pure thought, and on the other immediacy itself, simple and indeterminate; and the first beginning cannot be mediated by anything, or be further determined.
>
> (Hegel: 1892/2014: 101)

Hegel thus construes human experience as comprising something that is both *'immediate'* (i.e. not behind a Lockean 'veil of perception' (Locke: 1690/1981)) and also *'indeterminate'*. This notion of 'indeterminacy' is key to an understanding of how Hegel understands concept formation. We initially experience the world in this form and the dialectical workings of the mind then render it more 'determinate'. The concepts that emerge from this process are 'mediated' and they allow us to establish knowledge of the world. Hegel rejects the views of philosophers, such as Locke and Hume, who claim that we enjoy immediate knowledge of our sense impressions:

> In Empiricism lies the great principle that whatever is true must be in the actual world and present to sensation.
>
> (ibid: 49)

> The theory asserts that immediate knowledge is a fact. It has to be shown to be untrue in fact to say that there is immediate knowledge, a knowledge without mediation either by means of something else or in itself.
>
> (ibid: 87)

The form of 'mediated' knowledge that is achieved through the dialectical process is sometimes framed by Hegel in terms of *'thought-forms'* or *'thought-types'*:

> And in order to prevent misconception, thought-form or thought-type should be substituted for the ambiguous term thought. From what has been said the principles of logic are to be sought in a system of thought-types or fundamental categories, in which the opposition between subjective and objective, in its usual sense, vanishes.
>
> (ibid: 27-28)

These *'thought-forms'* or *'thought-types'* are quite unlike the 'interpretations' that we encountered in 'secondary dualism'. The latter, we noted, are isolated from reality because they are based upon our sense impressions. This is not the case with Hegelian *'thought forms',* or *'thought types',* because these are dialectically created as an *'amalgam'* of the mental and the empirical. In the course of this thesis we will see that both Peirce and Vygotsky possess equivalents of these Hegelian entities. In the case of Peirce, their equivalent is the *'object'* in the triadic sign. In the case of Vygotsky, they are *'word meanings'*.

Finally, as already noted above, Hegel's dialecticism results in the formation of concepts that can be used, reflexively, to inform perception itself. Our concepts, once established, impact on how we experience the world. As Inwood observes, *'everything, then, including all human awareness, is both mediated and immediate'* (Inwood: 1983: 211). This reverses the model of 'secondary dualism' that positions perception as prior to interpretation. It follows, as a result, that we experience things *as things*. We will also encounter this approach in Peirce and Vygotsky. Hegel states:

> Man, therefore, is always thinking, even in his perceptions: if he observes anything, he always observes it as a universal, fixes on a single point which he places in relief, thus withdrawing his attention from other points, and takes it as abstract and universal, even if the universality be only in form.
>
> (Hegel: 1892/2104: 29)

It follows from this that we, in fact, experience 'meaningful perception'. We experience (rather than infer) meaning because we use our concepts in perception.

3.2) Peirce and the *'Daughters of Nominalism'*

Having discussed Hegel's account of perception, we will now consider Peirce's view of the same process. In this discussion we will also place Peirce's thinking in a wider philosophical context. We have already encountered some of these issues - in our discussions of 'secondary dualism' and the 'Myth of the Given'.

To begin with, however, it is worth noting that a telling feature of Peircean exegesis is the relative lack of discussion of his views on perception (Almeder: 1980: 137). From the perspective of semiotics, this reluctance to engage with Peirce's foundational thinking has many consequences. Importantly, if we assume that Peirce's philosophical starting points are similar to those of Saussure, then we will misunderstand the entire basis of his semiotics.

Peirce is well known for being a critic of nominalism (Forster: 2011) and his views on perception are informed by this. The nominalist stance, he argues, largely determines the way in which we view the world:

> But it is not modern philosophers only who are nominalists. The nominalist *Weltanschauung* has become incorporated into what I will venture to call the very flesh and blood of the average modern mind.
>
> (EP2: 157)

Nominalism is closely related to 'secondary dualism' because it adopts much the same stance in relation to meaning construction. It maintains that we have sense data that are 'given', in our perception, and which we then interpret. Indeed, nominalism maintains that the very way in which meaning is created is through the giving of 'names', or *identities*, to our sense impressions – which is why it is called 'nominalism'. Peirce rejects this philosophical position, and its consequences, which, on one occasion, he calls:

> ….those daughters of nominalism, - sensationalism, phenomenalism, individualism, and materialism.
>
> (EP1: 104).

We will now consider what Peirce means by these *'daughters of nominalism'* and how they relate to his views on perception. Nominalism divides reality along the Cartesian lines that we have already encountered (Descartes: 1985). One of its many consequences is the assumption that the mind (and the mind alone) can perform *acts* of perception. This conclusion is reached because objects are viewed as intrinsically *passive* in the perceptual process; objects *are perceived* – they do not have an active role in the perceptual act itself.

Peirce's account of perception rejects this view. He understands perception, instead, in terms of a *relationship* between the perceiver and the perceived object. For example, Peirce discusses the example of a chair; the perception of it forces itself upon him:

> I am forced to confess that it appears. Not only does it appear, but it disturbs me, more or less. I cannot think the appearance is not there, nor dismiss it as I would a fancy. I can only get rid of it by an exertion of physical force. It is a forceful thing. Yet it offers no reason, defence, nor excuse for its presence. It does not pretend to any right to be there. It silently forces itself upon me.
>
> (CP: 7.620-1)

The chair is thus an active force in the perceptual process – *'it is a forceful thing'*.

A further, and damaging, consequence of the belief that we perform 'perceptual acts' is the fact that they necessarily *separate* our perceptions from each another. Each act of perception is particular and cannot, by definition, be the same as any other act of perception. This results in a pattern of fragmented sense data that is familiar to any student of Humean philosophy. Peirce is referring to this when, above, he mentions *'individualism'*. Our sense data, in the nominalist model, are 'atomised' by our acts of perception. It follows from this that we are unable to *perceive* any potential connections that might exist between our perceptions; there can be no sense impressions of these and we can *only infer* them. This conclusion is reached, of course, by definition - because if we could 'see' the potential connection between any two perceptions then this linkage, itself, would become another atomised perception. And we would then need to find a connection between the perceived 'linkage' and one of our original perceptions. This way of construing perception thus leads to the scepticism espoused by Hume (1985) *(footnote five).*

Again, Peirce rejects this position and argues that we experience the world as a *continuum*. Perceptions are, as a result, *picked out* from this continuum and they come laden with their linkages to other perceptions. This way of understanding experience Peirce calls *'synechism'*:

> In like manner, I have proposed to make *synechism* mean the tendency to regard everything as continuous. For many years I have been endeavouring to develop this idea… I carry the doctrine so far as to maintain that continuity governs the whole domain of experience in every element of it.
>
> (EP2: 1)

Peirce also highlights *'sensationalism'* in the quotation above. 'Sensationalism' maintains that, although we cannot see *between* our perceptions, we do have *true knowledge* of them, however. Peirce's 'sensationalist' asserts that when we see something 'red' we cannot doubt

that this is the case – it simply looks 'red' to us (Forster: 2011: 110). This is the *'Myth of the Given'* as criticised by Sellars. Peirce, concurring with his criticism of it, argues that we cannot possess this kind of knowledge and he rejects the 'intuitionism' of Kant (EP1: 12-27, CP5: 213). As Davis states:

> Knowing is a process, which cannot be immediate and intuitive.
>
> (Davis: 1972: 10)

We must be very careful, however, to avoid the mistaken conclusion that Peirce rejects the view that we directly experience sense data. Indeed, Peirce insists that we do enjoy *direct* experience of the world (via the categories) and that there is, as a result, no 'veil of perception'. So Peirce maintains, following Hegel, that we have direct (but still 'vague') experience of our sense data*, and* that this does not constitute a form of 'true' knowledge.

Another consequence of the nominalist model is the belief that our perceptions are exhausted by their individual qualities. We can see something that is 'red' or something that is 'blue', but if we see something that is 'blue *and* red' then we must accept, by definition, that we have two *separate* sense perceptions. Once again, Peirce rejects this argument. He asserts that we can have *single* perceptions that include *multiple* qualities – and which can be subsequently separated by the mind. Talking about the chair, he argues (I will discuss 'percepts' shortly):

> The percept is, besides, whole and undivided. It has parts, in the sense that in thought it can be separated; but it does not represent itself to have parts. In its mode of being as a percept it is one single and undivided whole.
>
> (CP: 7.625)

This account, when linked to the idea of a perceptual 'continuum', gives Peirce the opportunity to think about experience in a new way. Crucially, it allows him to sustain the view that we *perceive* connections and relationships in the world.

We have, so far, discussed two of the *'daughters of nominalism'* - *'sensationalism'* and '*individualism'*. This leaves the other two 'daughters' – *'materialism'* and *'phenomenalism'.* These are closely allied to Peirce's rejection of dualism. He consistently argued against this Cartesian position. He states, for example:

> The old dualistic notion of mind and matter, so prominent in Cartesianism, as two radically different kinds of substance, will hardly find defenders today. Rejecting this, we are driven to some kind of hylopathy, otherwise called monism.
>
> (EP1: 292)

Peirce, however, rejects *both* of these daughters of nominalism - 'materialism' and 'phenomenalism'; in other words, he argues against *both*

poles of the dualist model. In its place he asserts a form of *'monism'*, mentioned above, and which we have also noted in Spinoza (see appendix 5). Peirce, therefore, disputes that reality can be divided into two categories - mind and matter. And, in particular, he rejects the idea that reality is exhausted by matter which is why he mentions *'materialism'* above.

Simultaneously, however, Peirce also rejects what he sees as the 'phenomenalist' position of Hegel. Why does he do this? He claims that his account of experience is not the same as Hegel's phenomenalism because he believes that we have *direct* experience of reality – and particularly through 'secondness'. This is why he labels *'phenomenalism'* as one of the four *'daughters of nominalism'*. This leads him to adopt a position that he describes as *'objective idealism'* (EP1: 293). He positions this between the two dualistic views that he observes in the cases of *'phenomenalism'* and *'materialism'*.

Peirce's efforts to distance himself from Hegel *(footnote 6)* are also reflected in his decision to call his study of experience *'Phaneroscopy'*. For Peirce, the *'Phaneron'* comprises all that is in our mind, including the three categories of direct experience:

> I propose to use the word *Phaneron* as a proper name to denote the total content of any one consciousness (for any one is substantially any other), the sum of all we have in mind in any way whatever, regardless of its cognitive value.
>
> (EP2: 362)

The Phaneron is, therefore, *one* entity and it is experienced as a continuous whole which reflects Peirce's underlying *'synechism'* (EP2: 2). He sees the mind as being 'immersed' in the Phaneron. He believes that *'all that exists is continuous'* (CP 1.172) and that *'continuity is given in perception'* (EP2: 238). Because we are part of this continuity ourselves, it follows that we cannot view reality from the 'outside' in the role of a 'spectator'. Indeed, Peirce insists that *'we ought to say that we are in signs and not that signs are in us'* (CP5: 289). The position he rejects is, of course, the model of 'secondary dualism', and the 'mirror', and the inspecting 'eye', that inform it.

The 'objective idealism' of Peirce thus positions his philosophy in a way that transcends dualism. He places himself squarely between the opposing views that reality is either 'objective, but unknowable' (the dualist position), or that it is 'knowable, but not objective' (the 'idealist' position). Indeed, Peirce even construes the mental as being in matter itself – as *'effete mind'* – illustrating his rejection of both 'materialism' and 'phenomenalism':

> The one intelligible theory of the universe is that of objective idealism, that matter is effete mind, inveterate habits becoming physical laws.
>
> (EP1: 293)

3.3) Peirce on Perception

3.3.1) The 'Percept'

At the basis of Peirce's account of perception is his notion of the 'percept'. This is very different from the concept of 'sensation' in the nominalist model. Peirce describes it as follows:

> Let us say that, as I sit here writing, I see on the other side of my table, a yellow chair with a green cushion. That will be what psychologists term a 'percept' (*res percepta*). They also frequently call it an image. With this term I shall pick no quarrel. Only one must be on one's guard against a false impression that it might insinuate. Namely, an 'image' usually means something intended to represent, - virtually professing to represent – something else, real or ideal. So understood, the word image would be a misnomer for a percept. The chair I appear to see makes no professions of any kind, essentially embodies no intentions of any kind, 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.
>
> (CP7: 619)

A number of points emerge here. Firstly, the percept does not *'stand for'* anything. It is not a *representation* of anything that is putatively 'behind' it. Secondly, the percept is *acting on* the perceiver. It '*obtrudes itself upon'* his gaze. This, as noted earlier, reverses the model that interprets the perceiver as the active force in the perceptual act. In the same section, Peirce goes on to describe what the percept does:

> 1st, it contributes something positive …….
> 2nd, it *compels* the perceiver to acknowledge it.
> 3rd, it neither offers any reason for such acknowledgement nor makes any pretension to reasonableness…..The percept, on the contrary is absolutely dumb. It acts upon us, it forces itself upon us; but it does not address the reason, nor *appeal* to anything for support.
>
> (CP7: 622)

Peirce, once again, insists here on the active force of the percept. But what is also clear is that it provides no information about the world. It is *'absolutely dumb'*. The percept does not contribute direct knowledge (contrary to the *'Myth of the Given'*).

There are other aspects of the percept, however, that are also important. The first of these is that percepts are always connected to each other. As such, Peirce rejects the 'atomism' of nominalism:

> The psychologists very reasonably argue that the first impressions made upon sense must have been feelings of sense qualities – say colours, sounds, etc – disconnected from one another, and not appearing to stand over against a self as objects….. But this is quite inferential. We are, of course, directly aware of positive

> sense qualities in the percept (although in the percept itself they are in no wise separate from the whole object); but as for their being at first disconnected and not objectified; that is psychological theory.
>
> (CP7: 624)

And, linked to this, Peirce maintains that perceptions are not exhausted by one quality. When we see a chair we perceive the different elements of it *in relation to* each other. Leaving aside Peirce's references to 'firstness' for the time being:

> In the percept, these elements of Firstness are perceived to be connected in definite ways. A visual percept of a chair has a definite shape. If it is yellow, with a green cushion, that is quite different from being green with a yellow cushion. These connectives are directly perceived, and the perception of each of them is a perception at once of two opposed objects – a double awareness. In respect to each of these connections, one part of the percept appears as it does *relatively to a second part*.
>
> (CP7: 625)

We thus see the chair in its entirety (and as a chair) and we also *perceive* the relations between its elements. This is not an option that is available to the nominalist who can only link atomised perceptions via acts of interpretation. Nominalists might argue, in response, that Peirce is overcoming the problems of scepticism by sleight of hand. They could argue that Peirce is simply defining what a 'percept' is in such a way that *allows* us to see the connections and relationships between perceptions.

The Peircean response would that the nominalist needs to justify his own account of perception. Why is it that he believes that perceptions are fragmented when, in fact, our day-to-day perceptual experience is quite to the contrary? It is clear that we do not actually experience 'atomised' perceptions. Instead, perception flows over us as a continuous whole. It is only because the nominalist position insists upon the 'active' perceiver that we conclude that our perceptions are fragmented. And this, in turn, is rooted in the dualism that Peirce rejects. So Peirce is not circumventing the issues posed by nominalism – he is asking serious questions about its own foundations.

3.3.2) The 'Perceptual Judgment'

The 'perceptual judgment' is central to Peirce's account of perception. It enables us to move from perceiving a 'dumb' percept to experiencing something that has the beginnings of 'knowledge'. The type of knowledge contained within a perceptual judgment will be discussed shortly, but, critically, with the perceptual judgment, we begin to understand *what sort of things* we experience in the world. Peirce describes the 'perceptual judgment' as follows:

> We know nothing about the percept otherwise than by testimony of the perceptual judgment, excepting that we feel the blow of it, the reaction of it against us, and we see the contents of it arranged into an object, in its totality, - excepting also, of course, what the psychologists are able to make out inferentially. But the moment we fix our minds upon it and *think* the least thing about the percept, it is the perceptual judgment that tells us what we so 'perceive'.
>
> (CP7: 643)

The perceptual judgment is, therefore, the mechanism through which we 'understand' what we have encountered in the percept. We have to be very careful, however, that we couch this in the correct Peircean terms. Even using the word 'understand' brings with it overtones of nominalist thinking. It suggests that there is some 'factual' element in the percept (the image in Rorty's mirror) which is then 'interpreted' by the mind (the 'inner eye'). This is, again, something that Peirce refutes – the perceptual judgment does not view the percept and *then* give it meaning (Misak, for example, suggests this – perceptual judgments are *'matters of interpretation'* (Misak: 1994: 742). Instead, the perceptual judgment is exactly *what* the mind perceives; it is forced upon it. Rosenthal puts this very clearly:

> The percept is that sensory element which is presented in perceptual awareness…… Peirce is not here asserting that we first perceive the percept and then proceed to interpret it in a judgment. Nor is he asserting that the percept and the content of the perceptual judgment are physically, metaphysically, or numerically distinct. He does not hold that what we are aware of is sense data of some sort rather than a physical object. Rather, the percept as interpreted *is* what we immediately perceive and *is* the reality.
>
> (Rosenthal: 2004: 194)

What does a perceptual judgment do? The perceptual judgment takes a percept and tells the perceiver 'what sort of thing' it is. It does this in a way that leaves the percept untouched, but which fundamentally changes its epistemological status. Whereas Locke and Hume argue that our ideas are 'copies' of sense impressions (the 'representationalist' paradigm), Peirce argues that the percept and the perceptual judgment are categorically different:

> By a perceptual judgment, I mean a judgment asserting in propositional form what a character of a percept directly present to the mind is. The percept of course is not itself a judgment, nor can a judgment in any degree resemble a percept. It is as unlike it as the printed letters in a book where a Madonna of Murillo is described are unlike the picture itself.
>
> (EP2: 155)

This means that we do not perceive 'sensations' as such - we only experience the world as it is *mediated* through our perceptual judgments. As a result, we do not perceive reality as such; we perceive reality *as something*. Gallie states:

> He (Peirce) rejects the claim that we have direct intuitive knowledge of such elementary data on the ground that whenever we know something we know it *as* something – as being of such and such a character, or as standing in such and such relations. In otherwords, to know something, we must classify it or relate it.
>
> (Gallie: 1952: 67)

Perceptual judgments, therefore, provide us with a tentative form of knowledge; they tell the perceiver 'what sort of thing' the percept might be. This is done in a manner that is outside of the control of the perceiver - and so is not an interpretation. As Peirce puts it, the perceptual judgment *'compels assent'* (CP: 7.627). It contrasts with the 'inner eye' model where the mind has the time, seemingly, to 'inspect' its sense data. Perceptual judgments, in contrast, are *not* something we can stand back from. Importantly, the process through which the perceptual judgment classifies the percept is through comparison and relation:

> But the perceptual judgment 'This chair appears yellow' has vaguely in mind a whole lot of yellow things, of which some have been seen, and no end of others may be or might be seen; and what it means to say is, 'Take any yellow thing you like, and you will find, on comparing it with this chair, that they agree pretty well in colour'.
>
> (CP7: 632)

This notion of resemblance is important for Peirce and we will return to it later (in relation to iconicity) . It is sufficient, at this stage, to highlight that it plays a role, even at this basic level of perception. It is on the basis of resemblance that our perceptual judgments are formed.

3.3.3) <u>What is the Status of a Perceptual Judgment?</u>

If we consider the words Peirce uses in the phrase 'perceptual judgment' - we can discern his underlying strategy. In 'secondary dualism', perception and judgement are held apart; Peirce now deliberately conjoins them. In the nominalist model, sense data are viewed as 'representations' of the world, but what is the status of the perceptual judgment? Radically, as we saw in the 'Madonna of Murillo' quotation, Peirce claims that the perceptual judgment has the formal status of being a *proposition* (Sternfelt: 2014: 120). The perceptual judgment has this structure because of how it is formed. It makes an assertion that:

Percept Y is the member of class X.

We, therefore, experience percepts as members of classes. Peirce accepts that any perceptual judgment may, in fact, be incorrect in its classification, but this does not change its underlying logical structure. As Forster argues, on Peirce's definition, *'a perceptual judgment qualifies as a judgment because it involves assent to a proposition'* (Forster: 2011: 121). The perceptual judgment, therefore, not only combines perception and judgment – it also enjoys propositional status. And, concurring with McDowell, Peirce sees the conceptual as being necessarily involved in the perceptual (McDowell: 1994).

Peirce readily accepts that any individual perceptual judgment may be mistaken. Indeed, this is what his doctrine of '*fallibilism'* entails (Short: 2007: 317-323). The perceiver classifies the percept in a way that is always open to revision. If I see a blue stain out of the corner of my eye then this *is* what I have seen. If, however, I turn my head and realise that what I thought was a blue stain is, in fact, some blue paper then this perceptual judgment does not falsify the original perceptual judgment – *it simply replaces it*. It does this because, for Peirce, no two perceptual judgments can have the same subject – they always succeed each other. And this may also mean that, on some occasions, an existing perceptual judgement is replaced by an inferior one; no *comparison* ever takes place between our perceptual judgements because this would entail the model of 'secondary dualism' again.

This is a radical suggestion, on the part of Peirce, because 'secondary dualism' always wants to separate our perceptions into two camps - ones that are 'correct' and ones that are 'incorrect'. This insistence stems from its belief that our perceptions are either 'true' or 'false' representations of some noumenal reality. Peirce, however, is freed from this constraint. He believes, instead, in a continuous process of making new perceptual judgments (CP: 7.639).

Another aspect of the perceptual judgment is that it is '*vague'*. Therefore, when I perceive what I think is a 'blue stain', I am thinking that it is *the sort of thing* that looks like a blue stain. Peirce is adamant that I do not know whether the percept *is* of a *specific* blue stain (i.e. a singular fact about reality). All I know is that the stain looks like it belongs to the *class of things* that look like blue stains. It is, as a result, a category that is open to further *determination*. There may be lots of different types of blue stains in reality. This is what Peirce means by a perceptual judgment being 'vague' – it is never absolutely true, or false; it is simply never absolutely determined.

So, what a perceptual judgment does is to place a percept into a putative class. Indeed, we can only experience 'things' as members of classes:

> I look again at the colour before me. The idea of yesterday and that of today are two ideas; they have nothing in common, unless it be that the mind naturally throws them together. Some beginner may object that they both have a *blueness* in them; but I reply that blueness is nothing but the idea of these sensations and of others I have had, thrown together and indistinctly thought at once. Blueness is the idea of the *class.*
>
> (CP7: 392)

The fact that perceptual judgments do not deliver specific *knowledge* about *individuals* in the world, but forms *classes* of percepts, is critical. Bernstein (1964) argues, erroneously, that a perceptual judgment cannot be a 'judgment' if it cannot be true or false. But this is to assume that perceptual judgments provide specific 'facts' about the world. They are, in fact, doing no such thing - they are merely providing us with *classificatory hypotheses* upon which we can build our knowledge:

> This brings us to Peirce's own, at first sight, paradoxical suggestion that every piece of apparently direct intuitive knowledge – including our knowledge of the most elementary 'data of consciousness' – is in fact of the nature of a hypothesis; since every claim to knowledge involves the *assumption* that a certain method of classification or systematization will in fact apply to a particular object or set of objects in a particular way.
>
> (Gallie: 1952: 68-9)

This has implications for the Peircean account of signs. As we discussed earlier, we should not approach Peirce's semiotics assuming that we know the identity of a 'sign vehicle'. Instead, any perception that forms the content of a Peircean sign starts as a 'vague'. Indeed, signs are *the very way* in which we come to understand (or 'determine') the identity of such perceptions.

Importantly, moreover, because the perceptual judgment transforms the percept into a member of a class it also creates a putative universal (or *'general'* as Peirce calls it):

> But it follows that since no cognition of ours is absolutely determinate, generals must have a real existence. Now this scholastic realism is usually set down as a belief in metaphysical fictions.
>
> (CP5: 312)

The nominalist asserts, in contrast, that we only perceive atomised particulars - and that it is the interpretative mind that creates universals. Peirce, however, believes that we *experience* universals (albeit indistinctly) in perceptual judgments. Peirce states:

> Consequently, it is now clear that if there be any perceptual judgement, or proposition directly expressive of and resulting from the quality of a present percept, or sense image, that judgment must involve generality in its predicate.
>
> (EP2: 208)

This has the effect of changing the 'direction' in which our perceptions 'operate'. The nominalist argues that the mind moves *from* particulars *to* universals and that perceptions simply provide us with raw data. For Peirce, in contrast, perceptions are transformed by the perceptual judgment and are *experienced* as manifestations of universals. As Peirce notes, nominalists would dismiss this as a relapse into metaphysics. They would argue that such a position involves unfounded beliefs in a noumenal reality. But Boler summarises Peirce's position:

> In its strictly logical sense the universal *is* a creation of the mind and cannot exist apart from the mind. But it is not necessarily a fiction, for it can be based on a real commonness which is the nature in itself.
>
> (Boler: 1963: 52)

Because the perceptual judgment creates a class, this means that it contains a potentially *infinite* number of individual manifestations within it. For example, when I have a perceptual judgment of 'blueness', the class to which it belongs contains an infinite number of shades of blue.

It follows from this that any perceptual judgment also includes the idea of 'possibility'. When we think of something as 'blue' it contains a potentially infinite number of 'blues' which could be further 'determined'. Whilst the nominalist insists that we start with individual perceptions and construct 'generals' from them, Peirce advocates the opposite trajectory:

> But Kant gives the erroneous view that ideas are presented separated and then thought together by the mind. This is his doctrine that a mental synthesis precedes every analysis. What really happens is that something is presented which in itself has no parts, but which is nevertheless analysed by the mind, that is to say, its having parts consists in this that the mind afterward recognises those parts in it.
>
> (W6: 449)

This is not to say that Peirce rejects the notion of individuality. Early in his philosophical life he did adopt this position (‘*The absolute individual can not only not be realised in sense or thought, but cannot exist properly speaking’* (CP3:93), but in the later parts of his career (Murphey: 1993: 131), Peirce comes to believe that we experience individuality through the action of what he calls *‘haecceity’*. What Peirce consistently rejects, however, is the suggestion that intellection begins with ‘atomised’ sense data.

To summarise, it is clear that Peirce’s arguments for perceptual judgements run strongly against the current of nominalism. He believes that we enjoy direct experience of the world, but only in a manner that combines the experiential and the judgmental. The perceptual judgments that we form in perception are putative universals and, critically, they are ‘real’ (rather than ‘constructed’). But, importantly, they still do not possess the status of ‘true’ knowledge - and so Peirce rejects the *‘Myth of the Given’.* Perceptual judgments, therefore, always remain indeterminate ‘vagues’ in need of further determination.

As a philosophical position, this leaves Peirce with a fundamental need to *‘fix belief’* (EP1: 109-124). In the case of Hegel, this indeterminacy of Being is addressed through dialectical logic. For Peirce, the same task is achieved through the combinatory action of signs.

3.4) Vygotsky on Perception

So far, we have identified some of the parallels between Hegel and Peirce in their accounts of perception. We have noted that they both reject dualism and that whilst our perceptions are ‘immediate’, they do not constitute the kind of non-inferential knowledge suggested by the *‘Myth of the Given’*. In contrast, they both maintain that we experience the world in a manner that is ‘indeterminate’ and which requires further determination.

In his account of perception, Vygotsky also argues, in line with Hegel, that our initial experiences of the world are ‘confused’. He describes them, for example, as ‘*a wild dance of uncoordinated sensations’* (Vygotsky: 1987: 291). And when describing a scenario in which a child is confronted with an intellectual puzzle, Vygotsky and Luria talk of the *‘jumbled’* nature of the child’s responses:

> The small child, placed in a situation where the direct attainment of his purpose seems impossible, displays a very complex activity which can only be described as a jumbled mixture of direct attempts to obtain the desired end….
>
> (Vygotsky and Luria: 1994:117)

Although Vygotsky does not emphasise the *indeterminacy* of our perceptions as much Hegel and Peirce do, this starting point still echoes their accounts of 'indeterminate' Being and perceptual 'vagues'. Elsewhere, Vygotsky describes our experience of the world as a *'syncretism in perception'* (Vygotsky: 1978: 29) and he believes that a *'child's thought emerges first in a fused, unpartitioned whole'* (Vygotsky: 1987: 251).

This *'unpartitioned whole'* means that our perceptions do not enter the mind in the atomised form of the nominalist model. Vygotsky states:

> Structural psychology has shown that the small child does not perceive separate objects. Daily observation supports this perspective. Whether the situation is that of play or feeding, the child perceives the whole situation.
>
> (Vygotsky: 1987: 298)

And:

> In processes of so-called 'immediate perception' and the transmission of perceived forms uninfluenced by speech, the child grasps and fixes an impression of the whole (spots of colour, the basic features of form, etc)
>
> (Vygotsky and Luria: 1994: 127)

It is important to note, however, that Vygotsky is simply claiming here that our perceptual experience should be taken as a *'whole'*. He is not making the bigger claim, as Hegel and Peirce do, that *reality itself* is syncretic. Vygotsky's work is devoted to outlining how a child develops concepts; he is not trying to make a broader epistemological statement about the world. Vygotsky and Luria immediately go on to state that:

> Yet no matter how correctly and skillfully the child does it, at the very first stages of speech its perception ceases to be bound by the immediate impression of the whole; in its field of vision there arise new centres, fixed by words, and ties appear between these centres and different parts of the situation being perceived; perception ceases to be a 'slave' of the field of vision and, independently of the degree of correctness and perfection of solution, the child transmits impressions transformed by words.
>
> (ibid)

This is an important passage for a number of reasons. Firstly, it outlines the key role that Vygotsky highlights for speech in transforming our perception. Secondly, he states that this allows the mind to create *'new centres'* (e.g. new potential concepts). Thirdly, he specifically maintains that this is achieved when things are *'fixed by words'*. This verb is one that we have just encountered in Peirce – and it reflects the requirement for both thinkers to explain how we establish fixed points within the indeterminate continuum of our perception.

This approach is also reflected in Vygotsky's treatment of 'attention' in a child. When the effects of speech on our perception are taken into account,

the child is able to focus on particular aspects of the 'visual field' in a way that is more structured:

> From the first steps of the child's development, the word intrudes into the child's perception, singling out separate elements overcoming the natural structure of the sensory field and, as it were, forming new (artificially introduced and mobile) structural centres. Speech does not merely accompany the child's perception, from the very first it begins to take an active part in it: the child begins to perceive the world not only through its eyes, but also through its speech, and it is in this process that we find an essential point in the development of the child's perception.
>
> (ibid: 125)

And:

> In the case of the child, the field of perception is organised by the verbalized function of attention…… The ape must first see the stick in order to pay attention to it; the child may pay attention in order to see.
>
> (ibid: 133)

Vygotsky thus envisages a progression from what he calls *'natural perception'* (as enjoyed by apes) to the *'higher forms of perception'* that are specifically human. Speech is critical to this process and it enables the child to *'single out'* particular perceptions and to render them distinct from other perceptions. It enables the child to employ what Vygotsky calls *'verbalised perception'*:

> Behind the phase of 'object perception' actually lay a living and integral perception, quite adequate to the picture while destroying the supposition of the 'elementary' character attributed to perception at this phase. What was usually regarded as a property of the child's natural perception, proved to be really a peculiarity of its *speech*, or, in other words, a peculiarity of its *verbalised perception*.
>
> (ibid: 125)

> The natural laws of perception, most clearly observed in the receptive processes of the higher animals, undergo basic changes due to the *inclusion of speech in human perception*, and human perception thus acquires an entirely new character (my italics).
>
> (ibid: 126)

'Verbalised perceptions' do not entirely supplant, or replace, 'natural perceptions', but they establish a further level of experience that builds, in an Hegelian manner, upon a child's 'lower' levels of *'natural perception'* (ibid: 123). They *restructure* the way in which the child experiences the world:

> At the moment when, thanks to the planning assistance of speech, a view of the future is included as an active agent, the child's whole operational psychological field changes radically and its behaviour is fundamentally reconstructed. The child's perception begins to develop according to new laws that differ from those of the natural optic field.
>
> (ibid: 122)

It is clear, in these passages, that Vygotsky is proposing a model that parallels that of Hegel (and of Peirce). As we saw, they both maintain that our concepts reflexively inform our perceptions. With Peirce, the 'perceptual judgement' allows prior knowledge to become involved in the perceptual process. He sees this as a purely mental capacity of the mind – we are able to see things *as things*. Vygotsky, in contrast, by invoking the notion of *'verbalised perception',* brings an external factor into the perceptual process. Without speech, he argues, the child would not be able to go beyond the bounds of *'natural perception'*. Later, we will discuss this difference between Peirce and Vygotsky and whether this means that Vygotsky is committed to a social account of meaning. But Vygotsky does agree with Peirce that *'verbalised perceptions'* involve categorisation:

> A special feature of human perception – which arises at a very young age – is the *perception of real objects*. This is something for which there is no analogy in animal perception. By this term I mean that I do not see the world simply in colour and shape but also as a world with sense and meaning. I do not merely see something round and black with two hands; I see a clock and I can distinguish one hand from the other….. These observations suggest that all human perception consists of *categorised* rather than isolated perceptions (my italics).
>
> (Vygotsky: 1978: 33)

This position, as we saw before, entails the view that we experience the world in a way that is intrinsically meaningful. We do not first experience the world and then add meaning to it – our perceptions inherently contain meaning:

> Another [issue] is the meaningful nature of our perception. It has been shown experimentally that we cannot create conditions that will functionally separate our perception from meaningful interpretation of the perceived object…The understanding of the thing, the name of the object, is given together with its perception…… I see the object. I immediately perceive the object as such, with all of its meaning and sense. I see a lamp, a table, a person, or a door. In Buhler's words my perception is an inseparable part of my concrete thinking.
>
> (Vygotsky: 1987: 295-6)

One point of difference between Vygotsky and Peirce is that the latter insists on the *provisional* nature of 'perceptual judgments'. This is not an epistemological position that Vygotsky seems to hold. But, for Vygotsky, the development of our concepts is still construed as a continuous process and one that is constantly re-structuring perception. As such, our 'higher perceptions' are always open to revision and so 'verbalised perceptions' do, in fact, have an effective provisional status.

Vygotsky's view that our perception is holistic, and that we 'single out' our perceptions from a syncretic whole, also has important consequences for his views on the psychology of his time. His rejection of 'atomism', as with Peirce, leads him to attack what he calls the *'associationist'* template in

psychology. ‘Associationism’ maintains that we re-assemble our ‘atomised’ perceptions (and create meaning) by finding the ‘links’ between them. It forms an essentially *quantitative* account of how the mind develops. Vygotsky views this as follows:

> (In the Associationist view] The child’s mental development consists of the constant accumulation of this material, resulting in new, more extended, and richer associative connections among separate objects. The child’s perception is constructed and grows with this development of associative connections.
>
> (Vygotsky: 1987: 291)

In contrast, Vygotsky construes the development of the mind as being a *qualitative* development that involves the creation of *new mental structures*. Critically, he argues that concepts themselves are part of this development. They are not formed by the accumulation of associations within the mind; rather they evolve from perception:

> A concept is not just an enriched and internally joined associative group. It represents a qualitatively new phenomenon which cannot be reduced to more elementary processes which are characteristic of the early stages of development in the intellect. Concept thinking is a new form of intellectual activity, a new mode of conduct, a new intellectual mechanism.
>
> (Vygotsky: 1994: 259)

This rejection of ‘associationism’ can also be found in Hegel and it is implicit in Peirce’s earlier rejection of nominalism. For example, Hegel argues that:

> The so called *laws of the association of ideas* were objects of great interest, especially during the outburst of empirical psychology which was contemporaneous with the decline of philosophy.
>
> (Hegel: 1830/1971: 206)

For Vygotsky, the ability of the mind to create concepts is critical in the liberation of humans from the more mechanistic thought processes of animals. By creating concepts, and evolving our ‘higher psychological processes’, we are able to free ourselves from the constraints of ‘natural perception’:

> However, the difference between the practical intelligence of children and animals is that children are capable of reconstructing their perception and thus freeing themselves from the given structure of the field. With the help of the indicative function of words, the child begins to master attention, creating new structural centers in the perceived situation.
>
> (Vygotsky: 1978: 35)

The perceptual process in humans enables us, as a result, to rise above our experience of ‘dyadic’ reactions. It means that we are not *‘slaves’* to our vision (Vygotsky: 1987: 127), and we have choice in the world:

> The child constructs with words much greater possibilities than the ape can realize through action.
>
> (Vygotsky and Luria: 1994: 110)

Vygotsky's rejection of associationism, however, also has implications for the way in which psychology conducts its experiments. For a rejection of associationism also means that the workings of the human mind cannot be understood in terms of 'stimulus and response':

> Despite great diversity in procedural details, virtually all psychological experiments rely on what we shall term a stimulus-response *framework*. By this we mean that no matter what psychological process is under discussion, the psychologist seeks to confront the subject with some kind of stimulus situation designed to influence him in a particular way, and then the psychologist examines and analyses the response(s) elicited by that stimulating situation.
>
> (Vygotsky: 1978: 58)

Because humans are operating at a 'higher' level, Vygotsky argues that this stimulus/ response approach will always fail:

> When we examine the experimental procedures used in complex reactions, we find that all are restricted to meaningless connections between stimuli and responses.
>
> (ibid: 69)

Vygotsky also argues that psychology has fallen into the dualistic trap of assuming that the mind and the body are in separate realms. When discussing the differences between biological and psychological development Vygotsky argues that:

> So a great chasm continues to gape between these two concepts. The historical and the biological aspect of the child's development end up separated from one another and it is impossible to build a bridge of any sort between them, which might help us unite facts and data pertaining to the dynamics of form in the thinking process with the facts or data about the dynamics of the content which fills this form.
>
> (Vygotsky: 1994: 197)

In addition, he also sees psychology's tendency to separate thought from speech as being founded on a dualistic mindset. He argues that speech is often treated by psychologists as a mere external manifestation of internal thought. As such, speech is interpreted as an *accompaniment* of thought, rather than something that actually *forms* it:

> Speech, at the most, was looked on as an element accompanying operations just as harmony assists the main melody.
>
> (ibid: 107)

And this results, in turn, in yet another dualism being created – that arising between sound and meaning. If speech is treated merely as the outward expression of thought, then the sounds that comprise it are also separated from meaning and are simply conjoined to it - by association. This is another assumption that Vygotsky also attacks:

> In accordance with dominant trend, psychology has until recently depicted the matter in an oversimplified way. It was assumed that the means of communication was a sign (the word or sound); that through simultaneous occurrence a sound could become associated with the content of any experience and then serve to convey the same content to other human beings.
>
> (Vygotsky: 2012: 7-8)

In this sub-section, we have noted that Vygotsky approaches perception from a similar standpoint as Hegel and Peirce – indeed, he accepts many of the tenets of Hegel's position. Their shared position on perception, however, means that all three thinkers must now account for the way in which our knowledge of the world is created. Confronted with 'indeterminacy' in our perceptions, they need to demonstrate how we 'fix' our knowledge. In the following chapters we will see that Peirce's answer to this problem is through the action of signs. In the case of Vygotsky, he also moves some distance from Hegel's original model of concept formation. He does this by giving 'speech' a critical role in the process.

4) Peirce's Three Categories

Immersed in the Phaneron, Peirce argues that we experience reality through three categories – which are monadic, dyadic, or triadic. It on this basis that Peirce establishes his three categories of firstness *(footnote seven),* secondness, and thirdness.

The notion of experiential 'categories' emerges with Kant (1781/2007). He argues that they are four in number (quantity, quality, relation and modality). The idea of categories is then adopted by Hegel, but in a different form. Hegel asserts, instead, that there are three *stages* (or 'moments') in our experience – Being, Essence and Notion. And Peirce openly acknowledges that he is following Hegel with his own three categories:

> They agree substantially with Hegel's three moments.
>
> (CP2: 87)

Incidentally, Peirce also believes there can be no such thing as 'fourths' – because these (if they existed) could be re-analysed as triadic relationships (CP: 7.537).

Before discussing the Peircean categories, we should make some general observations. Firstly, the three categories seem, occasionally, to map onto the more familiar terminologies of the 'nominalist' position. Instances of firstness, for example, seem to be equivalent to 'qualities'. 'Firsts' appear to be like our experiences of 'warmth', or 'blueness' etc, but, as we shall see, they have a number of characteristics that distinguish them from Locke's 'secondary qualities' (Locke: 1690/1981). Equally, secondness seems to be equivalent to the concept of 'objectivity' and it is often associated with it. But, as we shall also see, secondness is not the same as externally existing reality. As a category, it has other properties that impact on us, and play an active role in experience.

More alarming, for the nominalist, is Peirce's concept of 'thirds'. These are *perceptions* of relationships that exist in reality. In the nominalist account these can only exist as inferences. Peirce argues, however, that we do *experience* relationships in the world. Our *understanding* of the world is entailed in our perceptual acts.

Importantly, Peirce's categories are *how* we perceive the world. They are not 'things' that we perceive. We experience the world *through* firstness, *through* secondness and *through* thirdness – they are *experiential dimensions*.

The three Peircean categories are also fundamentally different to signs – which we use to *understand* experience. Later, we will explore how these two dimensions interact with each other within Peirce's classification of signs. Concept formation takes place as a result of this synthesis; but it is important to recognise that categories and signs are initially different from each other.

4.1) Firstness

The first[1] of Peirce's categories is monadic and it transcends the distinctions that are normally applied to our notions of 'sense impressions' and 'qualities'. As we shall see, 'firsts' share some of the properties of these more familiar concepts, but, at the same time, they re-orientate our understanding of them. Most importantly, in this respect, Peirce understands them as 'qualities' that are 'real'. They cannot be treated as mental entities in the same way that Locke conceives 'secondary qualities'. This means that firstness is a category that is perceived directly:

> Imagine if you please, a consciousness in which there is no comparison, no relation, no recognised multiplicity (since parts would be other than the whole), no change, no imagination of any modification of what is positively there, no reflexion, - nothing but a simple positive character. Such a consciousness might be just an odor, say a smell of attar; or it might be one infinite dead ache; it might be the hearing of [a] piercing eternal whistle. In short, any simple and positive quality of feeling would be something which our description fits, - that it is such as it is quite regardless of anything else.… The first category, then, is Quality of Feeling, or whatever is such as it is positively and regardless of aught else.
>
> (EP2: 150)

Firstness also enjoys a 'freshness' and 'originality' that differentiates it. It is 'fresh' because it has yet to be determined by the mind:

> It must be fresh and new, for if old it is second to its former state. It must be initiative, original, spontaneous, and free; otherwise it is second to a determining cause. It is also something vivid and conscious; so only it avoids being the object of some sensation. It precedes all synthesis and all differentiation: it has no unity and no parts. It cannot be articulately thought: assert it, and it has already lost its characteristic innocence; for assertion always implies a denial of something else. Stop to think of it, and it has flown!
>
> (EP1: 248)

A 'first', therefore, is a quality of experience, but as soon as we begin to think about it, reify it, or compare it with other 'firsts', it has lost its character. It is a quality in its own right, but as soon as we try to specify what it might be, we find that we have actually differentiated it from something else and created a *description* of it. As Boler notes, a 'first' is a *'bare thisness'* (Boler:

1963: 122). In many respects, it has the same status as a 'percept' before it becomes a perceptual judgement.

Importantly, a 'first' is never perceived as a 'atomised' sense datum. It is only experienced as *embodied* in something else. In this respect, it is always experienced as being conjoined with other perceptions. Because of this, it only achieves the status of being a 'first' (and it can only *be* a first (Short: 2007: 75)) if the mind *prescinds* it from the embodied state in which we experience it.

When Peirce gives instances of 'firsts' he often gives examples that we would view as 'qualities' - such as sensations of colour and warmth. But Peirce also includes examples such as the 'emotional' reaction one feels upon watching a performance of *King Lear* (CP1: 531), or when listening to a piece of music (CP5: 475). This confirms his description of 'firsts' as types of *'consciousness'*; they are much more than atomised sense impressions.

Indeed, if we look at the precise words Peirce uses to describe 'firsts', he talks about them as *'qualities of feeling'* – terminology that deliberately conflates two aspects of experience that are usually separated in the nominalist model. 'Qualities' are *what* we experience, whilst 'feelings' are their *effect* upon us. Peirce deliberately runs the two together in an overtly anti-dualist move. In doing so, however, he is following in Hegel's footsteps:

> All our representations, thoughts, and notions of the external world, of right, of morality, and of the content of religion develop from our *feeling intelligence*…(my italics)
>
> (Hegel: 1830/1971: 194)

Peirce, therefore, refuses to limit our experience of the world to the narrow experiences permitted by our five senses. Experience now includes, as for Hegel, how we *feel* in the world, and how we do so over a period of time. Critically, however, Peirce also emphasises the fact that the 'first' is a *simple* (but confused) feeling - even though the phenomena experienced (i.e. a performance of *King Lear*) can be complex.

As noted, Peirce also maintains that 'firsts' are *real*. In a section entitled the *'Reality of Firstness'*, he argues they are different to the 'sense impressions' of empiricism:

> But as for Qualities, they are supposed to be in consciousness merely, with nothing in the real thing to correspond to them except mere degrees of more or less….But when one considers the matter from a *logical* point of view the notion that qualities are illusions and play no part in the real universe shows itself to be a peculiarly *unfounded* opinion.
>
> (EP2: 187-8)

Another difference between Peirce's 'firsts' and nominalism's 'sense impressions' is that they are not *foundational;* they are *not* the building blocks upon which our knowledge of the world can be established. Although they are the simplest things that we perceive, they are never perceived in atomised, (or indeed un-embodied) states.

To this extent, the term 'first' is somewhat misleading for the uninitiated reader. They are, in an important sense, not primary (an assumption that can be easily made). Instead, they are always prescinded *retrospectively* from embodied experiences. Some commentators do not emphasise this point enough and give an impression of their primary status (e.g. Murphey: 1993). Peirce often does this as well, but, on occasion (e.g. EP2: 268), he does make it clear that our experience of 'seconds' actually precedes that of 'firsts' and he discusses them in that order. Boler makes the same point, and argues:

> For the purposes of exposition, the order of the categories can be slightly transposed; secondness seems the best one to begin with.
>
> (Boler: 1963: 121)

We should also briefly compare Peirce's 'firsts' with conventional *abstract* ideas. There seem to be initial parallels here, but, once more, it is easy to be misled. Because a 'first' is a quality like 'greenness' or 'blueness' we could assume (nominalistically) that it is has been *abstracted* by the mind.

Peirce, however, insists that we should distinguish between abstraction and 'prescision'. For nominalists, an abstract idea is created when we identify shared qualities amongst our perceptions. We have an idea of blueness because we identify the similarities amongst a number of blue things. For Peirce, however, 'prescision' is quite different – it is the action of taking a quality from its embodied state. It thereby creates a new mental entity, but this is not created by grouping atomised perceptions. As such, Peirce insists that a 'first' implicitly retains its underlying relationships and *cannot be fully detached* from the context in which it was initially experienced. The reason for this, of course, is that a 'first' such as blueness only exists within the context that created it. It is not, therefore, a free-standing quality (as in the *'Myth of the Given'*) – it is always dependent upon its relational context. Peirce gives the example of a diamond and its 'hardness':

> Remember that this diamond's condition is not an isolated fact. There is no such thing; and an isolated fact could hardly be real. It is an unsevered, though presciss, part of the unitary fact of nature.
>
> (EP2: 356)

The 'hardness' of the diamond is thus not a 'property' in any absolute sense; it does not exist separately from the contexts in which we experience it. Therefore, when we experience this particular quality, we

must include all of its relational context (Gallie: 1952: 191). The hardness of the diamond is not, as a result, a 'fact'. It is simply a *possibility* that exists within the diamond itself and which is actualized, or not, in the relationships in which we encounter it.

Importantly, this also means that we do not know all of the properties that a diamond possesses because we have not experienced it in all possible circumstances. It may contain properties that will arise in new contexts and which exist within the diamond '*in potentia'*. It could, for example, turn green if taken to Pluto. This insight has implications for Peirce's account of signs. The elements of signs exist in the world, awaiting a relational context to reveal them.

To summarise, Peirce's 'firsts', seem, at first, to be a category of experience that has similarities with nominalist 'atomised' sense data, or with Lockean 'secondary qualities'. But these similarities are misleading. 'Firsts', in themselves, combine both the experiential and the mental because they are prescinded qualities that are experienced in an embodied form. Equally, they are perceived directly - which means that they are real. They are not simply the 'effects' of the world in our mind. 'Firsts' are, additionally, relational in nature because we encounter them in embodied states. As such, they are quite unlike the abstract ideas of nominalism. Finally, although they are the most elementary of Peirce's three categories, they are *not* foundational in relation to human knowledge.

4.2) Secondness

The category of secondness, as the name suggests, is fundamentally dyadic; it involves the interaction of two entities. It works in two ways; either between two 'objects' in the world, or between the world and the self. Peirce gives an example of the latter - the pressing of one's shoulder against a half open door (EP2: 150); it involves effort on one's own part, but also the resistance of the door itself. Another example is the experience of being hit on the head by a man carrying a ladder (ibid). On both occasions there is a sense of effort and of resistance; it involves an acknowledgement of something 'other' than oneself:

> We find secondness in occurrence, because an occurrence is something whose existence consists in our knocking up against it. A hard fact is of the same sort; that it to say, it is something which is there, and which I cannot think away, but am forced to acknowledge as an object or second beside myself, the subject or number one, and which forms material for the exercise of my will.
>
> (EP1: 249)

Secondness is also experienced when we observe two objects interacting with each other in the world; our diamond being scratched would be an

example. It is important to stress, in such cases, that these are just 'raw' experiences – they do not lead us to any conclusions about causal laws - as these would then become 'thirds' (Stearns: 1952: 201):

> We not only thus experience Secondness, but we attribute it to outward things; which we regard as so many individual objects, or quasi-selves, reacting on one another. Secondness is only while it actually is. The same thing can never happen twice.
>
> (EP2: 268)

Secondness, therefore, is a dyadic experience which is perceived momentarily (*footnote eight*). Peirce is, therefore, careful to point out that secondness does not involve two entities *having a relationship*, because this would last through time. As Boler states: '*Although secondness can be experienced, it is non-conceptual'* (Boler: 1963: 122) This, however, still leaves open the possibility that secondness is little more than a *single* experience of a dyadic event. As such, it might possibly collapse into firstness. Peirce, however, rejects this objection because a 'second' must involve a *limitation* of a sense experience. It must involve interaction and resistance. Murphey thus rightly describes secondness as *'upagainstness'* (Murphey: 1993: 373). It is how we discover limits in the world.

Secondness amounts to the experience of something 'other'. We must be careful, however, not to conclude that this amounts to an assertion of objectivity. As noted, Peirce is anti-dualist and his notion of secondness does not equate to our experience of an 'objective world'. This is occasionally misunderstood by commentators. Olteanu, for example, argues that *'objectivity is the definition of secondness'* (Olteanu: 2015: 267), Semetsky states that 'seconds' are *'matter',* or *'the mechanical aspect',* of the natural world (Semetsky: 2010: 64; 66), and Stearns suggests that secondness is the *'category of existence'* (Stearns: 1952: 201). Elsewhere, Smith even goes so far as to suggest that secondness represents *'causality'* (Smith: 2010: 39).

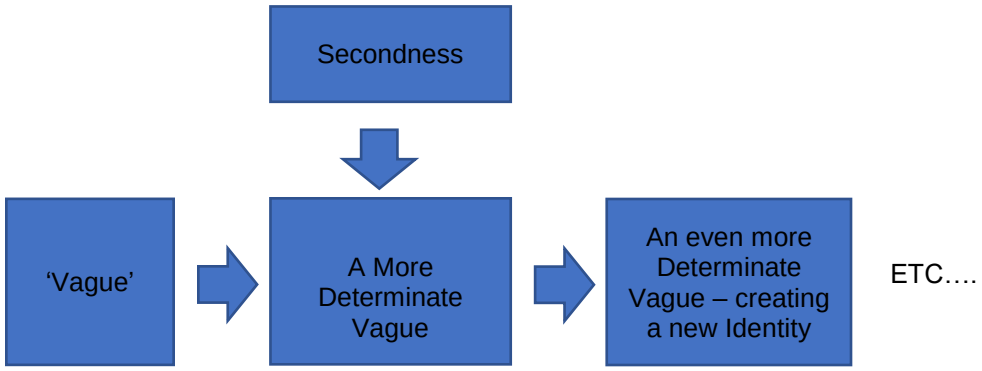
Secondness, however, should be viewed in the context of Peirce's analysis of perception. There we saw that Peirce construes our perceptions as fundamentally *indeterminate* (e.g. they are *'vagues'*). The key role of secondness, as a result, is *to set limits on the indeterminacy of our perceptions*. This is why Peirce describes secondness in the first quotation in this section as being '*a hard fact'* (EP1: 249) and why Peirce tends to use two specific verbs when discussing secondness – those of *'struggle'* and *'surprise'*:

> The next simplest feature that is common to all that comes before the mind, and consequently, the second category, is the element of *Struggle.*
>
> (EP2: 150)

> But precisely how does this action of experience take place? It takes place by a series of surprises.
>
> (EP2: 154)

Secondness, therefore, involves the discovery that the world is not how we expect it to be. This is pivotal to an understanding how Peirce views the formation of concepts. He maintains that reality has a role in this process through the action of secondness. In the Introduction of this thesis we saw, in diagrammatic terms (i.e. Fig 2), how perceptual 'vagues' become progressively more determined. We can now frame the action of secondness in this context – for it is this action that causes 'determination' to take place:

Fig 5



This is how reality, for Peirce, plays a role in determining the meaning of our concepts. If follows that our resulting concepts can only contain the meanings that reality permits them to have – our concepts begin to acquire a *logical* character that is dictated by reality itself. In contrast, a semiotician, such as Saussure, would argue that our culture has a 'free hand' in creating the meanings of our words.

As an example, Saussure might argue that our culture has arbitrarily separated 'tigers' from domestic 'cats' – by using the two terms to denote them. He might argue that we could have easily named them both, using just one term, as 'cats' (see Gergen's quote, for example, in sub-section 1:2). Peirce would point out, however, that this would be quite foolish. If we attempted to feed the large stripy 'cat', it might eat us instead. Reality – in the form of 'secondness' would thus has a role in demonstrating that cats and tigers should be denoted by different terms. We are not, it turns out, free to 'divide up' the world in an arbitrary manner. For Peirce, in *'A Guess at the Riddle',* this is what secondness involves; it limits us:

> It [secondness] is very familiar, too; it is forced upon us daily: it is the main lesson of life. In youth the world is fresh and we seem free; but limitation, conflict, constraint and secondness generally, make up the teaching of experience.
>
> (EP1: 249)

And Peirce uses the analogy of the sail on a ship returning from a storm:

> With what secondness: *'doth she return with overweathered ribs and ragged sails'*
> (ibid)

Secondness is, therefore, the action of reality upon us. It thwarts our plans, it limits the 'breadth' of our concepts, and makes us revise the scope, and, therefore, the meaning, of our words. Very importantly, however, secondness is not representing anything *behind* our perceptions – Peirce's advocacy of secondness does not amount to him revising his rejection of dualism.

Importantly, Peirce's efforts to distance himself from Hegel come to a head with his concept of secondness. Peirce criticises Hegel for giving too much emphasis to what Peirce calls 'thirdness' (CP5: 79). This, he claims, does not allow reality (via secondness) to play a sufficient role in the development of knowledge. It entails a neglect of what Peirce calls the *'Outward Clash'* (EP1: 233). Let us consider Peirce's arguments on this point, and then evaluate whether Peirce is justified in his claims.

In Peirce's view, Hegel adopts a triadic model that describes the development of human knowledge, but it removes reality from the dialectical process. Hegel claims that this process is carried out as a *matter of logic* - by simply considering the contradictions that an Essence may contain. Peirce views this as fundamentally mistaken. Logic alone, he believes, cannot perform this task - only secondness can provide us with the 'surprises' required to constantly revise our thinking. He argues that:

> The capital error of Hegel which permeates his whole system in every part of it is that he almost altogether ignores the 'Outward Clash'. Besides the lower consciousness of feeling and the higher consciousness of nutrition, this direct consciousness of hitting and of getting hit enters into all cognition and serves to make it mean something real.
>
> (EP1: 233)

> When Hegel tells me that thought has three stages, that of naïve acceptance, that of reaction and criticism, and that of rational conviction; in a general sense, I agree to it….. But be that as it may, the idea that the mere reaction of assent and doubt, the mere play of thought, the heat-lightening of the brain, is going to settle anything in this real world to which we appertain, - such an idea only shows again how the Hegelians overlook the facts of volitional action and reaction in the development of thought. I find myself in a world of forces which act upon me, and it is they and not the logical transformations of my thought which determine what I shall ultimately believe.
>
> (EP1: 237)

The question, however, is whether Peirce is justified in this criticism. The generally metaphysical tone of Hegel would suggest, initially, that Peirce is

quite correct. But Peirce is overlooking important aspects of Hegel's position. Firstly, there is the fact that the Hegelian Notion evolves from an 'Essence' which is, itself, derived from reality. As such, the Essence potentially contains everything that is required for an *'Outward Clash'* to take place. In *'The Science of Logic'*, Hegel states:

> And yet, as it was before remarked, the notion is a true concrete; for the reason that it involves Being and Essence, and the total wealth of these two spheres with them, merged in the unity of thought.
>
> (Hegel: 1892/2014: 187-8)

Secondly, for Hegel, the *on-going* nature of experience constantly brings new 'Essences' to the dialectical process. These will always demand integration with other Essences. This means that reality is always providing new inputs into the overall formation of our concepts. And, thirdly, Peirce overlooks the fact that Hegel sees concepts as informing our perceptions. This means that each time that we use an evolving concept we are re-evaluating its utility in the world. As such, it is clear that Hegel does, in fact, allow reality to play an on-going role in concept formation. And Hegel even goes on, in the same passage, to reject the very position that Peirce accuses him of:

> The Logic of the Notion is usually treated as a science of form only, and understood to deal with the form of notion, judgment, and syllogism as form, without in the least touching the question of whether anything is true. The answer to that question is supposed to depend on the content only. If the logical forms of the notion really were dead and inert receptacles of conceptions and thoughts, careless of what they contained, knowledge about them would be an idle curiosity which the truth might dispense with. On the contrary they really are, as forms of the notion, the vital spirit of the actual world.
>
> (ibid: 189-90)

This passage shows that Hegel is, indeed, alert to the charge that his notions are detached from reality and that they have no input from the world. Hegel's *'Logic of the Notion'* means, therefore, that we cannot make meanings by ourselves, or as a matter of our will ('*a science of form only*'). And this is also, of course, a refutation of the future Saussurian view that concepts are formed arbitrarily. Such a position is dismissed by Hegel because it implies that our concepts can be formed in a way that is '*careless of what they contained'.*

The interpretation of Hegel, put forward here, is also supported by Kaag, who points out that Hegel's concept of 'Essence', in the German, is '*Wesen'* and that this *'stems from 'Gewesen' (been), the past participle of Sein'* (e.g. 'Being') (Kaag: 2011). Kaag argues, as a result of this, that an Hegelian 'Essence' will include all previous empirical experience.

It seems, therefore, that Peirce, in his eagerness to distance himself from Hegel, may have overlooked these key aspects of his thought and, like

many subsequent philosophers, tended to see Hegel in more metaphysical terms. As a result, Peirce overstates the difference between himself and Hegel. And, in line with this conclusion, Shapiro highlights that Peirce's criticism of Hegel on these points *'is an exaggeration which needs to be corrected'* (Shapiro: 1981: 270).

4.3) Thirdness

Having defined secondness as involving resistance, Peirce completes his account of the categories with 'thirdness'. This is the most important category for Peirce because it is the one category that provides us with knowledge of the law-like nature of reality. As we saw, secondness provides a sense of 'something else' that we react against, and which can 'surprise' us, but this *limiting* category only operates momentarily. It provides no understanding of the way in which reality operates at the level of cause and effect, or in terms of regularity. As we saw earlier, the nominalist equivalent of thirdness is the conviction that our mental *interpretations* of 'constant conjunctions' provide our understanding of the world. Peirce argues, in contrast, that reality itself exhibits the category of thirdness, that we can directly perceive it, and that 'thirds' are not interpretations.

'Thirds' are, by definition, triadic. This term needs careful explanation. Peirce sees thirdness as an additional level of experience which allows us to perceive relationships. A dyadic relationship is one that exists between two phenomena. A triadic relationship, on the other hand, is the experience *of a dyadic relationship from a third perspective*. In a synechistic model this can occur from any point in the web of relationships that make up the Universe. It is always possible, in this account, to view a dyadic relationship from a third perspective because it is inherently linked to the other two within the continuum. If the Universe is a web of such relationships (as in Leibniz's formulation), then 'thirds' are always present in reality - either explicitly or implicitly.

This has consequences in two important areas – in the social domain and in the physical world. Let us look at the social dimension first because many of Peirce's examples of thirdness are social ones. In a discussion of the act of 'giving', Peirce talks as follows:

> A presents C to B by any aggregate of dual relations between A and B, B and C, and C and A. A may enrich B, B may receive C, and A may part with C, and yet A need not necessarily give C to B. For that, it would be necessary that these three dual relations should not only coexist, but be welded into one fact.
>
> (EP1: 252)

Another example that Peirce gives is the action of a stone being haphazardly thrown out of a window by a merchant. This stone kills his son. This action can be broken down into the first action of the stone being thrown and the second action of the son being killed. It is only if we assert that the 'merchant killed his son' that we have a *single* fact of a *relationship*:

> Had it been aimed at him, the case would have been different; for then there would have been a relation of aiming which would have connected together the aimer, the thing aimed, and the object aimed at, *in one fact* (my italics).
>
> (EP1: 254)

Thirdness, therefore, is the bringing together of two actions under one heading and perceiving them as *one* relationship. This enables us to think about two events as being linked by cause and effect because we now construe them as one event, or *as one identity*. Peirce, therefore, believes we experience thirdness at a perceptual level, enabling him to circumvent the problems of atomism. Hume argued that such connections can only be established via inference. Peirce, in contrast, not only suggests that these connections are justified, but also that they can be perceived (Peirce, for example, talks of the *'firstness of thirdness'* (CP5: 113)). We experience thirdness as a category of being.

A 'third', because it involves identifying two phenomena *as something else,* always results in the creation of a *new identity* and, therefore, a new meaning. Peirce states that it is only through this action that meaning is created; meaning cannot derive from either 'firsts' or 'seconds' alone:

> I will sketch a proof that the idea of meaning is irreducible to those of quality [firsts] or reaction [seconds]. It depends on two main premises. The first is that every genuine triadic relation involves meaning, as meaning is obviously a triadic relation. The second is that a triadic relation is inexpressible by means of dyadic relations alone.
>
> (CP1: 345)

Meaning is, therefore, dependent on our ability to see things *as other things*. As we saw, for Saussure, this signifying (or meaning-making) effect is achieved via a 'code' operating between two *known* identities (Fig:1). But, for Peirce, it involves a completely different process - *a change in the identity in what is perceived* (see Fig 2). This action creates a new identity *in reality* – rather than an existing identity, re-interpreted in the mind, via a 'code'.

The question, of course, is whether a Peircean 'third' is, after all, just an act of 'interpretation'. Peirce argues that the mind picks out 'thirds' from the synechistic continuum because it sees them as being different from other dyadic actions. This is not an act of interpretation, but rather an act of perception. This, corresponds to his account of perceptual judgments where

we see things *as something*. This is how he construes the basic action of perception, but with 'thirds' we now have a new, and important, twist. 'Thirds' (which, ultimately, are signs) are not construed as *seeing something as something* (i.e. a perceptual judgment), but, rather, signs involve *seeing something as something else*.

This means, of course, that 'giving' and 'murder' are not viewed by Peirce as arbitrary social constructions, or 'interpretations', but rather as real phenomena in the world. As 'thirds', they exist as synthetic entities that involve both the experiential and the mental. The mental is clearly involved because 'thirds' entail a relational perspective, but this does not mean that 'thirds' are created through interpretation.

The question may arise, of course, as to where the experience of social phenomena originates. Surely, there might still have been some initial agreement, or convention, about a phenomenon such as 'giving'? But this need not be the case - because such phenomena may have originated in a manner explained by Peirce's model of perception. *Individual* members of a society may have seen the *similarities* between particular acts of 'passing a thing' from one person to another and may have perceptually classified these (via their 'perceptual judgments') in ways that made them distinct from other acts. This would have created a perceptual class of acts which developed into a distinct identity within each *individual* mind.

The social constructionist might object by saying that the *combined* effect of these individual 'perceptual judgments' would amount to the creation of 'giving' as a *cultural convention*. But this claim should also be rejected. Just because individual 'perceptual judgements' are found to be alike does not mean that they are 'socially constructed'. This would amount to saying that trees are 'socially constructed' because we all know what a tree looks like. The social constructionist needs to show that either the act of 'giving' is picked out at a social level, or that some (even tacit) social *agreement* exists as to what constitutes the act. Peirce, however, has no requirement to invoke either of these premises.

Ultimately, the social constructionist may agree with Peirce that the concept of 'giving' is derived from experience (rather than convention), but then decide to take the argument one stage further. For he, or she, might argue that we can possess the new concept of 'giving at a wedding' (where the bride and groom make a long list of what they would like) *without ever going to a wedding*. Surely, the constructionist would argue, this is an example of the *social construction* of a concept which has nothing to do with our experience of 'thirds'.

Peirce, however, would reject this argument. The idea of 'giving at a wedding' certainly 'qualifies' our notion of 'giving' and it does form a new

concept. However, Peirce would assert that this is actually the *combination of two symbols* – 'giving' and 'wedding' – to create a new one – 'giving at a wedding'. This, he would claim, is not an instance of the social construction of meaning – but rather just an example of how symbols can be conjoined together. Philosophers have recognised this kind of mental activity ever since Locke distinguished *'simple'* from *'complex'* ideas (Locke: 1690/1981: 132). It is not enough for the social constructionist to demonstrate that ideas can be combined – he, or she, has to show that meaning is created *ab initio* - and this is not achieved with the example of the 'wedding gift'.

Peircean 'thirds' also play a vital role in our understanding of the physical world. When we see two actions in a formation of 'cause' and 'effect', a 'third' means that we do not see these two actions separately, but rather *one* event:

> He is now in a third state of mind: he is *Thinking*. That is, he is aware of learning or of going through a process by which a phenomenon is found to be governed by a rule, or has a general knowable way of behaving. He finds that one action is the means, or middle, for bringing about another result. This third state of mind is entirely different from the other two [firstness and secondness]. In the second there was only a sense of brute force; now there is a sense of government by a general rule. In Reaction [secondness] only two things are involved; but in government there is a third thing which is a means to an end. The very word *means* signifies something which is the middle between two others.
>
> (EP2: 5)

In our experience of the physical world, therefore, these 'mediating' 'thirds' establish our knowledge of regularities and laws. They are, however, also directly observed and form what Peirce calls *'habits'* (CP1: 327-9). In a letter to Lady Welby, he states that:

> The third Universe consists of the co-being of whatever is in its nature *necessitant,* that is, is a Habit, a law, or something expressible in a universal proposition.
>
> (EP2: 479)

Likewise, in a paper called *'The Reality of Thirdness'*, Peirce argues that:

> ….**general principles are really operative in nature**. That is the doctrine of scholastic realism.
>
> (EP2: 183)

In this he, again, follows Hegel:

> Laws are determinations of the intellectual consciousness inherent in the world itself; therefore, the intellectual consciousness finds in them its own nature and thus becomes objective to itself.
>
> (Hegel: 1830/1971:163)

For Peirce, 'habits' belong to things in themselves (rather than just to people) and they are also '*general principles'* operative in nature. As such,

they are not mental ‘associations’, as Meyers suggests (Meyers: 1992: 518). Peirce, therefore, talks about objects themselves having ‘habits’:

> Moreover, all things have a tendency to take habits. For atoms and their parts, molecules and groups of molecules, and in short every conceivable real object, there is a greater probability of acting as on a former like occasion than otherwise.
>
> (EP1: 277)

> If we now revert to the psychological assumption originally made, we shall see that it is already largely eliminated by the consideration that habit is by no means exclusively a mental fact. Empirically, we find that some plants take habits. The stream of water that wears a bed for itself is forming a habit. Every ditcher thinks so.
>
> (EP2: 418)

> Belief is not a momentary mode of consciousness; it is a habit of mind essentially enduring for some time, and mostly (at least) unconscious; and like other habits, it is (until it meets with some surprise that begins its dissolution) perfectly satisfied. Doubt is of an altogether contrary genus. It is not a habit, but the privation of a habit.
>
> (EP2: 336-7)

In the third quotation, doubt is seen to arise in the mind when an expectation of reality (based on a ‘third’) is surprised (by secondness). A habit is then upset and a doubt created. When this occurs, we want to address the doubt and adjust our knowledge accordingly; Peirce thus talks of the *‘irritation of doubt’* (CP1: 114).

In the philosophy of Hegel, mediated entities evolve dialectically and share many of the characteristics of Peircean ‘thirds’. When they become ‘Notions’, new ‘sublated’ identities are created that also exist in reality. We saw earlier that ‘sublation’ is the critical step that allows a new identity to be formed at the end of the dialectical process. And this is, of course, exactly what happens with a Peircean ‘third’. It forms a new identity from previously perceived phenomena in a way that parallels Hegel:

> *Apropos* of this, we should note the double meaning of the German word *aufheben* (to put by, or set aside). We mean by it (1) to clear away, or annul: thus, we say, a law or regulation is set aside: (2) to keep, or preserve: in which sense we use it when we say: something is well put by. This double usage of language, which gives to the same word a positive and a negative meaning, is not an accident, and gives no ground for reproaching language as a cause of confusion.
>
> (Hegel: 1892/2014: 116)

With ‘sublation’, elements that existed in previously observed phenomena are both ‘preserved’ and transformed into the new identity. In our example of ‘giving’, the particular ‘movements’ of the gift from one person to another still exist in reality (and as two separate acts), but they are now ‘sublated’ into a ‘third’ (e.g. ‘giving’). And importantly, this new identity then becomes

‘immediate’ in our perception – because we are able to reflexively experience it as a ‘third’.

To summarise this section, Peirce understands both social phenomena and the physical laws of nature through his category of ‘thirds’. It is through ‘thirds’ that new identities, and their meanings, are created. Once formed, ‘thirds’ subsequently enable us to understand the way in which the physical world operates, and they allow us to experience social phenomena at both a cultural and a symbolic level. Meaning is not created for Hegel, or for Peirce, at a social level, or through social convention.

5) The Structure of the Peircean Sign

So far, we have focused on how Peirce construes our experience of the world – either in our perceptual judgments, or through his three categories. We have not attempted to show how Peirce believes we *comprehend* the world. Earlier, we highlighted a need to establish a bridge between empirical experience and human knowledge - across the dualistic divide - and it is this that Peirce tries to address through his account of signs. In the last section we started to see how 'thirds' form the basis of more coherent thought. But we must now consider how signs enable us to move from experience to knowledge itself and how they do this specifically through concept formation. As we shall see in due course, the precise mechanism that enables concepts to be formed is the interaction of signs with the three categories of experience – in a Peircean equivalent of dialectics.

Peirce's account of perception raises a number of questions. In assuming that our experience is intrinsically 'vague', he needs, firstly, to establish how we 'pick out' (or *'fix'*) identities within the continuum. Secondly, he is required to show how we transform such identities into concepts; and thirdly, he must establish how they evolve into complex forms of knowledge. In the next two chapters, the ways in which Peirce tackles these issues will be analysed in detail.

In this chapter, however, we begin with a detailed discussion of the key elements, and structure, of the Peircean sign. These are important for a number of reasons. Firstly, Peirce is famous for his view that signs are 'triadic' in nature - a point of difference from the binary sign of Saussure. Secondly, it is important to understand his sign structure in the way that Peirce intended – and this means understanding it in more of an Hegelian context. For example, the terms that he uses - such as 'object', and 'determine' - are sometimes passed over by modern commentators as if their meanings were entirely obvious. But we need to grasp their underlying Hegelian meaning in order to make full sense of them.

This chapter, therefore, conducts a detailed discussion of the three elements of the Peircean sign (the 'representamen', the 'object' and the 'interpretant'), their relationships with each other, and also *the order* in which they act upon each other. These discussions will also be related to our previous analysis of perception in Hegel and Peirce.

5.1) The 'Representamen'

The representamen is generally agreed to be the first element in the sign. But what does this mean? Peirce makes it clear that not all perceptions are necessarily representamens. If a perception is not caught up in the process of semiosis (and thereby results in an interpretant) it is not a representamen. At one level, it seems, therefore, that Peirce sees the representamen a 'special' kind of perception, but he is not suggesting anything like the distinction that Saussure makes between ordinary perceptions and 'sign vehicles'. For Peirce, perceptions do become involved in a process of semiosis, but until that point they are only potentially representamens:

> While no Representamen actually functions as such until it actually determines an Interpretant, yet it becomes a Representamen as soon as it is fully capable doing this; and its Representative Quality is not necessarily dependent upon its ever actually determining an Interpretant, nor even upon its actually having an Object.
>
> (EP2: 273)

The factor that changes a simple perception into a representamen is the recognition, on our part, that it is something we have seen before. The role of repetition is important here:

> The mode of being of a representamen is such that it is capable of repetition….. A representamen which should have a unique embodiment, incapable of repetition, would not be a representamen, but a part of the very fact represented. This repetitory character of the representamen involves as a consequence that it is essential to a representamen that it should contribute to the determination of another representamen distinct from itself.
>
> (EP2: 203)

These characteristics of recognition and repetition illustrate the fact that, at the beginning of the semiotic process, an *act of classification* takes place. The perceiver, however sub-consciously, asserts that one perception is similar to another. We saw, before, that this is precisely what happens when a 'perceptual judgment' classifies a percept. A representamen is essentially, therefore, a perceptual judgment that enters into a sign and eventually determines an interpretant. This firmly roots Peircean semiotics in his theory of perception.

Over his career, Peirce is quite inconsistent in his use of the term 'representamen' (*footnote nine*), but we should establish why Peirce does adopt the term on some occasions. It suggests the idea of 'representation', but it is not the sort of 'representation' that we find in the mirror of 'secondary dualism'. In the latter, a sense perception is deemed to be a 'copy' of an object 'behind' it. But we have already seen that 'perceptual

judgments' are not like this – they are not representations of the 'noumenal' world.

This is important in terms of how we understand the creation of a Peircean sign. For if the representamen is 'vague', then the central task of the signification process is to transform this status into something more clearly defined. And this observation begins to explain why Peirce describes the sign as being *determined* by its object. He uses this term because the representamen is, by its very nature, something that is *indeterminate*. And this assumption is founded in his account of perception. Indeed, Peirce even goes so far as to claim *'the universe is a vast representamen'* (CP5: 119).

To fail to understand this characteristic of the representamen is to make a fundamental mistake about the nature of Peircean semiosis. His semiotics diverges from that of Saussure in very many respects, but one critical difference is that the Peircean sign involves the development of a 'vague' representamen to a more 'determinate' sign. It follows from this that Peirce is not concerned, as Saussure is, with establishing a link between a known perception and a culturally defined meaning for it (Fig:1). He is pursuing an entirely different account of how meaning is created and it is one that follows Hegel's transition from 'Being' to 'Notion'.

There are commentators who neither fully recognise these specific characteristics of the Peircean representamen, nor its Hegelian influences. Short, for example, insists that the sign amounts to a triadic relationship of three elements – the sign, the object and the interpretant (Short: 2007: 30). In such a construal, the representamen amounts to a 'sign vehicle':

> The 'sign vehicle' *is* the sign, as Peirce conceived of signs, and the object and the interpretant are other things, distinct from the sign.
>
> (ibid: 19)

Jappy also maintains that the representamen is actually the sign, or sign vehicle:

> To conclude, then, a sign is a representamen, that is the first element in the triadic relation, but owing to the fact that that it has an animate interpreter and therefore a mental interpretant, it is but one of many different species of representamens. Nevertheless, the reader should bear in mind that Peirce adopts the term 'representamen' in many of the quotations to come and should substitute the term 'sign' for the sake of simplicity.
>
> (Jappy: 2013: 13)

Hookway, noting that Peirce's use of the term representamen is inconsistent, also suggests that we drop the term and talk, instead, simply of 'signs' (Hookway: 1985: 121). And Greenlee, likewise, argues that we

'dismiss the distinction between 'sign' and 'representamen' and speak only of signs' (Greenlee: 1973: 46).

Such interpretations will result in a number of important misunderstandings. Not only does the representamen itself become the sign itself (because it is now being treated as a 'sign vehicle'), but the subtleties of Peirce's thoughts on the 'vagueness' of the representamen are entirely lost. Moreover, for Peirce, the sign, itself, is *more than the representamen* – it is the *whole triadic relationship* created between the representamen, object and interpretant. To reduce the 'sign' to one element of this relationship (a 'sign vehicle') is thus misconceived.

Problems then proceed to multiply, however, when commentators consider what Peirce might mean by the 'object' 'determining' the sign. Firstly, they tend to miss the Hegelian meaning of the verb 'determine'. Secondly, if they have already decided that the representamen is the 'sign vehicle', then it is relatively easy to conclude (and mistakenly so) that the 'object' initiates it. This, however, results in a complete inversion of the Peircean trajectory of the sign – as we shall see in the next section.

5.2) The 'Object'

There is, perhaps, no other term in Peircean thought that causes more confusion than the 'object' in the sign. Given his strong rejection of dualism, the fact that Peirce uses this term when describing sign structure, seems something of a paradox. Is he now abandoning his anti-dualistic stance? Or is he actually using the term in a manner that incorporates his rejection of dualism?

To begin our discussion, two accounts of sign structure will be briefly considered which seem *prima facie* to have some correspondence with Peirce's position. These are included in our discussion simply as points of comparison. They serve to illustrate the problems that can arise in reading Peirce. Both accounts work, ostensibly, within his 'triadic' model and they appear to follow his sign structure.

The first of these models is in a book which had a major effect on how Peirce has been interpreted by semioticians. This is Ogden and Richards's work, '*The Meaning of Meaning'* (1989). Written in 1923, Fisch sees this work as '*the first book in any language from which it was possible to get a grasp of Peirce's semeiotic at first hand, in his own terms'* (Fisch: 1986: 345). The second work specifically discusses Peircean semiotics and has been mentioned before - Jappy's *'Introduction to Peircean Visual Semiotics'* (2013).

5.2.1) Interpretations of Sign Structure and the Peircean Model

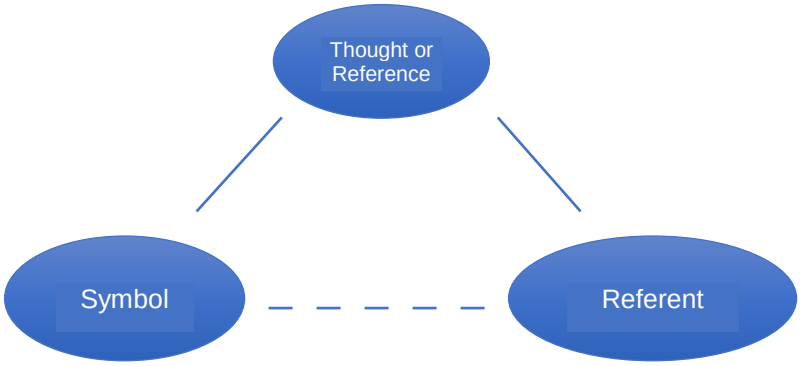
A key issue, when interpreting the Peircean sign, is to understand how the three elements of the structure relate to each other. It might be assumed that this would be a settled issue in the secondary literature, but this is far from the case.

Writing in the early twentieth century, the Ogden and Richards's approach to the triadic sign is important because it was, arguably, at this point that the Peircean 'object' became associated with being a *referent* in the outside world. In a footnote, they state, probably referring to Peirce (and possibly also in reaction to Hegel?):

> It has seemed desirable, therefore, to introduce a technical term to stand for whatever we may be thinking of or referring to. 'Object' though this is its original use, has had an unfortunate history. The word 'referent', therefore, has been adopted, though its etymological form is open to question when considered in relation to other participial derivatives such as agent or reagent.
>
> (Ogden and Richards: 1989: 9n)

Ogden and Richards recognise that there is confusion over the 'object', or that it has become a contentious term to use. Hoping to simplify matters, they introduce the term 'referent' in its place. Armed with this re-interpretation of the 'object', they introduce a triadic structure as follows:

Fig 6: Ogden and Richards's Triadic Model



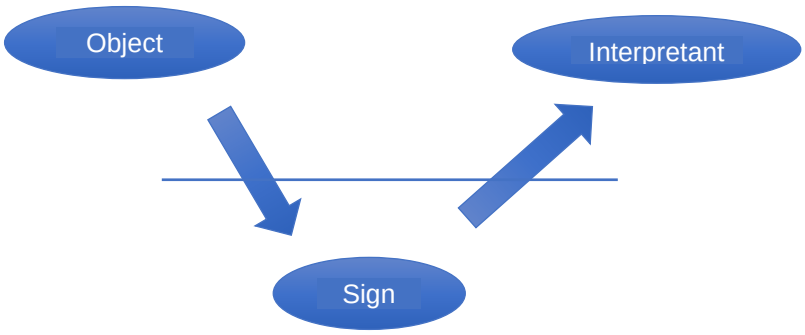
(ibid: 11)

In this model, 'thought' is placed in a central role. It 'mediates' between the symbol and the referent, creating a 'bridge' between them. Thought effectively 'translates' one into the other. This mediating role is, as a result, *interpretative* in nature. It either translates an object into a symbol (or meaning) or, conversely, it encounters a symbol and interprets it by connecting it with a referent. The mind, therefore, actively 'encodes' and

'decodes' signs in a way that closely parallels the model of 'secondary dualism' (and Saussurian semiotics).

Our second example is Jappy's account of the Peircean sign. This is another triadic model and it is one, indeed, that even claims to follow Peirce himself. It differs from the model of Ogden and Richards in that the sign is now positioned *between* the object and the interpretant - as something that translates an object into the latter - a 'meaning':

Fig 7: Jappy's Version of the Peircean Sign



(Jappy: 2013: 6)

Here, again, we have a triadic structure. We have already seen that Jappy conflates the notion of the representamen with that of the sign – hence the absence of this term in his diagram. Critically, Jappy views the order of sign action as being:

From Object …….to Sign …….. to Interpretant

However, like Ogden and Richards, Jappy's model places the *object* at the beginning of the chain – it starts the semiotic process and it acts as a source of 'transmission'. But, in this model, the sign is now positioned between the object and interpretant:

> …the arrows indicate the direction of the semiotic 'determination flow', so to speak – from the object to the interpretant via the sign.
>
> (ibid: 6)

This is also a structure that Short thinks is present in Peirce:

> The basic scheme, of object determining sign determining interpretant, clearly goes back to his 1868-9 papers in The *Journal for Speculative Philosophy*….. On the one hand, Peirce wants to say that signs are produced by their objects and produce interpretants: varieties of causal language are employed, apparently efficient not final in meaning….
>
> (Short: 2007: 165-6).

And Smith sees the representamen/object/interpretant relationship along the same lines (Smith: 2010: 38-9). In these models, the sign now acts as if it were a *communication vehicle* between the object and the mind. The sign is thus construed as being *caused* by the object, and as 'carrying' meaning.

Elsewhere, there are still other interpretations of Peircean sign structure. Ma, for example, suggests that the *interpretant* should be placed in the middle of the sign (rather than as the concluding element) and this echoes the model of Ogden and Richards:

> The mediatory effect of the *interpretant* in the *sign-object* relation is predicated on the meaning of a sign being tied to the cultural, historical milieu within which the sign is understood.
>
> (Ma: 2014: 379)

And Semetsky follows a similar line of argument in suggesting that the interpretant should be placed between the representamen and the object (Stables and Semetsky: 2015: 17).

It is clear, therefore, that there is considerable debate on even the basic issue of Peirce's triadic sign structure. Some commentators adopt intrinsically dualistic models, but it would, indeed, be paradoxical for Peirce to adopt these. He would also be unlikely to adopt the notion of 'referents'. We need to explore, therefore, other ways of understanding the Peircean 'object'.

Reading Peirce, there does, however, seem to be ample evidence for the Jappy/ Short interpretation. For example, Peirce states:

> I will say that a sign is anything, of whatsoever mode of being, which mediates between an object and an interpretant; since it is both determined by the object *relatively to the interpretant*, and determines the interpretant *in reference to the object*, in such wise as to cause the interpretant to be determined by the object through the mediation of this 'sign'.
>
> (EP2: 410)

But if we look further, we find Peirce also says that:

> I define a Sign as anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its Interpretant, that the latter is thereby *mediately* determined by the former. My insertion of 'upon a person' is a sop to Cerberus, because I despair of making my own broader conception understood (my italics).
>
> (EP2: 478)

In this passage Peirce seems to state, initially, that the object determines the sign, but he then goes on to say that the interpretant is '*mediately'* determined by the object. This suggests that the object is in the middle of

the sign *between* the representamen and the interpretant. So why does he begin by saying that the 'sign' is determined by the object? The solution lies in the fact that the overall sign, for Peirce, is more than the representamen – *the sign is all three of its elements in combination with each oth*er. As such, the sign comprises the whole triadic structure, including the 'object', and so it is the object *within the sign* that determines its meaning. In this account, therefore, the sign creates a triadic relationship that places the 'object' in a mediating role.

One of the key arguments of this thesis is that the 'object', in the Peircean sign, is not a source of the sign's transmission – rather the 'object' is one of the correlates *within* the sign – and it is from this mediating position that it then determines the interpretant. This claim will now be discussed in detail because it forms one of the main bridges between Peircean and Hegelian thought. Peirce states that:

> But in order that anything should be a Sign, it must 'represent', as we say, something else called its Object.
>
> (CP2: 230)

This quotation seems, again, to endorse the view that a sign should be understood in terms of dualism – the sign seems to 'stand for', or 'represent', the object 'behind it'. But in the same paper, Peirce also argues that:

> The sign stands for something, its *object*. It stands for that object, not in all respects, but in reference to a sort of idea, which I have sometimes called the *ground* of the representamen.
>
> (CP2: 228)

So it is clear that matters are more complicated than they first seemed. We have already noted that the representamen is a 'vague'. What Peirce is suggesting here is that the sign takes the representamen and makes it 'represent' the 'object' in some, but *'not in all respects'*. One, or more, elements of the representamen are, therefore, 'picked out' in the sign – and this forms its *'ground'*. This process of 'picking out' occurs on the basis of similarity and will become an important aspect of our discussion of iconicity. But at this stage, we should simply note that, on the one hand, the representamen is not taken at face value, and never *in toto*, and that, on the other, the 'object' constitutes a *selection* from the representamen. As such, the 'object' is, in fact, *a partial creation of the mind.*

We can now begin to identify elements of the Peircean sign in our earlier discussion of Hegel. For Hegel, the mind, when confronted with indeterminacy of 'Being' (i.e. the representamen), posits an 'Essence' which is a partial approximation of reality. The 'Essence' is an imperfect representation of this reality, but it is one that is improved dialectically over time. As this happens the 'Essence' comes closer to representing reality

more accurately. I would contend that the ‘object’ in the Peircean sign is operating in a similar manner. Selected elements of the representamen ‘stand for’ the object (in a partial and imperfect manner) and, as such, act as a working hypothesis of what the ‘object’ actually may be.

On this basis, the relationships within the Peircean sign structure begin to look very different. We perceive the representamen, and the ‘object’ (within the sign) is our *posited* response to it. A sign begins to form and, through sign action, this leads to the creation of an interpretant which completes the formation of a triadic relationship. The ‘order’ between the elements of the Peircean sign should thus be as follows:

Representamen… (the mind’s creation of the) Object… Interpretant

In this interpretation of the Peircean sign, the interpretant is still ‘determined’ by the object. But, crucially, this now takes place through the *mediating* action of the object in the sign.

On the basis of these arguments, it is proposed that it is far more useful to think about the ‘object’ in the Peircean sign as being *‘an object of thought’*. It does not act as an initiating source of signification, but as a mediating entity within the sign. As a result, Peirce is not referring to an object that ‘exists’ in the world; he is not contradicting himself and now re-committing himself to dualism. As a result of this, for the sake of clarity, and when appropriate, the ‘object’ in the sign will be described in the rest of this thesis as an ‘object of thought’.

To summarise, some commentators position the elements of the Peircean sign in an order that views the ‘object’ as the sign’s initiator. In so doing so, these models either suggest that the mind acts as a ‘bridge’ between an object and a symbol, or that the whole sign acts as a mediating entity between an object and the mind. These assumptions, however, tend to echo nominalist models of perception. They do not reflect what Peirce is proposing; and neither do they recognise his rejection of dualism. In contrast, Peirce views the ‘object’ as being ‘posited’ by the mind when it is confronted with the ‘indeterminacy’ of the representamen. In this approach, Peirce is, in fact, paralleling the Hegelian relationship between ‘Being’ and ‘Essence’.

We shall now consider the philosophical context surrounding Peirce’s use of the term ‘object’. Is there an historical foundation for the interpretation of the ‘object’, as a mediating entity, that is proposed here?

5.2.2) The 'Object': Kantian, Medieval, and Hegelian Models

In order to understand Peirce's usage of the word 'object', we need to recognise that he is a nineteenth century writer immersed in Kantian and Hegelian philosophy. Both of these philosophers use this term in a specific manner, and in a way which is embedded in German Idealism. The origins of the term, however, also go back much further than this. The concept has medieval roots, and Peirce is also influenced by Duns Scotus (Boler: 1963) in this respect. There are, consequently, several philosophical pathways leading to Peirce's use of the term 'object' - and which are generally unfamiliar to modern readers.

The most useful way to understand Peirce's concept of the 'object' is to begin with a quotation from Kant. This is a well-known passage at the start of the section in the *'Critique of Pure Reason'* entitled *'The Idea of a Transcendental Logic'*. Kant states:

> We are so constituted that our **intuition** can never be other than **sensible**; that is, it contains only the mode in which we are affected by objects. The faculty, on the contrary, which enables us to **think** the object of sensible intuition is the **understanding**. Neither of these properties is to be preferred to the other. Without sensibility no object would be given to us, without understanding no object would be thought. Thoughts without content are empty, intuitions without concepts are blind.
>
> (Kant: 1781/2007: 85-6)

Here Kant talks of *'the object of the sensible intuition'* and he states that *'without understanding no object would be thought'*. Kant is clearly using the term 'object' in a different way to modern parlance; it is, for him, a mental entity employed by the mind in an act of comprehension. Kant also claims that human knowledge is made from the *fusion* of sensibility (which provides sense data) and our understanding - and that these are combined in *mediating* entities. As Kant famously concludes in this passage, '*Thoughts without content are empty, intuitions without concepts are blind'.* Synthetic knowledge cannot exist, he argues, without both elements of this epistemological equation in place and the existence of an entity (e.g. an 'object of thought') where they are synthesised.

The implications of this for our understanding of Peirce are clear. It both confirms that the 'object' should be viewed as operating in a mediating role, and also that it is neither exclusively extra-mental, nor intra-mental. Instead, the 'object of thought' combines, for Kant, experiential and mental components and, because it mediates, it is able to transcend dualism. And it corresponds, as a result, with other aspects of Peirce's philosophy.

Peirce, in his own writings, often uses the word 'object' in this Kantian fashion. Examples can be found at CP1: 115, CP1:132, CP2: 230, CP8: 15,

CP3:93, EP1: 7, EP1: 43, EP1:46, and EP1:91. This use of the term is sometimes noted by commentators (e.g. Murphey: 1993: 40), but, on the whole, it is infrequently referenced in the secondary literature. On occasions, however, Peirce could not make his meaning clearer:

> Indeed, what Kant called his Copernican step was precisely the passage from the nominalistic to the realistic view of reality. *It was the essence of his philosophy to regard the real object as determined by the mind.* That was nothing else than to consider every conception and intuition which enters necessarily into the experience of an object, and which is not transitory and accidental, as having objective validity. *In short, it was to regard the reality as the normal product of mental action, and not as the incognizable cause of it* (my italics).
>
> (EP1: 90-91)

This Kantian approach is also present in German Idealism. Hegel uses the term 'object' in the same manner; again, it is created by the mind:

> The real nature of the object is brought to light in reflection; but it is no less true that this exertion of thought is *my* act. If this be so, the real nature is a *product* of *my* mind, in its character of thinking subject….
>
> (Hegel: 1892/2014: 26)

And:

> Now by concreteness of contents it is meant that we must know the *objects of consciousness* as intrinsically determinate and as the unity of distinct characteristics (my italics).
>
> (ibid: 48)

This usage is clearly important in relation to Peirce's use of the term. Inwood, an Hegelian scholar, helps to clarify the potential confusion that surrounds it. He highlights that Hegel, in fact, uses *two words* in German which are both translated as 'object':

> He [Hegel] stresses the etymology of *Gegenstand* more than that of *Objekt*, so that a *Gegenstand* is essentially and immediately an object of knowledge etc, whilst an *Objekt* is at least initially independent. A *Gegenstand* is an intentional object whilst an *Objekt* is a real object.…. A *Gegenstand*, by contrast, may be the object of a simple form of consciousness, such as sense certainty, which is not yet a fully-fledged subject.
>
> (Inwood: 1992: 204)

It is clear, as a result, that whilst Peirce often speaks of conventional 'objects', he also uses the term 'object' in the same manner as Hegel uses '*Gegenstand'*. The fact that the latter can be an *'object of a simple form of consciousness'* parallels Peircean use of the term in the sign.

As such, Hegel also views the 'object of thought' as something that develops over time - a position that we will also encounter in Peirce. In the *'Phenomenology of Spirit',* Hegel argues that when consciousness is

confronted with reality, in an unexpected form, it is the 'object' (*Gegenstand*) that changes:

> If the comparison shows that these two moments do not correspond to one another, it would seem that consciousness must alter its knowledge to make it conform to the object. But, in fact, in the alteration of the knowledge, *the object alters for it too*, for the knowledge that was present was essentially a knowledge of the object: as the knowledge changes, *so too does the object*, for it essentially belonged to this knowledge (my italics).
>
> (Hegel: 1977: 54)

This distinction between two kinds of 'object' can also be found elsewhere. When Deely discusses the sign, he makes a similar distinction between *'objects'* and *'things'*. He argues:

> Now there is a great difference between an object and a thing, however confusedly the two notions are made to play in popular culture. For while the notion of thing is the notion of what is what it is regardless of whether it be known or not, the notion of object is hardly that. An object, to be an object, requires a relation to a knower, in and through which relation the object as apprehended exist as terminus. A sign warning of 'bridge out' may be a lie, but the thing in question, even in such a case, is no less objective than in the case where the sign warns of a 'true situation'.
>
> (Deely: 2002: 136)

And again:

> Objects as such exist only in relation to a knower, a being that is aware or virtually aware of them; whereas 'things' by definition are what they are regardless of whether anyone is aware of them or not.
>
> (Deely: 2008: 26-7)

If we go further back in Western philosophy, we find this usage of the term 'object' is also found in more ancient sources. In the Duns Scotus's view, individual sense data are the 'objects' of the senses (e.g. colour is an 'object' of sight) (Lagerlund: 2007). Thus, in order to understand an 'object', as it exists in reality, it is necessary to have an additional, and *mediating,* 'object', which forms within the mind. As Pasnau explains, it is this second 'object' that renders something cognizable:

> He [Scotus] gladly allows that the external object is present – that it has *real presence* – and that it is the efficient cause of the cognitive act. Still Scotus insists that this is not enough to account for cognition. Another kind of presence is needed, the presence of the object-as-cognized.
>
> (Pasnau: 2003: 289)

This insistence on the *'object-as-cognized'* also explains how we can have concepts of things that we have not encountered in experience. And this parallels the Peircean view that signs can have 'objects' which are fictitious:

> Of course the object in itself can be present and can make an impression on our cognitive faculties. But that does not explain cognition: that sort of relationship obtains throughout the natural world, between the sun and a rock, or waves and a beach. To account for the special sort of relationship at work in cognition, Scotus appeals to a further kind of presence….. It is this sort of presence, here said to be brought about through species, that is required for the intentional relationships found in cognition. The need for this special kind of presence is more clear in cases in which the object of thought is not itself present. Even here, thought has a kind of relationship to an object: one must be thinking about something. But since the object has no *real* presence, and so exerts no causal influence, the relationship is entirely conceptual.
>
> (ibid: 289-90)

This passage is interesting because Pasnau differentiates between physical relationships, such as the *'waves and a beach'* (Peirce's 'dyadic' relationships), and the relationships that are involved in perception. As we saw, an act of cognition must involve the perception of something *as something* and this requires a *conceptual* component (an 'object of thought') provided by the perceiver.

Elsewhere, Jacques Maritain also describes how the early modern philosopher, Poinsot, employs the term 'object':

> The concept is a *mediator;* by and in it the object is brought into the womb of the mind in the state of ultimate intellectual actuation. Thus, our intellect attains things only according as its concepts render them present to it. The manner of our understanding corresponds to the more-or-less complete, or the more-or-less defective way in which the thing is objectified in the concept.
>
> (Maritain: 1995: 416)

And Tweedale confirms this view (in a book with a sub-title which explicitly mentions 'objects of thought' in medieval philosophy):

> Toward the end of the thirteenth century a distinction between *esse subjectivum* and *esse objectivum* comes into common usage among the scholastics. Perhaps the first thinker to make heavy use of it is John Duns Scotus. The idea here is that something might have two ways of existing: (1) a real existence in no way dependent on being the object of any mental act or state; (2) existence as an object of some mental act or state. The former is *esse subjectivum*; the latter, *esse objectivum*. Something can have either of these without the other, or both at once.
>
> (Tweedale: 2007: 73)

It is of note, of course, that it is the '*esse objectivum'* (and not the *'esse subjectivum'*) that involves the action of the mind here (*footnote ten*).

Returning to Peirce, there are, a number of places where he explicitly confirms the interpretation of the 'object' that is being proposed here. In a letter to Lady Welby, he explains what he means by the term:

> I use the term 'object' in the sense in which *obiectum* was first made a substantive early in the XIIIth century; and when I use the word without adding *'of'* what I am speaking of the object, I mean anything that comes before thought or the mind in any usual sense.
>
> (SS: 69)

And elsewhere, he argues that:

> By an *object,* I mean anything that we can think, *i.e*. anything we can talk about.
> (MS [R] 966: Quoted in Olteanu: 2015: 261)

And even more compellingly, Peirce writes about potential manifestations of the 'object':

> The Objects – for a Sign may have any number of them – may each be a single known existing thing or thing believed formerly to have existed or expected to exist, or a collection of such things, or a known quality or relation or fact, which single Object may be a collection, or whole of parts, or it may have some other mode of being, such as some act permitted whose being does not prevent its negation from being equally permitted, or something of a general nature desired, required, or invariably found under certain general circumstances.
>
> (CP2: 232)

It is clear in this passage that the 'object' is created by the mind - it is an 'object of thought'. As Ransdell points out, Peirce's semiotic is *'about objects of thought as such'* (Ransdell: 1976: 98).

The view of the 'object' being put forward here may have its critics. They will point out, quite correctly, that there are numerous occasions where Peirce talks about 'objects' as if they are objects in a dualistic sense. But, as noted above, Peirce is not reverting to a form of dualism in his use of the term 'object'. What he doing, instead, is using the word 'object' in the pre-modern sense of being an 'object of thought'. Such 'objects of thought' are neither 'objective', nor 'subjective', in nature, because they are synthetic.

Additionally, and as noted earlier, there are always two stages in the *'life of the sign'* – the phase where it begins to form a concept, and the second stage where it is reflexively observed in the world. We can accept that Peirce often fails to distinguish these two usages clearly enough, and that there are many occasions when he appears to be talking about a conventional 'object'. But these instances should not be seen as evidence that he is adopting a dualistic stance. They are merely examples of occasions when we experience objects in the real world through signs.

This account, however, still leaves an unanswered question; what precisely is the relationship between the representamen and the 'object of thought'? This brings us to the contentious (and, again, misconstrued) issue of what Peirce means by the verb *'determine'*. We have already seen that Peirce

does not mean ‘initiate’ or ‘cause’. So what, precisely, does Peirce mean by this term?

5.2.3) ‘Determination’

The concept of ‘determination’ also creates much confusion in the secondary literature. Like the word ‘object’ these mis-interpretations relate to Peirce’s usage of a term that is commonplace in Hegel. Peirce often employs the word in his definitions of the sign and we have already observed several instances of this. Here is further example - with an indication (and significantly in German this time) of what the term ‘determination’ may mean:

> A Sign is a Cognizable that, on the one hand, is so determined (i.e. specialized, *bestimmt*) by something *other than itself*, called its Object….. while, on the other hand, it so determines some actual or potential Mind, the determination whereof I term the Interpretant created by the Sign, that that Interpreting Mind is therein determined mediately by the Object.
>
> (EP2: 492)

This quotation, again, unequivocally places the *object* in a mediating role – the *‘Interpreting Mind is therein determined mediately by the Object’*. However, such passages can still be read as suggesting that *‘determined’* means ‘caused’. We have already discussed Jappy’s account of sign structure, and there are other examples of this interpretation. De Waal, for example, claims that the object ‘*compels the sign’* (De Waal: 2013: 87). Likewise, Hookway, seeking to explain the Peircean ‘object’, uses the example of some ‘stripped bark’ that acts as a sign:

> The stripped bark, here, is the sign; as its object we can take the deer or the fact that there have been deer nearby; and the interpretant is our thought that there are deer nearby.
>
> (Hookway: 1985: 122)

Hookway here sees the deer as the ‘object’ and as the *cause* that leads to the bark being stripped. ‘Determination’, in these accounts, suggests that we must look for a ‘cause’ of the sign.

Short, however, is more nuanced in his discussion of ‘determination’. He fully recognises the importance of the term to Peirce and devotes several pages to its meaning. He correctly identifies that ‘*there is considerable trouble over how the relation of object to sign and of sign to interpretant is to be conceived’* (Short: 2007: 165). Crucially, he recognises, in line with the quotation above, that the word that Peirce often uses is the German term ‘*bestimmen*’ and that its meaning is ‘*to limit as in ‘The water’s edge determines where your property ends*’ (ibid: 167). Short concludes, as a result, that *‘each object limits, or determines, what may be a sign of it, and*

each sign similarly determines what may be an interpretant of it' (ibid) and that *'objects determine their signs and signs determine their interpretants'* (ibid: 168). Whilst setting aside the mistaken order that Short suggests here in the sign itself, his account is, in fact, much closer to a true understanding of the term 'determine'. But Short still does not take the critical step of making any connection with the *indeterminateness* of our perceptions.

Given our discussion of Peircean perception, however, we are in a much better position to explicate precisely what Peirce means. Because he believes that our perceptions are intrinsically *indeterminate*', it follows that the 'object' now has a clear role to play – to encapsulate a more 'determinate' identity compared with the 'vague' representamen. In other words, the 'object of thought' limits the representamen. This procedure is never entirely accurate, or exhaustive, enough to make the 'object of thought' completely 'determined' (i.e. an absolute representation of reality itself), but this process renders it more 'determinate' than the initial representamen. This is the beginning of concept formation; as Peirce clearly puts it: *'…thoughts are determinations of the mind'* (CP4: 582).

It is important to understand how this process takes place. Usefully, one of Peirce's editors entered into correspondence with him on this subject. Peirce clarified his position in a letter entitled '*What is Meant by Determined'.* Peirce states, referencing Hegel:

> Perhaps, therefore, I shall do well to state more fully than I did before, the manner in which I understand Hegel (in common with all other logicians) to use them. Possibly, the original signification of *bestimmt* was 'settled by vote'; or it may have been 'pitched to a key'. Thus its origin was quite different from that of 'determined', yet I believe that as philosophical terms their equivalence is exact. In general, they mean 'fixed to be *this* (or *thus*), in contradistinction to being this, that, or the other (or in some way or other).
>
> (Writings of C.S. Peirce: 1867-71 (Vol. 2) 1982: 155-6)

The meaning of 'determined' is, therefore, linked to the idea of 'fixing'. When the representamen is 'determined' by the 'object', the latter *specifies* the former (at least provisionally). In other words, it determines (or *'fixes')* the representamen as one thing, and not another. In an unpublished manuscript Peirce says:

> Potentiality is the absence of Determination (in the usual broad sense) not of a mere negative kind but a positive capacity to be Yea and to be a Nay.
>
> (MS 277:1)

This clearly corresponds with the idea of 'limiting' which Short highlights. Elsewhere, Peirce also describes 'determination' as the adding of *'depth'* because it involves specification. As Liszka notes:

> Reasoning processes that are focused primarily on the increase or decrease in depth, respectively, are called *determination* and *depletion*. Determination is the process of reasoning by which we add greater and greater depth, more and more predicates to a particular subject (CP2: 422). A complete determination would involve a display of all the predicates that apply to some subject.
>
> (Liszka: 1996: 70)

If we consider the pre-modern roots of this Peircean account, the *'Isagoge'* of Porphyry is clearly an influence here. This major text in medieval universities argued that 'species' are contained within their 'genera'. As we move down the 'Porphyrian Tree', we move from higher 'genera' towards manifestations, or 'species', that are more 'determined' (Barnes: 2003). At each lower level the 'indeterminate' genus becomes more specified (hence 'species') and, as a result, comes closer to *identifying* an individual. In this manner specific identities are created through a process of *determination*.

It is very easy for the modern mind to interpret the tree of Porphyry, in nominalistic terms, as a *'catalogue',* or as a *'classificatory system'* (Semetsky: 2015: 48). In the hands of Peirce, however, it is a mechanism that demonstrates how secondness forces us to distinguish discrete identities within the Phaneron:

> A genus characterised by Reaction will, by determination of its essential character, split into two species, one a species where secondness is strong, the other a species where the secondness is weak, and the strong species will subdivide into two that will be similarly related, without any corresponding subdivision of the weak species.
>
> (CP5: 69)

This pre-modern model reflects Peirce's use of the word 'determine' and the vital action of secondness. When we initially encounter a representamen, we encounter it is a 'vague' which can be given greater 'determinateness':

> Suppose, for example, two Englishmen to meet in a continental railway carriage….. If one mentions Charles the Second, the other need not consider what possible Charles the Second is meant. It is no doubt the English Charles the Second. Charles the Second of England was quite a different man on different days; and it might be said that without further specification the subject is not identified. But the two Englishmen have no purpose in splitting hairs in their talk; and the latitude of interpretation which constitutes the indeterminacy of a sign must be understood as a latitude which might affect the achievement of a purpose.
>
> (CP5: 448n)

> We can only say, in a general way, that a term, however determinate, may be more determinate still, but not that it can be absolutely determinate. Such a term as 'the second Philip of Macedon' is still capable of logical division - into Philip the drunk and Philip the sober, for example….
>
> (CP3: 93)

Peirce believes, therefore, that greater 'determination' can be given to our concepts as they become more 'limited' in their scope. This creates a vision of the concept that involves what Peirce calls *'breadth'* and *'depth'*. He argues that every concept develops, over time, a combination of these two dimensions which determine its overall meaning – or its *'information'* (EP2: 305). The more predicates a concept possesses the more 'specified', or determined, it will become.

The belief that the action of the mind (in combination with experience) leads to greater determinations in a concept was widespread in the late eighteenth century. Kant also uses the verb 'determine' in the *Critique of Pure Reason* (Kant: 1781/2007: 487-94) and a contemporary of Kant's, Salomon Maimon (*footnote eleven*) even proposed a *'Principle of Determinability'* (Bergman: 1967: 97). In this historical context, it is not at all surprising to find Hegel using the same term. In the *'Encyclopaedia Logic'* he says:

> What are called concepts, and indeed determinate concepts, e.g. man, house, animal etc, are simple determinations and abstracted representations.
>
> (Hegel: 1830/1991: 242)

And Hegel highlights the process of 'determination', or 'separation', when specifically distinguishing them from the activity of taking intuitions at their face value (e.g. the 'Myth of the Given'):

> Since the understanding behaves toward its objects in a way that separates and abstracts them, it is thereby the opposite of immediate intuition and feeling, which as such, deal entirely with the concrete and stick to that.
>
> (ibid: 126)

It is clear, therefore, that the idea of 'determination' is also present in Hegelian thought. This usage is frequently misunderstood in accounts of Peircean semiotics and, as such, this serves to further confuse interpretations of the term 'object'.

The sign, therefore, contains a mediating 'object of thought' that determines the representamen. Peirce believes that this process of determination occurs through the action of secondness:

> Experience is that determination of belief and cognition generally which the course of life has forced on man. One may lie about it; but one cannot escape the fact that some things *are* forced upon his cognition. There is the element of brute force, existing whether you opine it exists or not.
>
> (CP2: 138)

So reality refines our experience by determining, or limiting, our 'objects of thought'. An 'object of thought' emerges (in a sign) when we initially select

certain aspects of the representamen. This act of selection, as with Hegel's 'Essences', is always provisional. But reality nearly always forces us to revise our initial hypothesis. In so doing, any previous determinations (contained in the 'object of thought') can be reinforced, further limited in their scope, or new ones formed. Reality thus has a critical say in concept formation. We have no choice, it turns out, in the process of deciding what is actually contained within our concepts.

In contrast, one of the key tenets of Saussurian semiotics is that we have the freedom to choose (at a cultural level, at least) how signifiers are linked to their signifieds. Peirce, we can now see, rejects this view because our concepts are determined by reality. At one level, he does agree that we can 'arbitrarily' decide, in a game of chess, for example, to use an old bottle top to 'stand for' a rook. But this is a special case of sign action – and one that Peirce indeed recognises (see section 6.2). It is not, however, how signs operate in general, or in relation to our empirical experience of the world.

It is clear, therefore, that the development of a mediating 'object of thought' is connected with the creation of meaning within the sign. We have already encountered the activity of meaning-making in our discussion of 'thirds'. These begin to emerge as 'objects of thought' slowly develop within the sign. Peirce argues that:

> This third state of mind is entirely different from the other two [firstness and secondness]. In the second there was only a sense of brute force; now there is a sense of government by a general rule. In Reaction [secondness] only two things are involved; but in government there is a third thing which is a means to an end. The very word *means* signifies something which is the middle between two others. (EP2: 5)

The mediating 'object of thought' thus creates meaning in the sign by determining what it represents. It is in *'the middle between two others'* and, as we shall see, it goes on to form an interpretant. The 'object' is not, therefore, the initiator of the sign.

5.2.4) Immediate and Dynamic Objects

With the evolving 'object of thought', our grasp of reality becomes progressively more determined. As such, Peirce is not rejecting the existence of reality as such. This impasse would only occur if we assumed that reality is, in some sense, 'behind' our perceptions. Peirce, in contrast, sees the semiotic task as one which involves the development of conceptual structures *within our experience* of the Phaneron. And reality has a central role to play in this activity - as it helps us establish what is contained, or not contained, within our concepts. This is why that Peirce calls himself an *'objective idealist'* (EP1: 293), rather than an 'idealist'.

As we build our ‘objects of thought’, some become more developed than others. In the latter part of Peirce’s career, he begins to make a distinction between two types of ‘object of thought’ on this very basis. These he describes as the ‘immediate’ and the ‘dynamic’ objects in the sign.

So how are these distinguished? In the relational world of Peirce’s Phaneroscopy, like Leibniz’s Universe, it is possible to view a particular phenomenon from many different perspectives. This means that we will have *degrees* of understanding of a particular ‘object of thought’ depending on our relational acquaintance with it.

To take an example, a large piece of metal with four rubber wheels at each corner, can be classified as a ‘means of getting to work’, a reflection of ‘my status in life’ or, if I am standing in the outside lane of the M1, a ‘source of my imminent death’. These are all possible ways classifying the same ‘object’; they are revealed in different contexts and also in different levels of completeness (e.g. the car can still be a potential source of my death even if I am sitting at home). What matters is the context, or the level of determination, in which an object is encountered.

For Leibniz, we have only a limited understanding of reality – and only God knows the entire relational network of the Universe. In these circumstances, he argues that we must accept that we have only *partial levels of comprehension* - which he calls *‘nominal definitions’* - and which he contrasts with the *‘real definitions’* that are known by God. These ‘nominal definitions’ are, of course, provisional and can always be revised. In his ‘*New Essays Concerning Human Understanding’* Leibniz states:

> So there is a kind of redundancy in our perceptions of sensible qualities as well as of sensible portions of matter: it consists in the fact that we have more than one notion of a single subject. Gold can be nominally defined in various ways – it can be the heaviest body we have, the most malleable, a fusible body which resists cupellation and aquafortis, etc. Each of these marks is sound, and suffices for the recognition of gold: provisionally, at least, and in the present state of the bodies around us. So we can say that in matters where we have only the empiric’s kind of knowledge our definitions are all merely provisional.
>
> (Leibniz: 1996: 299-300)

This is the same distinction that Peirce is making between ‘immediate’ and ‘dynamic’ objects. What Leibniz is distinguishing is an ‘object of thought’ as it is immediately, or partially, known (e.g. in particular circumstances) and an ‘object of thought’ as it could potentially be construed, and if we had many perspectives on it. If we apply this way of thinking to our car, Peirce’s ‘dynamic object’ includes all of the potential perspectives as to what the car could be - on different occasions, and in different contexts.

Curiously, there seems to be a form of dualism here, but this is very different from the metaphysical dualism of the nominalist. The latter distinguishes between what we actually experience and what we think might exist *behind* reality. Peirce's (and Leibniz's) distinction, in contrast, differentiates between actual (and partial) understandings and more complete (but potential) understandings. And the difference resides in the fact that Leibniz, and Peirce, both assume that we are *immersed* in a relational Universe.

At the heart of this distinction is the question of what type of reality we are working with. The Kantian position suggests a world that is still *separate* from the spectator. A commentator, such as Apel, tends to see Peirce's semiotics as an attempt to *cross* this dualistic divide (Apel: 1995: 366-397). He calls this *'meaning critical realism'* (*footnote twelve*) (Apel: 1981: 28). But an alternative model of reality exists, and this views our consciousness as *immersed in a web of relations*. This model places Peirce much closer to Leibniz than to Kant. Peirce rejects Kant's 'transcendentalism' (CP2: 113) and he adopts the Leibnizian model that seeks to establish the 'real definitions' of things.

This Leibnizian template also explains why Peirce views signs as being potentially *interpretable*, even when they are not actually being interpreted (EP2: 404). In a system in which entities are defined by their relationships with each other it must follow that each entity is potentially interpretable from every other point of view in the system.

In this context, Peirce defines the object that we initially encounter as the 'immediate' object and he argues that it provides us with just a '*hint*' of what the 'dynamic' object might be. In a letter to Lady Welby in 1908 he states:

> It is usual and proper to distinguish two Objects of a Sign, the Mediate without, and the Immediate within the Sign. Its Interpretant is all that the Sign conveys: acquaintance with its object must be gained by collateral experience. The Mediate Object is the Object outside of the Sign; I call it the *Dynamoid* Object. The Sign must indicate it by a hint; and this hint, or its substance, is the *Immediate* Object. (EP2: 480)

Peirce is also keen to insist that the dynamic object is *not* some noumenal reality that exists 'behind' the immediate object and, in another letter, to William James in 1909, he explains that he has deliberately *not* called the dynamic object the 'real' object:

> We must distinguish between the Immediate Object, - i.e., the Object as represented in the Sign, - and the Real (no, because perhaps the Object is altogether fictive, I must choose a different term; therefore:), say rather the Dynamical Object, which, from the nature of things, the Sign *cannot* express,

> which it can only *indicate* and leave the interpreter to find out by *collateral experience*.
>
> (EP2: 498)

The *'dynamical object'* is thus the 'object of thought' in all of its relational richness. It is what we would know if we were omniscient, or had the time and energy to consider an object from all of its relational perspectives (via '*collateral experience*'). This would give us an understanding of how reality is formed by *relationally defined entities* (Raposa: 1984: 154).

It is significant that Peirce initially wants to use the term '*real*' to describe the dynamic object, but he deliberately chooses to avoid this term because he knows that such a description will be interpreted in a dualistic manner. Many commentators, however, do not appreciate Peirce's desire to avoid this trap, and falling into it themselves, assume that Peirce admits of some kind of 'objective' reality. Short, for instance, whilst giving an excellent analysis of the dynamic object still concludes that:

> The dynamic object is exactly that about which more can be learned. Therefore, it must be independent of our experience of it.
>
> (Short: 2007: 199)

Here he slips from the correct idea that we have incomplete experience of the dynamic object to the erroneous conclusion that it is '*independent*' of us. He, therefore, ignores Peirce's synechistic (and Leibnizian) view that we are immersed in reality and have only a partial grasp of objects. Short concludes that Peirce's position must take him back to idealism:

> We are back to idealism again, semiotic idealism specifically.
>
> (ibid: 191)

This reluctance to accept Peirce's rejection of dualism also emerges with other commentators. Liszka (1996), for example, explains the 'immediate' object, but, picking up on the idea of 'dynamism', focuses on the idea *compulsion* when he defines the 'dynamic object'. This then reinforces the 'transmission' interpretation of the Peircean sign that we have seen before:

> The dynamic object can be considered as the dynamism, the machine that drives the semiotic process; it is what compels the sign.
>
> (ibid: 21)

Indeed, Liszka goes on to illustrate his version of sign action with a diagram (ibid: 32) that places the dynamic object at the beginning of the signification process. This is a long way from the model of partial and complete 'objects of thought' that Peirce actually is proposing. Elsewhere, Nöth suggests that Peirce's dynamic object '*seem(s) to have committed him to an ontological realism'* (Nöth: 1990: 43) and Hausman, likewise, argues that:

> It is clear that Peirce regarded the dynamical object as having a pre-interpreted, pre-triadic, and yet constraining function with regard to interpretation.
>
> (Hausman: 2012: 82)

Deledalle also seems to misunderstand Peirce on this point. He rightly accepts that knowledge of the dynamic object is gained by '*collateral experience*', but argues that such knowledge cannot be '*direct knowledge of the dynamical object'* itself. He concludes, in dualistic fashion, that:

> We must therefore, unless we fall back into idealism, admit the *existence* of an 'external' object: the dynamical object, which is *'as it is regardless of any particular aspect of it, the Object in such relations as unlimited and final study would show it to be'* (CP: 8.183). What is known is thus the relations of an *existing* object independent of ourselves in the course of the semioses in which we are, it and ourselves, engaged.
>
> (Deledalle: 2000: 46)

Like Short, Deledalle has taken the fact that we have no direct knowledge of the dynamic object to mean that it is *'independent of ourselves'*. The only alternative, he concludes, is idealism – adopting an inherently dualistic and binary position. Proni likewise asserts that the dynamical object is equivalent to Kant's noumenal reality:

> The Dynamical Object is that which puts the whole process in motion, standing behind the scenes, unreachable in its completeness (as in *Ding an Sich* in Kant), but effective in its empirical existence.
>
> (Proni: 2015: 19)

And, finally, Greenlee reaches the same conclusion with the dynamical object viewed as having 'noumenal' characteristics:

> The dynamical object is the represented thing, as it is in itself, *apart from relation to thought*, while that same thing, brought into relation to thought, is the 'immediate' object (my italics).
>
> (Greenlee: 1973: 66)

Instead, Greenlee should recognise that the dynamical object, within the web of the Universe, is simply the end point towards which our 'object of thought' is evolving – it is not something '*apart from relation to thought'.*

In summary, each of these Peircean commentators fail to reflect his rejection of dualism. Peirce's view, in contrast, is that the evolving 'object of thought' is how we encapsulate our growing understanding - as it comes closer and closer to the 'dynamical object' (*footnote thirteen*). In doing so, it becomes both richer in content and more rooted in reality. As Deely points out, *'before there are signs, there are signs virtually…'* (Deely: 1994: 381) and it is this semiotic fact that drives the evolving nature of the 'object of thought'. Peirce's notion of the 'dynamical object', therefore, stands in complete opposition to the nominalist model which asserts a vision of reality without such relations.

5.3) The Interpretant

The interpretant is the third element of the Peircean sign and it is, again, a subject of much debate in the literature – and not only because of the word that Peirce has chosen for it. He uses the word 'interpretant' - not because it is an 'interpretation', but because the interpretan*t itself* acts as an 'interpreter'. We need to explore, therefore, why Peirce insists that an *interpreter* is not the same as an *interpretation*.

We have already seen that the representamen has an 'indeterminate' nature and that the role of the 'object of thought' is to determine greater specification of it. The outcome of this determining process is the interpretant – a transformation of the 'object of thought' into something that is also deemed to exist in the world (and not just in the mind). This is the semiotic action that transforms objects made of wood into 'tables' and a rings of metal into 'signs of love'. Peirce thus defines the interpretant as a '*proper significate outcome'*:

> For the proper significate outcome of a sign, I propose the name, the *interpretant* of the sign. The example of the imperative command shows that it need not be of a mental mode of being.
>
> (CP5: 473)

Why should Peirce be so concerned that the interpretant is not an interpretation? What is important to him is that the outcome of the sign is not simply a 'psychological' 'interpretation' of a perceived phenomenon. If this were the case, then he would be letting nominalism re-assert itself. He wants to avoid this and to show, in contrast, that sign action *changes the identity of the representamen* (in the world). This transforms the representamen by *giving it a new identity* – which Peirce calls the interpretant. Interpretants (which can be either natural or cultural) exist all around us; they are how we experience world (as tables and chairs); they are not merely our 'interpretations' of it.

This is why Peirce stresses the role of the '*interpreter*' because an interpreter is the someone that says that one thing is *equivalent* to another (i.e. that two different identities are the same):

> Such a mediating representation may be termed an *interpretant*, because it fulfils the office of an interpreter, who says that a foreigner says the same thing which he himself says.
>
> (EP1: 5)

Earlier, it was noted that concepts are created when thirdness becomes involved in our understanding. And we saw that Peirce sees 'thirds' as undergoing Hegelian 'sublation'. We can now link together these two

aspects of Peirce's thought to see how thirdness is involved in the creation of new 'mediated' identities, or interpretants.

If we observe an indentation in the snow we see this as a *dyadic* relationship – the shape in the snow is caused by something impacting on it. But we may also understand it as a 'footprint'. When we do this, we create a 'third' because we now see the indentation as something that is more than just an impact of one substance upon another. We are experiencing it as a *sign* of human presence; in other words the mark in the snow is now a *new identity* (a footprint) that exists in reality. We saw the same process at work when Peirce described the merchant hitting his son. This could be viewed as a dyadic relationship; but, if it is construed as an 'act of murder', we have created a new identity from the two events of the brick being thrown and it hitting the son. This is, of course, exactly what signs do and the outcomes that are created in this process are called 'interpretants' – they are new realities existing in the world for which merchants, in this particular example, can be imprisoned.

The interpretant, framed as a *new identity*, is critical for Peirce. But commentators sometimes misunderstand this essential aspect of his semiotics; instead, they reach for different verbs to describe what is happening – and ones that sometimes refer to 'sending' messages, or to 'communication'. The example of the footprint is, in fact, borrowed from Liszka (1996: 90). Instead of recognising that the footprint creates a new identity, Liszka sees it as an instance of *'transmission'*:

> Consequently, there is, in a sense, a *transmission* of form or character to the hunter by means of the footprint in the snow, but no *communication*, strictly speaking.
>
> (ibid)

But an interpretant has nothing to do with 'transmission'; it is, instead, an example of Hegelian *sublation*. The interpretant takes our previously experienced sense data and *translates* them into a 'third'. This new identity can then be used by the mind to understand the world more effectively.

Later in his career, Peirce makes distinctions between different types of interpretant in the same way as he distinguishes types of 'object'. Because he maintains that the interpretant is a *new form of reality* (a new identity), rather than simply an 'interpretation', he creates three types of interpretant that correspond to his three *experiential* categories. This means that the interpretant, itself, can be *experienced*, either as a 'first' (an *'emotional interpretant'*), as a 'second' (an *'energetic interpretant'*) or as a 'third' (a *'logical interpretant'*):

> The first proper significate effect of a sign is a feeling produced by it. There is almost always a feeling which we come to interpret as evidence that we comprehend the proper effect of a sign, although the foundation of truth in this is

> frequently very slight. This 'emotional interpretant', as I may call it, may amount to much more than that feeling of recognition; and in some cases, it is the only proper significate effect that the sign produces….. If a sign produces any further proper significate effect, it will do so through the mediation of the emotional interpretant, and such further effect will always involve an effort. I call it the energetic interpretant…….It can never be the meaning of an intellectual concept, since it is a single act, [while] such a concept is of a general nature. But what further effect can there be?
>
> In advance of ascertaining the nature of this effect, it will be convenient to adopt a designation for it, and I will call it the *logical interpretant*, without as yet determining whether this term shall extend to anything beside the meaning of a general concept, though certainly closely related to that, or not.
>
> (CP5: 475-6)

Peirce is here making the same distinctions that we encountered earlier – the 'first' is concerned with feelings, the 'second' is concerned with reaction and effort, whilst the 'third' is focused on the understanding. These three interpretants build upon each other in the same way as do the three categories of experience. This occurs because interpretants (as 'thirds') are directly experienced in the world – and this parallels the Vygotskian notion that we possess *'verbalised perceptions'*.

To summarise, we have seen that the interpretant is the final element of the sign as it moves from experiential 'vagues' to the creation of synthetic concepts. These are formed as potential new identities that may exist in the world. It follows from this that if semioticians come to Peirce with a Saussurian frame of mind they will fail to recognise the project that he is embarked upon. If they assume (e.g. Jappy: 2013: 6), that we already know the identity of the representamen (or 'signifier'), then it is inevitable that Peirce's analysis of the evolving 'object of thought' will be misunderstood. And in doing so, commentators will fail to grasp that the interpretant is, in fact, a new identity. Instead, they will simply construe it as a 'meaning', or an 'interpretation'. And this entails a failure to understand the Hegelian framework within which Peirce is working.

6) Icons, Indices, Symbols and Concept Formation

We have now evaluated Peirce's account of perception and his three experiential categories. We have also discussed the elements of the triadic sign and how these relate to each other. These elements do not, however, provide us with knowledge of the world.

If we assume, incorrectly, that what Peirce means by 'objects' are everyday objects, then we will never understand how 'objects of thought' are formed. But if we acknowledge that 'objects of thought' are a primary concern of Peirce, and that they are working hypotheses (like Hegel's 'Essences'), then what we must understand is how they are developed within the sign. What sort of process is this? How is an 'object of thought' initially formed and how does it evolve? These are the semiotic questions that will be addressed in this chapter – in a detailed account of Peirce's icons, indices and symbols. The focus of these discussions will be the way these three sign types allow us to semiotically initiate, and build, the 'object of thought' in the sign. Crucially, the signs that are involved in this process should not be construed as different types of signs that we perceive; rather, they should be interpreted as different *staging posts* in the development of fully-fledged concepts. Each of the sign types that we consider in this chapter are, as a result, formed at particular points as the three Peircean categories intersect with the three different elements of the sign.

When we considered the philosophy of Leibniz, these questions relating to the formation and development of mental 'objects' did not need to be addressed. Given that Leibniz gives a central role to God in his system, his 'objects of thought' (or rather his 'monads') already exist in the 'mind of God'. They simply await discovery by the human mind. This option is not available to Peirce; he needs to provide an account of how we develop 'objects of thought' from our perceptions.

To begin with, however, we must evaluate how Peirce classifies his different sign types, how they interact with his three categories, and, in particular, how Peirce views the roles of the three central sign types of the 'second trichotomy' – icons, indices and symbols. These three signs are frequently considered to be a major part of his contribution to semiotics, but, as we shall see, the 'received' view often misrepresents them.

6.1) Peirce's Classification of Signs

Peirce's classification of signs is notorious for its complexity and, in the words of Short (1986) can become a *'journey into darkest semiotica'*. Hookway, likewise, calls the classification *'bewildering'* (Hookway: 1985: 125). Muller (1994: 135-153) also explores the ways in which various commentators have tried to elucidate it. The underlying problem, however, is that these commentators often fail to recognise what Peirce is trying to achieve with this classification. Unable to acknowledge that the main purpose of Peircean signs is to form concepts, they approach his classification mistakenly armed with *known* perceptions (instead of 'vagues'), on one hand, and with *fully-fledged concepts*, on the other, and then try to establish semiotic links between the two. For Peirce, however, the whole purpose of his classification is to demonstrate how concepts are derived from vagues. This serves to entirely reposition his classification. Instead of being an obscure diversion into *'darkest semiotica'* it forms *the Peircean equivalent of Hegelian dialectics.* As such, I will discuss Peirce's classification in terms of how it parallels the thinking of Hegel and the workings of his 'objective logic'.

To begin with, it is essential to recognise that the sign is triadic in two senses. It involves *three* categories combining with the *three* elements of the sign (Savan: 1994: 184). This leads to a delineation of the nine basic signs types. On the one hand, we have three *experiential categories* of firstness, secondness and thirdness. On the other, three *elements of the sign* which, together, facilitate greater knowledge of the world – the representamen, the object and the interpretant.

We must now understand how these two sets of triads interrelate in a way that is cumulative in nature. This is how, in Peirce's view, we form mediated concepts. Peirce's classification of sign types is found in many secondary sources (e.g. Nöth: 1995: 45, Olteanu: 2015: 73), and is as follows:

Fig 8:

	Element of the Sign: Representamen	Element of the Sign: Object	Element of the Sign: Interpretant
Category of Firstness (Monadic)	Qualisign	Icon	Rheme/Term
Category of Secondness (Dyadic)	Sinsign	Index	Dicent Sign /Dicisign/ Proposition
Category of Thirdness (Triadic)	Legisign	Symbol	Argument

The above table has deliberately not included, on the horizontal axis, any *verb* that specifies the relationships between the representamen, object and interpretant and the three categories - because we need to discuss these specific relationships.

It must be acknowledged, however, that some commentators do not agree with even this basic classification (Sheriff: 1994: 41, Olteanu: 2015: 73; Feibleman: 1970: 93). Feibleman, for example, places three other terms along the horizontal axis – Sign, Ground and Object – thereby limiting the scope of the term 'sign' and confusing matters by placing 'object' in the column that should be occupied by the term 'interpretant'. Meanwhile, Sheriff and Olteanu place the categories of firstness, secondness and thirdness along the horizontal axis *as well as* the vertical one. This latter strategy creates both its problems and its benefits. A disadvantage is that they lose the opportunity to show how each of the elements of the sign interact with the categories (although Olteanu does discuss this in his text). And, secondly, they make it harder to follow the transition from 'vagues', in the first column, to more specific statements about the world in the third (where we find rhemes, dicents and arguments). But one advantage of placing the categories along the horizontal axis is that this shows *how* the elements of the sign are experienced (e.g. monadically, dyadically, triadically etc). As such, a potential revision of Peirce's classification would be:

Fig 9:

	Representamen	Object	Interpretant
Category of Firstness (Monadic)	**Qualisign** A monadic form of firstness	**Icon** A monadic form of Secondness	**Rheme** A monadic form of Thirdness
Category of Secondness (Dyadic)	**Sinsign** A dyadic form of firstness	**Index** A dyadic form of Secondness	**Dicent/Dicisign** A dyadic form of Thirdness
Category of Thirdness (Triadic)	**Legisign** A triadic form of firstness	**Symbol** A triadic form of Secondness	**Argument** A triadic form of Thirdness

This way of thinking still seems very abstract, but it reflects occasions when Peirce does, indeed, talk about a *'first of a first'* (e.g. CP1: 543). However, if we now apply our learnings from previous sections, including our observations on the 'object' as an 'object of thought', we can propose the following tabulation:

Fig 10:

	Representamen	'Object of Thought'	Interpretant
Category of Firstness (Monadic)	A vague, or indeterminate, quality	A vague, or indeterminate, object (of thought)	The possibility of a relationship
Category of Secondness (Dyadic)	The actuality of a quality	The actuality, or actualities, of an object (of thought)	The actuality of a relationship
Category of Thirdness (Triadic)	A quality as part of a 'system', or 'law'	An object (of thought) as part of a 'system', or law	A relationship as part of a wider system, or law

It must be admitted, however, that this formulation still remains rather difficult to comprehend. But it can be given concrete manifestation with the provision of an example. At this point, commentators (e.g. Liszka: 1996: 48-52) often give *disconnected* examples of the different sign types. But if we are going to understand how a single concept is progressively formed within the sign, then we must show how its *systematic* growth takes place:

Fig 11:

	Representamen	'Object of Thought'	Interpretant
Category of Firstness (Monadic)	Feeling a vague sensation (which turns out later to be wetness).	An 'hypothesis' that I am experiencing 'rain'	'Rain' as a possible concept in a proposition
Category of Secondness (Dyadic)	Feeling the actual (but vague) sensation on my skin (a dyadic relationship)	Whilst hypothesising that this might be rain, I also know that I am getting wet (an indexical link)	A proposition about rain
Category of Thirdness (Triadic)	Feeling that this (vague) sensation of is one that I have felt before	Knowing that this is 'rain' (it is now an identity), and being able to tell someone else about it (via a symbol)	An argument about the consequences of getting wet in the rain

This revision of Peirce's classification follows the evolving trajectory of a particular sign, or concept, from its experience as a 'vague' through to its emergence in a system of other concepts. Fundamentally, this way of considering Peirce's classification emphasises that this process is *dynamic*. Peirce is not interested in classifying signs as static entities; Stjernfelt, indeed, highlights that Peirce is often interpreted as a *'taxonomist of signs'* (Stjernfelt: 2007: 118). Short is a case in point here (Short: 2007: 207-231).

But this is the wrong way to view his classification. Rather, Peirce wants to show how sign action operates as a developmental force. Muller shares this view, recommending that we move from a *'statics of classification'* to a *'dynamics of semiosis'* (Muller: 1994: 145).

In day to day experience, we encounter a spectrum of 'signs' at many different stages of this developmental process - from qualisigns, to signs with developing 'objects of thought', through to fully evolved symbols. We always encounter, as a result, a range of signs and these include various evolving 'objects of thought' in the second trichotomy. These 'objects of thought' can be experienced as just emerging; or they may be ones that we recognise as existing in the world; or perhaps they are ones that have evolved to achieve symbolic status. The development of the sign is thus, to borrow the phrase from Vygotsky, a *'natural history'*. Peircean signs should, as a result, be seen as 'staging posts' on a continuum of concept development. To take an example, the Eiffel Tower can be understood as a simple physical object, or as a symbol of France. The overlap between these two positions is determined by how well the 'object of thought' is developed in the minds of different individuals.

Peirce's classification also provides a solution to the problem that Saussure and Barthes encountered with regard to the initiation of the 'associative axis'. We saw earlier that their way of identifying how meaning is formed is circular. But we now have an alternative solution to this problem. In Peirce's view, we are often confronted by experiences which are on the verge of becoming 'objects of thought'. If they develop in this way they enter into the realm of semiotics. When they do this they become potential centres of meaning. In contrast, for Saussure and Barthes, an associative axis is only recognised when a meaning is *already established*, and can be seen to change. For Saussure and Barthes, paradigmatic identification, therefore, requires meaning to exist already, whilst, for Peirce, his 'objects of thought' emerge organically within a dynamic process of meaning creation.

Linked to this argument is the way Peirce uses the term 'sign'. We have seen that he views signs as being essentially *triadic* in nature and that they necessarily involve thirdness. It is, therefore, surprising to find him discussing 'qualisigns' that have yet to achieve this level of semiotic complexity. We must recognise, however, that Peirce wants to identify how the elements of the sign *all contribute to signification*. At the early stages of development they are not *'genuine'* signs (and he designates these as *'degenerate'* (EP2: 306)). Peirce is, therefore, using the term 'sign' to show that different signs combine with each other in concept formation. What can easily look like terminological confusion is, in fact, evidence of Peirce's theoretical perspective.

Although there is some risk of over-simplification here, a dynamic 'movement' takes place through Peirce's classification system. It acts 'downwards' in first column and then moves on, in similar fashion, in the second and third columns. It concludes, in the bottom right hand corner, with the 'argument'. There is, as a result, a 'spiral' action as signs build upon each other to form concepts. Paradoxically, this results in ten sign types as outlined in the appendix (*footnote fourteen*). Andacht comments on this cumulative action - and the dangers of assuming it is a static framework:

> If we do not act with theoretical caution, the Peircean sign classification may be misunderstood, and that would lead us to a static, non-triadic, reductionistic conception of the real functioning of signs in the world, as if each kind of sign worked in isolation from each other, or even worse, according to a nominalistic and dualistic mechanism.
>
> (Andacht: 2013: 519)

6.2) Qualisigns, Sinsigns and Legisigns

Before embarking on a detailed discussion of Peirce's icon we should look briefly at the three 'signs', in the first trichotomy of the representamen. This is important - if only to show what is *not included* in these concepts and what is subsequently added in the second trichotomy.

Peirce describes the 'qualisign' in his essay entitled *'Nomenclature and Divisions of Triadic Relations, as Far as They Are Determined'* as follows:

> A *Qualisign* is a quality which is a sign. It cannot actually act as sign until it is embodied; but the embodiment has nothing to do with its character as a sign.
>
> (EP2: 291)

The qualisign, therefore, is not a quality as such – but only the *possibility* of a quality. It is not a sign in its own right and it can only be observed as part of a sinsign. Effectively, it must be *embodied* in something in order to be experienced – as we saw in our earlier discussion of 'firsts'. An example of a qualisign is the perceptual experience of a shade of red. But we cannot say that it is a shade of 'red' at this point – it simply fulfills the *possibility* of being such. Critically, we can only say that it is 'red' once we have classified it in the column where an 'object of thought' is formed. At this point, in contrast, it has no *actualised* identity.

Two points are important here. Firstly, we should recognise that the qualisign, because it is a representamen, is still a 'vague'. It might be shade of red, but it also might be shade of 'crimson', or 'magenta'. Secondly, this account parallels precisely the discussion of percepts and perceptual judgments that we encountered earlier. The percept is a 'vague' that is

subsequently classified by the perceptual judgment. This is exactly what a qualisign is too. It is a 'possibility' because it could turn out to be any one of several colours, or even another quality altogether. And, as we noted, perceptual judgments are always open to revision. The only difference, in the case of the qualisign, is that the 'vague' has now become enrolled in a sign.

Peirce, in the same work, defines a sinsign as follows:

> A *Sinsign* (where the syllable *sin* is taken as meaning 'being only once' as in *single, simple*, Latin *semel*, etc.) is an actual existent thing or event which is a sign. It can only be so through its qualities; so that it involves a qualisign, or rather, several qualisigns. But these qualisigns are of a peculiar kind and only form a sign through being actually embodied.
>
> (EP2: 291)

It is easy to mistake what Peirce is saying here. There is much agreement as to what he intends by the qualisign, but when we come to the sinsign we encounter a range of interpretations. The correct one relies upon a clear understanding of what is included, and what is not included, in this sign type – and this depends on an understanding of what the columns and rows in his classification relate to. At this point we have a dyadic (but once only) relationship; and, critically, no 'object of thought' is yet involved - so we are still dealing with a *possibility*. In the above quotation Peirce stresses that the sinsign involves the embodiment of a qualisign (or several qualisigns). But we are still not sure what that embodied quality actually is. A sinsign, therefore, is simply a 'vague' quality that is embodied. Jappy claims, quite incorrectly, that a 'sketch' or a 'photograph' are sinsigns (Jappy: 2013: 13). In doing so, he commits the error of giving the embodiment *an identity* - and this is to run far ahead of ourselves.

Likewise, Liszka (1996) when discussing sinsigns, talks about a *'red buzzer'* (ibid: 36), thereby, rather precipitously, giving the 'red experience' an identity. At this point in the classification, the sinsign is still a 'vague'; but it has, at least, become actualised in 'something'. In other words, we have not reached a level where we have an identifiable 'object of thought' – although we have identified *something* that is embodied (and hence Peirce's emphasis on singularity in the name).

The last of the three signs in this column (the legisign), Peirce describes as follows:

> A *Legisign* is a law that is a sign. This law is usually established by men. Every conventional sign is a legisign. It is not a single object, but a general type which, it has been agreed, shall be significant. Every legisign signifies through an instance of its application, which may be termed a *Replica* of it. Thus, the word, 'the' will usually occur from fifteen to twenty-five times on a page. It is in all these occurrences one and the same word, the same legisign. Each single instance of it is a replica. The replica is a sinsign. Thus every legisign requires sinsigns. But

> these are not ordinary sinsigns, such as are peculiar occurrences that are regarded as significant. Nor would the replica be significant if it were not for the law which renders it so.
>
> (EP2: 291)

Legisigns, therefore, rely on a conventional 'law' or 'rule' to give them a significant value. But, again, we must be careful here. A hieroglyph on a page is an example of a sinsign, and it could also be what Peirce calls a 'replica' in a system of legisigns (Jappy: 2013: 33-4). However, a legisign does not tell us anything about the world. The legisign is '*a general type which, it has been agreed, shall be significant'*. It does not yet relate to an 'object of thought' that is rooted in reality. Peirce thus maintains that no specific 'object of thought' is involved in a qualisign, a sinsign or a legisign.

The legisign, therefore, *includes* conventional signs, but *exclude*s reference to the real world. This is misunderstood by some commentators, such as Short. He believes that the notion of 'laws' extends to the natural realm, and so he looks for 'conventionality' within this sphere. As a result, he sees legisigns as including conventional natural signs and he suggests that the signs created by mating grouse are legisigns because they have a purpose (Short: 20078: 211-12). But if we avoid the mistake of associating 'laws' with the natural world, we can see that legisigns are systems of signs created exclusively by the human mind. As such, we are now in a conceptual space that, in fact, allows *arbitrary* signs to be created. We can, for example, 'decide', as in our earlier example, that a bottle cap 'stands for' a rook in a game of chess. We can simply agree this amongst ourselves without reference to any empirical meanings in the world. This is why Peirce argues that '*this law is usually established by men'*. In otherwords, the whole of Saussurian semiotics can be found, arguably, in this part of Peirce's classification (of legisigns and sinsigns). This is the area where arbitrariness does, in fact, hold sway.

The full implications of this analysis only become clear, however, when we reach the next stage of the sign's development - that of the icon. The role of this pivotal sign type is to begin the process of giving the emerging sign (or concept) an empirical foundation in the world. The icon is able to achieve this because it is the first sign type which introduces an 'object of thought'. As such, we will now see how the icon forms the lynchpin of Peirce's account of signification – the 'bridge' that allows our transition from perceptual experiences to empirical knowledge.

6.3) Peirce on Icons

We have already discussed several misconstrued aspects of Peirce's thought. But a further, and major, area of misunderstanding emerges with our next subject - that of the icon. The irony is that this aspect of his thought is often viewed as one of Peirce's main contributions to semiotics.

The following analysis of the Peircean icon will form three broad parts; we will begin with the 'received' view of the icon. Umberto Eco's analysis of Peirce's position in his influential *'A Theory of Semiotics'* (1976) will be considered as an example of this perspective. Secondly, we will also look at how Eco changes his views on the icon in '*Kant and the Platypus'* (Eco: 1999) and consider more recent discussions of the icon as contributed by Stjernfelt in what he has called the *'iconic turn'* (Stjernfelt: 2007).

The third section will outline a revised account of the Peircean icon. This will place it within a context that relates it to the philosophy of Hegel – a task that is seldom attempted in the secondary literature.

6.3.1) The Icon: The 'Received' View

The 'received' view of the icon asserts that it involves a relationship of 'similarity' or 'resemblance' between *two things* - the sign (in our minds) and its object (in the world). As such, the icon is contrasted with the index, and with the symbol. The different relationships between these three sign types and their 'objects' is how they are usually differentiated from each other. There are numerous examples of this interpretation:

> In an *icon* the sign resembles its object in some way; it looks or sounds like it. In an *index* there is a direct link between a sign and its object; the two are actually connected. In a *symbol* there is no connection or resemblance between sign and object: a symbol communicates only because people agree that it shall stand for what it does.
>
> (Fiske: 1990: 46)

> We call something an icon, then, when it is related to its object by similarity.
>
> (Fitzgerald: 1966: 50)

> Icons are those signs which represent their objects in virtue of a qualitative resemblance to them (paintings, maps); indices represent their objects in virtue of some dyadic existential relation, such as causality or indication (weather vanes, directional arrows); symbols represent their objects only in terms of some general conventions or rules (nautical flags, Morse code).
>
> (Delaney: 1993: 136)

and even Stjernfelt, a more 'revisionist' commentator, concurs with this basic view:

> Icons function by means of a similarity between the sign and the object, or, as Peirce may also say, by shared characteristics between the sign and its object. Indices function by means of an actual connection between the sign and the object, either of a causal character (the footprint on the beach) or of a purposive character (pointing gestures, deictics, pronomina or proper names in language). Symbols, finally, function by means of a habit, in mind or in nature, of connecting two otherwise unconnected entities to a sign.
>
> (Stjernfelt: 2014: 206)

Icons, indices and symbols, therefore, are construed in terms of the different relationships that they have with the 'object'. The icon has a relationship with the object based on '*resemblance'*; the index one based on *'connection',* or *'contiguity',* and the symbol has a relationship founded on *'convention'* or *'habit'*. However, given our previous discussion of what Peirce means by the term 'object', we can see that there is considerable potential for revision here. For if the 'object' is actually an 'object of thought', *within the sign*, then a substantial re-casting of these relationships is demanded.

Dualism clearly plays a part in the misunderstandings of some commentators. Focusing on the idea of 'similarity', they often frame their analysis along dualistic lines. The 'object' is construed as being 'in the world' and the icon, for its part, is 'in the mind'. This reflects a misleading adherence to 'secondary dualism'. In addition to the positions of Fiske and Stjernfelt, quoted above, we find many other examples of this view; for instance Morris talks about the similarities between the sign (as a mental entity) and its 'denotata' (Morris: 1946: 349) and, likewise, Sebeok discusses the similarity between the signifier and its 'denotata' (Sebeok: 1994: 28).

More problems arise, however, because some critics do not notice the important distinction Peirce also makes between the 'immediate' and 'dynamic' object. In many places (but certainly not all), Peirce argues that, when he talks about the object in relation to the different signs in the second trichotomy, he is speaking of the '*dynamic object'* and not the *'immediate object'*. In the *'Prolegomena to an Apology for Pragmaticism'* he states:

> Thus the division into Icons, Indices, and Symbols depends upon the different possible relations of a sign to its Dynamical Object.
>
> (CP4: 536)

We have already seen that these two 'objects' are very different from each other. The 'dynamic object' is best construed as the object as it would be understood if we knew all of its relationships with the world, whilst the 'immediate object' is the object as it is directly presented to us in experience.

This also has implications for our understanding of the icon. It means that Peirce is defining the icon, not on the basis of some relationship with a known (immediate) 'object', but rather on the basis of the representamen's *potential relationships* with the 'dynamic object'. The effect of this is to re-interpret the 'direction' in which the icon is operating. In the received view, the signifying action of the icon is usually viewed as operating *from* a known object *to* the icon. But if the icon has a relationship with the 'dynamic object', then the 'direction' of this relationship is reversed. The icon is now positioned as a sign that helps us understand what the dynamic 'object of thought' might possibly be.

As such, the icon becomes one of the mechanisms through which we are able to establish knowledge of the 'object of thought' in the sign - rather than something that exists in the mind in a relation to a *known object* in the world. The icon, far from being a sign which (rather uninterestingly) has some relationship of 'similarity' with an object, becomes fundamental to the process of *learning about that object.*

6.3.2) Distinguishing Icons from Hypoicons

If these layers of potential confusion are already not enough, there is one further layer of terminology that Peirce introduces which also needs clarification. He often makes a distinction between icons and 'hypoicons' and he does this, paradoxically, in an attempt to clarify what he is saying about iconicity.

Icons clearly involve the notion of similarity, but Peirce also recognises that some things that we experience in the world are *substantial assertions* of similarity which we (or other people) have created. For Peirce, these types of phenomena operate differently from iconicity itself. He distinguishes them with another term – *'hypoicons'*:

> But a sign may be *iconic*, that is, may represent its object mainly by its similarity, no matter what its mode of being. If a substantive be wanted, an iconic Representamen may be termed a *hypoicon*. Any material image, as a painting, is largely conventional in its mode of representation; but in itself, without legend or label, it may be called a *hypoicon*. Hypoicons may roughly [be] divided according to the mode of Firstness which they partake. Those which partake the simple qualities, or First Firstness, are *image*s; those which represent the relations, mainly dyadic, or so regarded, of the parts of one thing by analogous relations in their own parts, are *diagrams*; those which represent the representative character of a representamen by representing a parallelism in something else, are *metaphors*.
>
> (EP2: 273-4)

The distinction that Peirce is making here is that an icon '*may represent its object, 'no matter what its mode of being'*, whilst the hypoicon, in contrast, is an *'iconic representamen'* - a '*substantive'* representation of asserted similarity. It can be, for example, a *'material image',* such as a painting, or a diagram, or it can be created through a metaphor. All of these are assertions of similarity – a distinction that is overlooked by commentators if they assume that all icons are 'images', or pictures, which have similarity to something else.

It is a mistake to either ignore this distinction, or to assume that icons and hypoicons can be conflated. Petrilli, for example, fails to make this distinction and wrongly asserts that images, diagrams, and metaphors are 'icons' rather than hypoicons (Petrilli: 2010b: 264). Elsewhere, Ayer (1968: 150), argues, in contrast, that if an icon is actually operating as a sign (i.e. as something *'representing its object'*), then it must be a hypoicon. As a result, he effectively removes iconicity from his discussion because it becomes usurped by the hypoicon. Short, similarly, confuses icons with hypoicons when arguing that *'a red fire engine is a hypoicon of its red colour'* (Short: 2007: 217) when this is an embodiment of red – not an assertion of it. Andacht, however, correctly recognises the differences here, saying that there is a *'distinction between the purely qualitative possibility (the icon proper) and its material embodiment (the hypoicon)'* (Andacht: 2013 :509).

Peirce's quotation above, however, is an example of how unclear he often is when discussing icons. As in many other parts of his philosophy, Peirce is not altogether consistent in his use of his terms. Even when he is trying to distinguish between icons and hypoicons he sometimes muddies the water. For example, having used a painting as an instance of a 'hypoicon' he can also be found, elsewhere, talking about a photograph as an 'icon':

> Most icons, if not all, are *likenesses* of their objects. A photograph is an icon, usually conveying a flood of information. A piece of mimicry may be an auditory icon
>
> (EP2: 13)

These inconsistencies make clear explication of his views on iconicity very difficult. But leaving aside these issues, we can now begin to explore what an icon is. Eco's rejection of icons in his *'A Theory of Semiotics'* (1976) exemplifies many of the criticisms that Peirce's sign has been subjected to.

6.3.3) Attacks on the Icon: Early Eco

As Sternfelt (2007) highlights, there was a considerable attack, in the late twentieth century, on the status of the icon and a concerted attempt to show that it is a conventional sign (like the symbol). This attack was led by Eco, but a clear way to exemplify it is through Petrilli's summary of the icon. This is useful because it captures several misconceptions:

> **Icon**: One of three types of signs identified by Charles S. Peirce, the other two being index and symbol. The icon is characterised by a relation of similarity between the sign and its object. However, similarity alone will not suffice to determine an iconic sign. Twins look similar but are not signs of each other. My reflection in the mirror looks like me but is not an iconic sign. For iconic signs to obtain the effect of convention or habit social practices or special functions must be added to similarity. Iconic similarity is a special kind of similarity: it is an abstraction on the basis of convention, for it privileges given traits of similarity and not others.
>
> (Petrilli: 2010: 242)

There are a number of key points here – some of which we have already noted. Firstly, a relation *'between a sign and its object'* forms the icon. Secondly, this relation is deemed to be one of *'similarity'*. Thirdly, Petrilli suggests that this Peircean sign must be misconceived because many things (which are similar to other things) are not icons of each other; so 'similarity' is an illegitimate basis on which to establish iconicity. Fourthly, she concludes that this means that there must be a *conventional* aspect to the icon because only through *'convention'* could some similarities be privileged over others. This leads to a conclusion that icons are conventional signs – leaving only indices as 'motivated' by reality. Chandler reaches the same conclusion:

> Semioticians generally maintain that there are no 'pure' icons – there is always an element of cultural convention involved.
>
> (Chandler: 2002: 40)

In his *'A Theory of Semiotics'* (1976), Eco takes a similar view. Many commentators cite this influential work (e.g. Sebeok: 1976). Eco considers the various ways in which the icon could possibly resemble its object – in terms of its having the *'same properties as its object'*, being *'similar to its object'*, being *'analogous' to its object,* or being *'motivated'* by its object (Eco: 1976: 191) and he rejects them all as untenable methods of establishing a sense of 'similarity':

> Thus even the continuous line tracing the profile of the horse may be considered as the institution of a relation of similitude by a transformed correspondence point to point between the abstract visual content model of a horse and an image drawn on a given surface. The image is motivated by the abstract representation of the horse, but it is nevertheless the effect of a cultural decision and as such requires a

> trained eye in order to be detected as a horse's profile. Similitude is *produced* and must be *learned*.
>
> (ibid: 200)

And Eco concludes his discussion with a provocative sub-section entitled *'Getting Rid of Iconic Signs'* (ibid: 216-20). The main thrust of his argument, as with Petrilli and Chandler, is that icons are 'coded' on the basis of convention and that some of these similarities are easily recognised (*'ratio facilis'*) whilst others are less obviously 'coded' (*'ratio difficilis'*). But convention, he insists, remains at the heart of iconicity.

The Peircean icon, for Eco, is too loosely defined to have real utility - a point reiterated by Sebeok:

> An infant daughter can be said to be an iconic design for her mother if there is a topological similarity between her, as signifier, and her mother, its denotatum; however, the little girl can likewise, though doubtless to a lesser degree, stand as an iconic sign for her father, every one of her siblings, all of her kinfolk, and, further still, all mammals, all vertebrates, and so forth, and so on, in unending retrogression to ever more generalized denotata.
>
> (Sebeok: 1994: 30)

Sebeok (1976: 130), like Petrilli, also points out that icons do not work reflexively and that this further undermines the notion of iconicity. A photograph of the Pope can be described as an 'icon' of the Pope, but it makes no sense to describe the Pope as an 'icon' of his photograph. Such criticisms by Sebeok, however, betray the tacit assumption, that a *dualistic* relationship must exist between an icon (in the mind) and an object (in the world).

6.3.4) Eco: His Revised Account of the Icon

Later in his career, Eco published, in *'Kant and the Platypus'* (1999) - a remarkably honest revision of his previous thinking on the icon. In this reworking of his thinking he accepts that he previously misunderstood the Peircean sign. In this work he comes much closer to the position that we will propose in due course – although there still remain very significant differences.

Crucially, Eco now makes a distinction between the icon and the hypoicon. He identifies, as a result, what he calls the *'problem of perceptual iconism'* (i.e. iconicity itself) (ibid: 340), and he distinguishes this from the hypoicon. Without going into lengthy detail, he correctly argues that *'primary iconism'* has parallels with Kant's notion of *'schema'* (ibid: 80), where perceptions are classified by the mind. He also notes that the schema is a *'product of the imagination'*, but he goes a little far in suggesting that this involves the immediate development of concepts (ibid: 81, 86). This is because

concepts (for Peirce) are ‘thirds’ and are created at a much later stage of the semiotic process. But Eco is certainly justified in suggesting that ‘primary iconism’ is at the basis of empirical knowledge.

Eco recognises that ‘primary iconism’ can exist at a basic perceptual level without using any objective criteria for establishing that any similarity exists. But he still argues that *‘adequate’* criteria must exist for the mind to do this:

> I think that for Peirce primary iconism lies in the correspondence whereby the stimulus is *adequately* ‘represented’ by that sensation and not by another. This correspondence is not to be explained, but only recognised (his italics).
>
> (ibid: 106)

Eco thus uses the notion of *‘recognition’* as a basis for similarity. However, his recourse to *‘adequacy’* does not mark a very significant revision in his thought. We find that Eco is still construing the icon as involving two (dyadic) entities. As a result, he tries (rather tortuously) to see iconicity as operating through two elements ‘corresponding’ with each other on the basis of some criterion, or other:

> The fact remains that, in the situation cited, two somethings meet because they *correspond to* each other, *as a screw corresponds to the female thread*. (his italics)
>
> (ibid: 108)

And he suggests:

> Therefore, in talking of primary iconism as a cast, we are talking not of actuated correspondence, but of a *predisposition to correspond*, of ‘likeness’ through the complementary nature of one element with respect to another *to come*.
>
> (ibid: 110)

This takes him into an unsatisfactory discussion of whether ‘primary iconism’ must involve being *‘like a hole’* (ibid: 110). It is thus clear that Eco, even in this revised interpretation, is still working within a dualistic framework which he assumes is fundamental to the concept of the icon itself. Whilst he is right in grasping that the icon is a source of knowledge that echoes the Kantian ‘schema’, he neither fully understands how Peirce utilises the notion of ‘resemblance’ in the icon, nor does he recognise that the icon is fundamentally *monadic* (see Fig. 8).

6.3.5) Stjernfelt's Account of the Icon

Another contribution to our understanding of iconicity has been that of Stjernfelt – in his *'Diagrammatology'* (2007), and his *'Natural Propositions'* (2014). These works also mark a substantial move away from the 'received' view of the icon.

Stjernfelt correctly critiques Eco's early analysis of the icon, making a number of points that concur with the above discussion, and he rightly views Eco's shift away from a 'cultural' position on iconicity as being only partial (Stjernfelt: 2007: 73). However, the direction in which Stjernfelt takes his analysis of the icon is not without its own problems. In the '*Diagrammatology',* Stjernfelt states that:

> This treatise deals with the sign types of icons and diagrams. Icons understood as those signs whose function as signs is due to *some sort of similarity between them and their objects* – and diagrams as that *special sort of icons* which represent the internal structure of those objects in terms of interrelate parts, facilitating reasoning possibilities (my italics).
>
> (ibid; ix)

Here, Stjernfelt asserts a very specific relationship between icons and hypoicons. The latter are described as a *'special sort of icons'*. Later he writes:

> The diagram is an icon. In the taxonomy of signs, thus, the diagram forms the second subcategory among the three types of hypoicons – images, diagrams and metaphors, respectively – even if Peirce elsewhere notes that sharp distinctions among icons are not possible due to the inherent vagueness of the concept.
>
> (ibid: 90)

It thus becomes clear that hypoicons are not viewed, by Stjernfelt, as something that Peirce wishes to separate from icons; rather, hypoicons, in the form of diagrams, are seen as *examples* of icons. This view is confirmed when Stjernfelt defines the icon in strictly diagrammatic terms: *'Thus when the operational criterion is adopted, icons become everything that can be manipulated in order to reveal more information about its object…'* (ibid: 92). This effectively inverts the relationship between the two – diagrams (e.g. hypoicons) become, for Stjernfelt, the dominant expression of iconicity.

In addition, in the first passage quoted above, Stjernfelt still seems attached to a *dualistic* account of icons. He states that they have *'some sort of similarity'* with their objects. This approach is confirmed, again, when he talks of icons in terms of reference:

> As it appears from the definition, the icon refers to its object solely by means of its own properties. This implies that an icon potentially refers to an indefinite class of objects, namely all those objects which have, in some respect, a relation of similarity to it.
>
> (ibid: 28)

It is clear, from these passages, that Stjernfelt does not recognise Peirce's deeper philosophy; the 'object' is being treated as something in the 'real world' and the role of the diagram is simply to capture its qualities. On other occasions, Stjernfelt also thinks dualistically when describing the icon as mirroring:

> So, as soon as the icon consists of parts whose relations mirror the relations between the corresponding parts of the object, and the sign is used to gain information about those parts and their interrelations, a diagram is at stake.
>
> (Stjernfelt: 2014: 207)

In this context, Stjernfelt also maintains that one of the defining characteristics of the icon is the way it enables us to *'learn more'*:

> It is not only the only type of sign involving a direct presentation of the qualities of its object, it is also a sign through the contemplation of which one can learn more than lies in the directions for its construction.
>
> (Stjernfelt: 2007: 78)

The icon is thus conceived by Stjernfelt as being a key mechanism through which we can gain knowledge about the world. As such, he places considerable emphasis on the icon (or rather the diagram) in its role in meaning creation:

> Hypoicons are signs which to a large extent make use of iconical means as meaning-givers: images, paintings, photos, diagrams etc. But the iconic meaning realized in hypoicons have an immensely fundamental role in Peirce's semiotics. As icons are the only signs that look-like, then they are at the same time the only signs realizing meaning.
>
> (ibid: 29)

And this point is reinforced by Stjernfelt's claim that:

> To Peirce, it was an ideal to use signs representing these phenomena [subjects and qualities and relations] as iconically as possible.
>
> (ibid: 22)

Stjernfelt, however, reaches this conclusion by viewing the icon as providing a 'mirroring' effect, and also by conflating the icon and the diagram. He thus claims that diagrams are able to inform us about the world because they elucidate the *'hidden informations'* (ibid: 85) that they contain. As such, icons (or is it actually diagrams?) *'play the central role in Peirce's evolutionary epistemology'* (ibid: 79). This is contrast to Peirce, who sees

the creation of meaning as a much more complicated process involving a *progressive combination* of signs (of which only one is an icon). And there is certainly no appeal to 'mirroring' in Peirce's account of how knowledge is created.

Overall, Stjernfelt's approach seems to be informed by an Husserlian influence in his writing and he often tends to see Peirce through this particular lens. Husserl, for example, places very significant emphasis on human 'intuition' in the development of knowledge. This aspect, as we have seen, is rejected by Peirce, but Stjernfelt highlights it as being central to an account of Peirce's diagrams. Stjernfelt's focus on intuition may also explain why he so often conflates the icon and the diagram. Indeed, he openly states that we should view Peirce from a Husserlian perspective (and note the running together of the icon and the diagram):

> Just like Peirce develops his notion of diagram-icons to understand the observation aspect of the access to ideal and universal objects, Husserl undertakes a daring extrapolation of the concept of intuition to involve the grasping of grammar and linguistics syntax, of essences and states of affairs etc.
>
> (ibid: 146)

In placing this emphasis of intuition, Husserl also claims that we can grasp 'wholes' and that we can understand the relationship of their parts (*'mereology'* (ibid: 161-174). But even if this Husserlian interpretation of Peirce is justified in relation to diagrams, Stjernfelt is mistaken in the assumption that it is also applicable to his account of icons.

We now turn to consider a revised account of the Peircean icon. We will define what it is, what it does, and how it forms a cornerstone of his semiotics. In so doing, we will set the icon apart from the hypoicon (and Stjernfelt's diagrams) and place it in the context of Peirce's broader, and Hegelian, account of perception and concept formation.

6.3.6) Revising the Peircean Icon

This section outlines a critical revision of the Peircean icon. This will take account of our previous analysis of the 'object', and also the influence of Hegel upon Peirce. The argument put forward here is central to the account of concept formation in this thesis. It will be argued that the icon is viewed by Peirce as 'posited' by the mind and that it acts as the initiating stage in the development of a 'mediating' concept - in the same way as the 'Essence' is posited in Hegel's system. We saw that the Peircean 'object of thought' is created by selecting specific elements of the representamen. It will be argued that this is achieved through the icon in the form of an hypothesis. As such, the icon represents the first glimmerings of empirical knowledge.

To begin, we should consider the manner in which Peirce describes the process of 'forming' a sign. In the Introduction section of Volume I of the *'Essential Peirce'*, Houser states (quoting CP1: 444):

> Speculative grammar studies what is requisite for representation of any kind; it is the study of the *'general conditions of signs being signs'*
>
> (EP1: *xxxi*)

Elsewhere, Peirce states that there are:

> ..three essential branches of semeiotics, of which the first, called *speculative grammar* by Duns Scotus, studies the ways in which an object can be a sign….
>
> (EP2: 327)

This approach will strike a Saussurian semiotician as strange. What makes a sign, in their model, is a simple act of *interpretation* on the part of the perceiver. Peirce, in contrast, wants to uncover the '*general conditions'* that need to be satisfied for something to become a sign - and he calls this subject '*speculative grammar'*. Peirce asserts that this particular branch of semiotics is concerned with how 'objects of thought' become the mediating elements within signs (*footnote fifteen*). And it is of some significance that Peirce calls this *'speculative grammar'*. For the icon's role in sign formation is fundamentally *speculative* in nature.

We also need to look again at Peirce's classification. We noted that, in the first trichotomy (column), we have not reached a point in the sign's development where an 'object of thought' has become involved. With the icon, however, we reach this critical stage in the sign's development; it is where firstness (in the first horizontal row) intersects with an 'object of thought' (in the second column).

If we consider the characteristic of being a 'first', we have already seen that this means that the icon should be viewed as a *'possibility'* (Savan: 1995: 325). But its position in the classification also means, critically, that the icon entails something else – 'firsts' *are always monadic in nature*. This suggests that iconicity should *not* be construed as a relationship existing between two entities that would render it *dyadic*. Instead, it should be interpreted as a *single* entity. However, the notion that the icon involves 'two things' is precisely what most of Peirce's critics assume. But this leads to an interesting question – how is Peirce able to combine the notion of 'similarity' with the icon's 'monadic' status? This problem is central to understanding the nature of the icon.

Fundamentally, the icon provides the mind with the first imaginings of an 'object of thought'. It is at this 'iconic' stage in the sign's development that we begin to move from our perceptual 'vagues', as we 'posit' an 'object of thought'. Critically, however, at this stage in the sign's development, we still do not know what the 'object of thought' is; *it is merely a likeness*.

This last point is immensely important – Peirce is using the term 'likeness' in a very particular way. He is not asserting that a specific, and verifiable, similarity exists between two *known* entities (e.g. exactly what his critics accuse him of). Instead, he is making another point - that all we have, at this stage, is a recognition that two of our perceptions might be similar *in some respect or other*. The icon thus represents the most minimal level of knowledge we can have; at the very most it is an *hypothesis* that an 'object of thought' might exist:

> A pure icon can convey no positive or factual information; for it affords no assurance that there is any such thing in nature.
>
> (CP4: 447)

In identifying such a similarity, we 'pick out' a putative resemblance in the Phaneron. It might be objected, at this point, that Peirce is now contradicting himself. We have seen, in his account of perceptual judgments, that we are *not* able to compare them – they simply replace each other. How is it possible for us, as a result, to identify a resemblance between two of them? Peirce would argue, however, that what is actually taking place is that the perceptual judgment, *itself*, draws two experienced percepts together. The icon can be thought of, as a result, as a perceptual judgment that has been drawn into a signifying relationship.

It is clear, however, that an important Rubicon has now been crossed in terms of the development of the sign. We have established that a potential 'object of thought' may exist on the basis of resemblance (and recognition) in much the same way as Leibniz defines his *'clear ideas'*. With the icon we

have now ‘picked out’ an emergent identity - even though this identity remains, at this stage, only an hypothesis.

However, we still need to account for the icon being found in the part of Peirce’s sign classification that specifies its *monadic* nature. Let us look at another quotation from Peirce:

> Each *Icon* partakes of some more or less overt character of its Object.
>
> (CP4: 531)

The verb Peirce uses - *‘partakes’* - is an interesting one. If ‘A’ ‘partakes’ of ‘B’ then ‘A’ *shares* something with ‘B’. This is not a dyadic relationship between two separate entities – *but rather a coming together under one identity.* To take an example, if I see John today, and then see John again tomorrow, I do not establish a dyadic relationship between two ‘Johns’ – I am asserting that they are *the same John*; they share the *same identity*. When discussing the concept of similarity, Peirce states that resemblance forms precisely this type of relationship:

> Suggestion by *resemblance* is easily enough understood, as soon as the conception is once grasped that the similitude of two ideas *consists* in the fact that the mind naturally joins them together in thought in a certain way.
>
> (CP7: 392)

And Peirce talks about two ‘experiences’ of blue:

> Some beginner may object that they have both a *blueness* in them; but I reply that blueness is nothing but the *idea* of these sensations and of others I have had, thrown together and indistinctly thought of at once. Blueness is the idea of a *class*.
>
> (CP7: 392)

Elsewhere, he also claims that:

> Identity is essentially a dual relation.
>
> (CP1: 446)

What Peirce is proposing here is that, in perceiving an iconic ‘resemblance’, we see two phenomena *as one thing*; we see them as the members of a class. We do not perceive two separate things, but, instead, we have a *monadic experience of two things*. Again, we have already seen this approach in Peirce’s account of ‘perceptual judgments’ where two experiences are members of a *single* class. Elsewhere, Peirce describes the ‘dyad’ as follows:

> A *dyad* consist of two *subjects* brought into oneness. These subjects have their modes of being in themselves, and they also have their modes of being, as first and second, etc, in connection with each other. They are two, if not really, at least in aspect. There is also some sort of union of them. The dyad is not the subjects; it has the subjects as one element of it. It has, besides, a suchness of monoidal character; and it has suchness, or suchnesses, peculiar to it as a dyad.
>
> (CP1: 326)

So Peirce is claiming that it is possible for an icon to be both monadic ('*monoidal*') and to assert a relationship between two things. The icon thereby effectively creates a *monadic* 'object of thought' from two separate experiences. It becomes a *class* awaiting further determination. Elsewhere, Peirce supports this view:

> This sort of association by virtue of which certain kinds of ideas become naturally allied, as *crimson* and *scarlet*, is called *association by resemblance.* The name is not a good one, since it implies that the resemblance causes the association, while in point of fact it is the association which constitutes the resemblance.
>
> (CP7: 498)

And, elsewhere, Peirce goes further to define exactly what he means by 'resemblance' – the combining of different experiences into one identity:

> Resemblance is an identity of characters; and this is the same as to say that the mind gathers the resembling ideas together into *one conception*. (my italics)
>
> (EP1: 254)

> A resemblance, therefore, consists solely in the property of the mind by which it naturally imposes one mental sign upon the resembling things.
>
> (CP8: 20)

So Peirce's critics utterly miss their target. They have debated whether similarity can be established between two identities (and reach the conclusion that this is not possible without convention), whilst Peirce is, in fact, embarked on an entirely different enterprise. *He is asserting the view that similarity forms the basis of identity, rather than debating the point of whether any two identities can be the same.*

The reader will also recognise the nominalist perspective of Peirce's critics here. Nominalists maintain that it is *we* who give identities to things and that *identity precedes* any assessment of similarity*.* In contrast, Peirce asserts that similarity is the very factor that creates identity. Iconicity, therefore, reinforces his rejection of nominalism.

Of all his commentators, Murphey grasps Peirce's position most accurately - referring to the same passage on 'blueness':

> The class concept of blue is a general idea which forms a connection among sensations, but the general idea does not produce those associations – rather it is an idea of the sensations which the mind groups together. *It is the fact that the mind connects these ideas which makes them similar – not their similarity which leads the mind to connect them.* (my italics)
>
> (Murphey: 1993: 340)

Olteanu (2015) picks up on the notion of 'recognition' in the icon in his analysis of Peirce. He sees the action of the sign as being an essential feature of *'how the unknown becomes known, of how that which is taught is integrated in what is already mastered'* (ibid: 201). However, he does not analyse the act of recognition in the sphere of perception, as discussed above, and nor does he see recognition as creating our 'objects of thought'. Instead, he focuses, following Stjernfelt, on the potential *'resemblance between taught and learned'*:

> The compatibility between what is taught and the learner's already existing signification is the diagrammatic character of learning, that is, the resemblance between taught and learned. The student has to re-cognize what is taught by using what she already knows and the teacher has to re-cognize what is taught into what starts being learned.
>
> (ibid)

This treatment places the action of 'recognition' at an altogether different level in Peircean thought – and Olteanu suggests that 'resemblances' operate across the Cartesian divide between the teacher and the student. This is contrast to the argument, outlined here, that the resemblances are themselves *created* in the formation of icons.

The fact that the icon creates a putative identity means that it is inevitably provisional and that it has an *abductive* character (*footnote sixteen*). This is precisely why Peirce asserts that the grounds for establishing signs should be called *'speculative grammar'*. In creating an icon, an 'object of thought' is tentatively established and it will not, therefore, represent anything like a *complete* similarity. As Peirce stated above, the icon only *'partakes of some more or less overt character'* of the perception. This highlights, of course, another way in which critics of Peirce have misconstrued him. They argue it is not possible to know *all* of the similarities between the icon and its object (so we have to rely on 'convention' to privilege some for them). But we can now see that one of the defining characteristics of the Peircean icon is that it cannot provide similarity at all levels. This is precisely why it remains an hypothesis.

The roots of the Peircean icon, in this interpretation, can also be found in Hegel. As we saw, the Hegelian 'Ego' grasps what is present in the indeterminacy of 'Being' by positing an 'Essence'. In the 'Phenomenology of Spirit', Hegel explicitly links this act of *'positing'* to the creation of the 'object' in opposition to the 'I' of consciousness:

> One of the terms is posited in sense-certainty in the form of a simple, immediate being, or as the essence, the *object*….
>
> (Hegel: 1977: 59)

For Hegel, ‘Essences’ represent our initial attempts to ‘fix’ reality. In the passage above he views them as being *‘posited’,* and he equates them with the *‘object’*. The ‘Essence’ is, therefore, positioned by Hegel as a hypothetical entity (or ‘object of thought’) between our experience of the world (Being) and our knowledge (Notion).

Significantly, there is one place in his writings where Peirce openly discusses Hegel’s model of positing of *‘identity’* - in the form of *‘possibility’*:

> In the *‘Encyclopadie’* the development is somewhat as follows: *Wirklichkeit* [actuality] is that whose mode of being consists in self manifestation. As identity in general (the identity of *Sein* and *Existenz*) it [Essence] is, in the first place possibility. That is to say, apparently, bare possibility, any fancy projected and regarded in the aspect of a fact.
>
> (CP2: 386)

Here Peirce is describing Hegel’s ‘positing’ of ‘Essences’ in terms similar to the icon – they are *‘identities’*, they form *‘bare possibility’,* and they are *‘projected’*.

There is one critical difference, however, between the concept of the Peircean icon and the Hegelian ‘Essence’. And it is one that explains their disagreement with regard to secondness. For Peirce, the icon is a nascent ‘identity’ that has no content. It is simply a ‘posited’ similarity. This is in contrast to Hegel’s ‘Essences’ that, as we noted, are *full* of content and implicitly contain the empirical contradictions that need to be dialectically resolved. This is why Hegel has no need ‘secondness’ – reality is already encapsulated, for him, in ‘Essence’. For Peirce, in contrast, the icon still needs to be ‘filled out’ at an empirical level. This, as we shall see (in section 6.4), takes place through the action of indices. Hegel, in contrast, asserts that ‘Essence’, is the *‘real ground of everything’* (Hegel: 1892/2014: 31).

Further back in the history of philosophy, we can also find the concept of the ‘icon’ (in the form proposed above) being discussed in the early modern period - but this time using quite different terminology. Deely (*footnote seventeen*) highlights the fact that Fonseca advocates two types of signs – the ‘formal’ and the ‘instrumental’. The first of these arguably equates to the icon, whilst the second corresponds to the index. Fonseca states (and note also his use of the term ‘object’):

> Formal signs are similitudes or certain forms (*species*) of things signified inscribed within the cognitive powers, by means of which the things signified are perceived…. These signs are called ‘formal’ because they form and as it were structure the knowing power. Instrumental signs are those which, having become objects for knowing powers, lead to the cognition of something else. Of this sort is the track of an animal left in the ground, smoke, a statue, and the like.
>
> (Fonseca: 1564: I.I. cap. VIII. Quoted in Deely: 2009: 183-4))

In this formulation, we encounter here a potentially new way of thinking about the icon – as a *'formal sign'* (*footnote eighteen*) which *'structures the knowing power'* (*footnote nineteen*). In contrast to the icon, the *'instrumental sign'* (or index), however, leads *'to the cognition of something else'*. This line of argument suggests that, when we first posit an icon, we create what early modern philosophers might describe as a *'form*'. This 'form', however, has no empirical content; it is what Kripke might call a *'placeholder'* (Kripke: 1980: see section 7.2). It establishes, however, a tentative 'object of thought' around which we can predicate further indexical relations.

6.3.7) The 'Purity' of the Icon

The notion of 'form', introduced above, highlights another aspect of the icon; the idea that it can be 'pure'. A 'pure' icon, for Peirce, is one that captures a *'suchness'.* In this construal, the icon has no extraneous empirical baggage; it is simply the beginning of an identity, or an 'object of thought':

> For a pure icon does not draw any distinction between itself and its object. It represents whatever it may represent, and, whatever it is like, it in so far is. It is an affair of suchness only.
>
> (EP2: 163)

'Pure' icons thus correspond to the notion of 'form' that we have just encountered. They are 'forms' before any empirical content has been added:

> No pure Icons represent anything but Forms; no pure Forms are represented by anything but Icons.
>
> (CP4: 544)

and Murphey concurs with this interpretation:

> What Peirce calls an icon then is a sign which expresses the form of its object, and hence it may stand for any object which has a given form.
>
> (Murphey: 1993: 233-4)

Peirce describes moments of experiencing such 'pure' icons, or forms, in very specific terms – they have an almost 'dream-like' quality:

> So in contemplating a painting, there is a moment when we lose the consciousness that it is not the thing, the distinction of the real and the copy disappears, and it is for that moment a pure dream – not in any particular existence, and yet not general. At that moment we are contemplating an *icon*.
>
> (CP3: 362)

Pure icons, as forms, are not, therefore, entities that exist 'behind' reality (in a model that McDowell rightly calls *'rampant Platonism'* (McDowell: 1994: 78)); rather they are the first imaginings of potential 'objects of thought'.

It is helpful, at this point, to consider the influence of Kant in relation to Peirce's icons. In the *'Critique of Pure Reason'* (and note the title refers to '*Pure Reason'*), Kant states that:

> We shall see hereafter that synthesis in general is the mere result of the faculty of the imagination, a blind but indispensable function of the soul without which we should have no knowledge whatsoever, but of which we are scarcely ever conscious. To bring this synthesis **to concepts** is a function that belongs to the understanding, and it is through this function that the understanding first supplies us with knowledge properly so called. **Pure synthesis, considered in general**, gives us the pure concept of the understanding. By this pure synthesis I mean that synthesis which rests on the basis of synthetic *a priori* unity.
>
> (Kant: 1781/2007: 104)

The imagination is thus seen by Kant as the activity that initiates a process of synthesis. It enables us to create a *'pure concept of the understanding'*. Freydberg argues that this mental faculty has a central role in the initial creation of knowledge. He sees the Kantian imagination as follows:

> In theoretical reasoning, our fragmented intuitions are brought to the unity of pure concepts of the understanding by means of the synthesis of imagination.
>
> (Freydberg: 2005: 95)

Kant's position on this point has clear parallels with our account of the Peircean icon. The imagination, in hypothesising an 'object of thought', initiates the beginnings of knowledge in the form of a 'pure' concept. And such a concept is distinguished by Kant on the basis that it has no empirical elements:

> A *priori* knowledge is called **pure** if nothing empirical is mixed in with it.
>
> (Kant: 1781/2007: 38)

And in the opening pages of the 'Critique', Kant explains that it is possible to think of substances *without* their empirical baggage. It this claim that arguably underpins the basis of the Peircean icon:

> Remove from your empirical concept of a **body** everything that stems from experience, one by one: the colour, the hardness or softness, the weight and even impenetrability, and there still remains the **space** which the body (now entirely vanished) occupied, and this you cannot remove. And in the same manner, if you remove from your empirical concept of any object, corporeal or incorporeal, all properties which experience has taught you, yet you cannot take away from it that property by which you think the object as a **substance** or **attached** to a substance….. Persuaded, therefore, by the necessity with which that concept of

> substance forces itself upon you, you will have to admit that it has its seat in your faculty of knowledge *a priori*.
>
> (ibid: 40)

The 'pure concept', as a 'form', thus establishes the beginnings of a concept. The difference between Kant and Peirce, however, is that Kant believes that these *'pure intuitions'* represent *'a priori'* knowledge, whilst, for Peirce, they simply retain the status of being 'hypotheses'. But it is still evident that Peirce is working within a largely Kantian template.

Not surprisingly, we find that Hegel also concurs with this view. In '*Philosophy of Mind'* he describes the process that begins with the 'Essence' and which ends with the 'Notion'. He describes how the mind strips '*contingency'* from our experience when creating an 'Essence' and how this creates a sense of *'objective'* rationality (i.e. an 'object of thought'):

> But intelligence, far from confining itself to merely accepting this immediately presented content of the object, purges the latter of its purely external, contingent, and worthless elements…..Thus intelligence strips the object of the form of contingency, grasps its rational nature and posits it as subjective; and conversely, it at the same time develops the subjectivity into the form of objective rationality.
>
> (Hegel: 1830/1971: 191)

Elsewhere in '*The Science of Logic'*, Hegel argues that *'Logic is the Science of the Pure Idea'* (Hegel: 1892/2014: 17). And in the *'Phenomenology of Spirit',* he maintains that the initial beginnings of consciousness are also *'pure'*:

> The movement in which the unessential consciousness strives to attain this oneness is itself threefold in accordance with the threefold relation this consciousness will have with its incarnate beyond: first as pure consciousness; second, as a particular individual who approaches the actual world in the forms of desire and work; and third, as consciousness that is aware if its own being-for-self.
>
> (Hegel: 1977: 130)

Hegel's notion of the *'pure idea'* seems, therefore, to parallel the Kantian idea of the *'pure concept'* and this idea re-emerges in Peirce's treatment of the icon. What all three thinkers are suggesting, in slightly different ways, is that the mind is able to establish an initial identity, or 'form'. Kant sees it as an intuited form of *a priori* knowledge, Hegel views it as a 'posited' identity which is full of contradictions, whilst Peirce construes it simply as a sign which is an hypothesis. But what all three insist upon is that it enables us to begin building a bridge across the dualistic divide that Descartes has created for us.

6.3.8) Icons: Are They Predicates?

This revision of the Peircean icon changes its status in many ways, but it should not be interpreted as narrow account of how *objects* are created. Importantly, 'objects of thought' can, for Peirce, be more than the actual objects that may (or may not) exist in reality; they also include other entities such as 'qualities' and 'predicates'. An 'object of thought' could, for example, be the 'redness' of a traffic light, or the 'speed' of a car. As we saw earlier, Peirce affirms the view that '*by an object, I mean anything that we can think, i.e. anything we can talk about'* (MS [R] 966).

It is important to emphasise, therefore, that 'objects of thought' can be *both* objects and predicates. There is a tendency, however, in some parts of the secondary literature, to view icons as predicates only. This is a view expressed by Houser (1992: 499), but it is also the case with Stjernfelt who states:

> Because Icons are the means of representing qualities, they generally constitute the predicative side of more complicated signs…..Thus the predicate in logic as well as ordinary language is essentially iconic.
>
> (Stjernfelt: 2007: 76)

And he claims this, even though he quotes Peirce (on his previous page) as stating:

> Anything whatever, be it a quality, existent individual, or law, is an Icon of anything, in so far as it is like that thing and used as sign of it.
>
> (EP2: 291)

The problem is that Stjernfelt tends to conflate the notion of 'likeness' with that of 'quality', and to interpret the 'object' in a conventional sense. It is relatively easy for him, therefore, to fall into the trap of thinking along Cartesian lines and to regard indices as equating to objects, and icons as equating to predicates ('likenesses'). This would, however, be a mis-interpretation of Peirce because predicates are also 'objects of thought'. Additionally, Stjernfelt, as we have noted, also tends to construe iconicity as a *correspondence* between the world and the mind. This, of course, encourages the view that correspondences relate to qualities. And this is why he emphasises *'Diagrammatology'* because diagrams capture such qualities.

Stjernfelt's interpretation of iconicity, however, is quite different from the one proposed here. It is worth re-stating where these differences reside. Both accounts construe the icon as an important mechanism which allows the mind to establish empirical knowledge. My interpretation, however, working within the framework of Hegelian philosophy, sees the icon as *positing* a mediating 'object of thought'. In contrast, Stjernfelt's model construes the

icon as establishing correspondences (on the basis of resemblance) *between* objects and signs. This is how, in Stjernfelt's view, icons create meaning and lead to empirical knowledge. But he does not recognise that the action of iconicity is quite different from that of the diagram. Paradoxically, however, Stjernfelt's interpretation does lead to the correct claim that *'natural propositions'* (Stjernfelt: 2014) are possible, but he only reaches this conclusion through a means that Peirce would hardly recognise.

Overall, however, the account of the icon, outlined in this section, marks a very significant step away from the received view of this important sign type. It should be construed, essentially, as the initial stage in the development of a concept. This is achieved by the mind on the basis of similarity, but it is not a similarity that exists, dualistically, between a known object and an image within the mind. The icon is, instead, an identity that is hypothesised as forming a putative class. And this places the icon in the appropriate part of Peirce's sign classification; it is a 'first', it is 'monadic', and it is also a 'possibility'. And, in this respect, it parallels the Hegelian 'Essence' and the first steps on the road towards synthetic knowledge.

6.4) Peirce on Indices

We have now considered the icon, and how it initiates the creation an 'object of thought'. A putative *identity* (or form) is created around which further empirical knowledge can subsequently develop. This newly formed icon, however, is no more than a 'possibility'. It is the index, in developing the initial icon, which creates the fuller concept and permits the final development of the symbol.

It is, however, briefly worth re-visiting the 'received' notion of the index that we encountered earlier. For there is now considerable distance between this account of the second trichotomy (as evidenced, for example, by Fiske) and the one that is being proposed here. The 'received' view of the index is that it (dualistically) involves a contiguous link between a sign (in the mind) and an 'object' (in the world) (Fiske: 1990; Sternfelt: 2014). For example, a perception of smoke is seen as an indexical sign of fire; a high temperature is seen as an indexical sign of a fever. The indexical sign thus shows us the 'connections' that exist in reality.

We need, however, to be extremely careful not to conclude that this is Peirce's understanding of the index. The linking of smoke with fire can be interpreted (and usually is by commentators) as the establishment of a causal link between two known entities (the smoke and the fire). The Peircean index can thus appear to be operating like a Humean 'necessary connection' between two known phenomena. But something must be

incorrect in this interpretation because, as we have already noted, *such causal links can only be established at the level of Peircean 'thirds'*. And, with the index, we are still working at the dyadic relationship of secondness.

So, when Peirce gives the example of a weathercock as an index of the wind he is *not* claiming that the index gives us knowledge of a *causal relation* between the wind and the weathercock. What he is making, instead, is the much less ambitious claim that the ability to move the weathercock is an indexical *property* of the wind. It enables us to *learn* something about the wind (as an emerging 'object of thought'):

> A weathercock is an *indication*, or *index*, of the direction of the wind; because, in the first place, it really takes the self-same direction as the wind, so that there is a real connection between them, and in the second place, we are so constituted that when we see a weathercock pointing in a certain direction it draws our attention to that direction, and when we see the weathercock veering with the wind, we are forced by the law of the mind to think that direction is connected with the wind.
>
> (EP2: 14)

The second part of this quotation certainly involves an extension of his argument to include the third, or *'law of the mind'*. But it is clear that the index simply provides an *'indication'* of a connection. As such, the index serves to develop the 'object of thought' and Peirce points out, in confirmation of this, that the pure index '*conveys no information';* it merely establishes indexical properties:

> A pure index simply forces attention to the object with which it reacts and puts the interpreter into mediate reaction with that object, *but conveys no information*. As an example, take an exclamation 'Oh!' (my italics).
>
> (EP2: 306)

This is a clear rejection of any suggestion that an index creates knowledge of causal connections in the world. And Peirce states:

> Icons and indices assert nothing. If an icon could be interpreted by a sentence, that sentence must be in a 'potential mood', that is, it would merely say, 'Suppose a figure has three sides', etc. Were an index so interpreted, the mood must be imperative, or exclamatory, as 'See there!' or 'Look Out!'
>
> (EP2: 16)

So the index, in itself, does not tell us about causal laws. Indices merely force us to notice *momentary* connections in the world and to include them (as potential properties) in our emerging 'objects of thought'. The 'received' view of the index, therefore, effectively 'jumps the gun' (as it also did with legisigns and sinsigns); it assumes that the index establishes a link that forms causal knowledge. But the latter is only achieved when concepts are formed at the level of 'thirds'.

However, the index does play a critical role in the development of knowledge because it enables us to develop our 'objects of thought'. It does this by adding indexical elements to our icons. Peirce describes the role of the 'genuine index' when it is combined with an icon:

> The Genuine Index represents the duality between the representamen and its object. As a whole it stands for the object; but a part or element of it represents [it] as being the Representamen, by being an *Icon* or analogue of the object in some way; and by virtue of that duality, it conveys information about the object.
>
> (EP2: 171)

So an index, in combination with an icon, *'conveys information about the object'*. It tells us what is *included*, or *not included,* within the icon. It does this, as it were, by saying 'Look! this is included!' and 'No! this is not included!'. All empirical propositions must, therefore, contain an index because it relates them to the experiential world (Hilpinen: 192: 479).

Brandom talks of the *'giving and asking of reasons'* (Brandom: 2000: 189-196) and McDowell refers to the *'space of reasons'* (McDowell: 1994: 5). Both of these modern philosophers follow Hegel, to some extent, in arguing that concepts must have empirical entailments *in order to be concepts*. We can see here that Peirce is adopting a similar approach. For a concept to be properly formed it must include empirical entailments – and these are provided by the index. It is at this stage in concept development, in Peirce's second trichotomy, that this critical development takes place. And this position parallels the Leibnizian concept of 'distinct ideas' that we encountered earlier. These ideas, as we saw, were defined by our ability to '*distinguish their contents'*. And it is the index that provides the empirical 'contents' of our concepts and 'fills out' the 'forms' initiated by icons.

The 'received' view of the index, therefore, puts the semiotic cart before the horse. It assumes that there are two *known* phenomena with *known* properties - smoke and fire - and that the index creates a link between them. The index, in these accounts, is viewed as informing us about a causal connection in the world. This can lead to some very curious results. Hookway, in our example earlier, talked about the bark missing on some trees as being a 'sign of deer', and he stated that *'it is probably only because we know what the deer do to the bark of trees that we take the tree as a sign of a deer'* (Hookway: 1985: 123). Here Hookway is trying to establish a causal, and indexical, link between the stripped bark and the deer. But this amounts to a complete *reversal* of indexical sign action. He is using our prior knowledge of the world (and what deer do) to explain the indexical sign – when, in fact, the indexical sign should be helping us explain the world.

The index, therefore, simply *indicates* (and only at a provisional level) that there is some kind of connection between two phenomena. It is telling us, effectively, *what sort of thing smoke is* (i.e. that we might find a contiguous fire somewhere) and helps us build our knowledge of that 'object of thought'. As we have noted, the role of secondness is critical here, because it 'surprises' us and sometimes forces us to adjust these contents.

There are three possible outcomes of this process. Firstly, a hypothesised identity, in an icon, may be simply 'incorrect'. The index may, for example, indicate certain properties of an entity that show us that it is not the sort of identity that we initially assumed it to be – in which case we need to revise it. Secondly, the index may simply confirm the identity (and its properties) that we initially assumed. Or, thirdly, we may find that we have correctly 'recognised' an iconic identity, but now discover (via secondness) that it contains some surprising, or new, element. In conjunction with each other, and through a process of 'give and take', the icon and the index thereby develop our concepts. This is a semiotic process that parallels Hegel's dialectics and his interplay of 'form' and 'content':

> It will be observed that the icon is very perfect in respect of signification, bringing its interpreter face to face with the very character signified. For this reason, it is the mathematical sign *par excellence*. But in denotation it is wanting. It gives no assurance that any such object as it represents really exists. The index on the other hand does this most perfectly, actually bringing to the interpreter the experience of the very object denoted. But it is quite wanting in signification unless it involves an iconic part.
>
> (EP2: 307)

This interpretation of the Peircean index also has the useful benefit of clarifying some of the insights of Social Semiotics. Earlier, it was argued that Social Semiotics does not problematise the identity of the signifier; it takes it very much as a given. But Social Semiotics then goes on to establish the relationships between the signifier and the elements that contextualise it. These include the ways that it is portrayed, such as its framing effects, its relationships with other elements in an image and, indeed, the viewer themselves. These contextualizing elements effectively *construct* an 'object of thought' by utilising semiotic resources to depict it in particular manner. These semiotic strategies position the sign in a way that suits the sign user. As such, these social constructions effectively establish the *indexical* components of a particular identity. Social Semiotics thus operates at the indexical level and it 'skips' the iconic stage where the identity is first posited. In so doing, Social Semiotics does not question the identity of the object that is being constructed and prefers, instead, to talk a language of ideology which suggests that the 'fixed' identity is being 'refracted' in some way.

The Peircean index can also be compared with the philosophy of Kant and Hegel. We saw earlier that Peirce's concept of the icon has its roots in their thought. It is not surprising, therefore, to also find equivalents of indexicality in their work. However, they consider the manner in which reality impacts on our thoughts in slightly different ways to Peirce.

Kant, for example, utilises the notion of his *'Antimonies'* to explain how reality limits the extent of our thought and human reason. The Antimonies allow us, through a logical process, to harmonise the *'conflicting assertions'* within our thoughts:

> Transcendental assertions, on the contrary, claiming insight into what is far beyond the field of possible experience, can never produce their abstract synthesis in any *a priori* intuition, nor can their flaws be discovered by means of any experience. Transcendental reason, therefore, admits of no other touchstone than the attempt to harmonise its conflicting assertions, and hence to let free and unrestrained conflict develop between them beforehand.
>
> (Kant: 1781/2007: 390)

Hegel acknowledges the *'Antimonies'* and he develops this intellectual tool:

> The Antimonies are not confined to the four special objects taken from Cosmology: they appear in all objects of every kind, in all conceptions, notions and Ideas. To be aware of this and to know objects in this property of theirs, makes a vital part in a philosophical theory. For the property thus indicated is what we shall afterwards describe as the Dialectical influence in logic.
>
> (Hegel: 1992/2014: 63)

Hegel thus agrees that the logical process suggested by Kant is critical to the internal coherence of our empirical knowledge. The 'Essences' posited by the mind in the early stages of dialectical thought contain contradictions. These need to be resolved through a dialectical process of thesis, antithesis and synthesis. Hegel calls this 'Reflection':

> This word 'reflection' is originally applied, when a ray of light in a straight line impinging upon a surface of a mirror is thrown back from it. In this phenomenon we have two things, - first an immediate fact which is, and secondly the deputed, derivated, or transmitted phase of the same. Something of this sort takes place when we reflect, or think upon an object; for here we want to know the object, not in its immediacy, but as derivative or mediated.
>
> (ibid: 135)

In this process, the mind identifies the *'connectedness of things'*. In the '*Philosophy of Mind'*, Hegel, rather confusingly calls this *'perception'*, but he clearly differentiates it from the sensuousness of immediate consciousness:

> While therefore the merely sensuous consciousness merely *shows* things, that is to say, exhibits them in their immediacy, perception, on the other hand, apprehends the connectedness of things, demonstrates that when such and such

> circumstances are present such and such a thing follows, and thus begins to demonstrate the truth of things.
>
> (Hegel: 1830/1971: 161-2)

Through a reflective process, the mind thus arrives at a better grasp of the identity, and properties, of an object. For Hegel this comprises two aspects – knowledge of what the object is itself (*'reflection-into-self'*) and how it is connected with the rest of the world (*'reflection-into-other'*):

> Existence is the immediate unity of reflection-into-self and reflection-into-another. It follows from this that existence is the indefinite multitude of existents as reflected-into-themselves, which at the same time equally throw light upon one another, - which, in short, are co-relative, and form a world of reciprocal dependence and of infinite interconnection between grounds and consequents.
>
> (Hegel: 1892/2014: 149)

This dialectical process establishes the connections between our concepts and how they relate to each other. This equates to the indexical stage of concept development for Peirce. But because they start from different positions the two processes appear to be very different from each other. Hegel wants to *eradicate* the contradictions contained within his 'Essences', whilst Peirce, starting with 'pure' forms (icons) wants to *add in* empirical relationships by establishing indexical links. But they are aiming for the same outcome – a system of concepts that contain accurate accounts of how they relate *both* to the world and to each other. And this corresponds to the Leibnizian system of interrelated monads that we encountered earlier.

In summary, the Peircean index develops the 'object of thought' initially posited in the icon. As such, it renders the sign a more effective 'tool' to understand the world – a conclusion that entails a re-framing of the indexical sign itself. Conventionally, it is seen as a sign that exists between the object and a particular perception. But in this account, it is the way in which an 'object of thought' develops and is given a relational identity.

Peircean semiotics is not, as Ransdell points out, a question of understanding a special class of objects that we call 'signs':

> But Peirce's semiotic is not about a class of objects. It is about *what it is to be an object*.
>
> (Ransdell: 1976: 99)

The indexical stage is vital in the development of *'what it is to be an object'*, but the index is still not concerned with the establishment of *causal* relationships. The fact that, at a later stage, we do see objects as being causally related to each other is a matter of 'thirdness'. This higher level of human understanding is only achieved at the next stage in the evolution of the sign – with the emergence of the symbol. It is at this point that the sign both adopts a law-like character and becomes a fully-fledged concept.

6.5) Peirce on Symbols and Communication

With the symbol, we come to the part of Peirce's classification where the evolving 'object of thought' now meets *thirdness*. This means that the 'object of thought' can take on the form of a law, a regularity, or a relationship that exists in the world. As we have seen, 'thirds' also represent *new identities* that are formed from dyadic relationships. This means that the symbol provides a mechanism to capture and express this new identity. And, moreover, as a symbol, it also offers us a way of sharing this evolving 'object of thought' (with all of its indexical entailments) in our discourse with others.

Such an exposition is at some considerable distance from the 'received' view. This almost always places emphasis on the symbol's conventional, and arbitrary, nature:

> In a *symbol* there is no connection or resemblance between sign and object: a symbol communicates only because people agree that it shall stand for what it does.
>
> (Fiske: 1990: 46)

> As such, symbol is correlated to its Object by an arbitrary and conventional decision. In this sense words are symbols insofar as their lexical content depends on a cultural decision.
>
> (Eco: 1984: 136)

These interpretations, however, ignore the argument that the symbol contains an evolving 'object of thought'. Many commentators claim that the boundaries of the symbol are very wide; symbols can have broad meanings because we can make them stand for anything that we like. We have already noted, however, that this claim is based on a confusion of sign types – it is the legisign (and not the symbol) that has this broad remit - because the legisign does not yet involve an empirical 'object of thought'. It is the legisign, as a result, that can stand for anything we want it to, and Peirce does acknowledge that it involves 'convention'. Symbols, however, are much more than legisigns because they include a developing 'object of thought. As such, reality has played a role in the formation of the symbol and it is this characteristic that ensures that they are more than merely 'conventional'.

In Peirce's view, symbols capture evolved, and evolving, 'objects of thought'. In this context, we need to explore how these 'objects of thought' then turn into symbols. We will look at the Peircean model of this process, but we will begin by looking at two alternative accounts. These can be summarised as follows:

- Firstly, there is the argument that symbols are simply created on an *arbitrary* basis. This is the view which we have just highlighted, and rejected, but there is more detail involved here.
- Secondly, it can be suggested that symbols are created by the tacit agreement, convention, or consensus, of a culture. This, as we saw in the Introduction, is often allied to the view that meaning is 'socially constructed'.

Taking the first of these models, there is a strong tradition in semiotics that finds it hard not to conflate the idea of the symbol with that of 'arbitrariness'. It is assumed that a symbol is based on convention, that it cannot be 'motivated' by reality, and that it is 'fixed' arbitrarily - from individual to individual, and from culture to culture. This way of thinking is clearly found in Saussure, but it is often mistakenly associated with Peirce. For example, Hodge and Kress interpret Peirce as follows:

> Peirce had a more helpful classification of signs. He had three major types: *icon* (based on identity or likeness; e.g. road signs), *index* (based on contiguity or causality: e.g., smoke as a sign of fire) and *symbol* (a merely conventional link, as in Saussure's 'arbitrary' sign).
>
> (Hodge and Kress: 1988: 21-22)

And sometimes Peircean scholars assume that convention and arbitrariness can be conflated because they are equivalent to each other:

> Icons share features with their referents. Indexes are caused by single objects and do not share common iconic features with their referents (unless they also 'contain' iconic relations). Symbols refer to generals rather than to particulars, and have a conventional or arbitrary relation to their referents.
>
> (Corrington: 1993: 164)

In this context, Peirce is willing to accept that the actual words, or marks on a page, that we use in symbols are based on convention, but he rejects the suggestion that their underlying 'objects of thought' are themselves 'arbitrary'.

This has important implications for the status of words. Once they are attached to their 'objects of thought' they take on a 'law-like' quality that is derived from their 'object of thought'. In a quotation that is often overlooked by Saussurian interpreters, we find Peirce stating that:

> The word itself has no existence, although it has a real being, *consisting in* the fact that existents *will* conform to it…. A Symbol is a law or a regularity of the indefinite future.
>
> (EP2: 274)

The Peircean idea that *'existents will conform'* to the word is in stark opposition to the Saussurian notion of the arbitrarily formed symbol.

Peirce's rejection of arbitrariness is often misunderstood by scholars - even though they sometimes sense the direction he is moving in. Corrington, for example, recognising something of Peirce's position, seems unsure whether Peirce means what he appears to be suggesting:

> This tension remains unresolved in Peirce although I am increasingly persuaded that he was struggling toward a nonconventionalist understanding of how symbols function to unveil objective and generic features of nature.
>
> (Corrington: 1993: 145)

I would argue that Peircean symbols are able to do precisely what Corrington is hesitant to accept – *'to unveil objective and generic features of nature'* – and this is because they, in fact, stand for their underlying (or 'under-standing'?) 'objects of thought'.

This re-interpretation of the Peircean symbol is only possible, of course, once we have re-evaluated the 'object' in the sign as an evolving 'object of thought' and not as something (outside the sign) that 'transmits' it. Peirce's position, however, now has the very significant effect of *inverting* the relationship between words and objects. In the nominalist tradition, words name and define objects; the assumption is that this relationship is created by ourselves. For Peirce, this is incorrect – *'existents will conform'* to our words. In an unpublished manuscript (MS:1105), quoted by Rosenthal, Peirce also argues that:

> Meaning enters into language by determining it.
>
> (Rosenthal: 1994: 147n)

This entirely reverses the nominalist stance that language determines meaning. In Peirce's model of the sign, in contrast, meaning is formed first (via the emerging 'object of thought') and it is *then,* subsequently, expressed in a symbol. Peirce is, effectively, overturning the very basis of nominalism.

As we saw earlier, the 'object of thought' captured in a symbol can be an actual object, or it can be an 'object of thought' (in a third) that we have created to understand the world (as in our example of gravity), or it can even be something that does not actually exist (e.g. a unicorn). The symbol is thus an 'instrument' of thought that is formed to facilitate more effective thinking about reality. In what is, in many ways, his most insightful description of sign action, Peirce thus states that:

> It appears to me that the essential function of a sign is to render inefficient relations efficient.
>
> (SS: 31)

What Peirce means here is that we render our understanding of 'relations' more 'efficient' by creating 'objects of thought' that capture (in symbols) the

relationships, and causal laws, we have encountered in reality. And, in the realm of social phenomena, we create 'objects of thought' that encapsulate social phenomena (such as 'giving') which enable us to participate in social interactions which we would otherwise construe on a purely dyadic basis.

Deely, borrowing two medieval concepts, similarly distinguishes between *'ens rationis'* and *'ens reale'* (Deely (2010: 391-5; 1982: 23-26). An *'ens rationis'* is an 'object of thought' that is *not directly* perceived (and which is, therefore, created by the mind and which is *'mind dependent'*). In contrast, an '*ens reale'* is an 'object of thought' that we have simply observed in the world and which is *'mind independent'*. This distinction (which seems, on the surface, to separate the 'intramental' and the 'extramental' along conventional dualistic lines) does not operate, however, on a Cartesian basis. Instead, it reflects the fact that, in Peircean thinking, *all* 'objects of thought' are created by the mind. The distinction between them then resolves into the secondary question as to whether they also exist, or not as *directly observable* phenomena. Deely, as we saw earlier, makes his own distinction here by distinguishing *'objects'* from what he calls *'things'*. And this, as we noted, is the same distinction that we saw in Hegel between the two words he uses for 'object' – *'Objekt'* and *'Gegenstand'*.

Of course, as our understanding of reality becomes more *'efficient'*, then the 'objects of thought' that we use to comprehend the reality converge on the world as it actually is. This means that our symbols become progressively more effective. In the Hegelian model this means that the *'Objekt'* and the *'Gegenstand'* converge, and become more like each other. And, incidentally, this tacit assumption may be another reason why Peirce uses the term 'object', rather than 'object of thought', when describing the elements of the sign. His nineteenth century audience, brought up on Hegel, would have assumed that the two will eventually merge in any case.

Importantly, if we consider Peirce's classification of signs, it is only with the symbol that the 'object of thought' becomes a 'third'. And Peirce believes that it is only at this symbolic stage that true *concepts* are created:

> Symbols grow. They come into being by development out of other signs, particularly from likenesses or from mixed signs partaking of the nature of likenesses and symbols. We only think in signs. These mental signs are of a mixed nature; the symbol-parts of them are called concepts. If a man makes a new symbol, it is by thoughts involving concepts. So it is only out of symbols that a new symbol can grow. *Omne symbolum de symbolo*. A symbol, once in being, spreads among the peoples. In use and in experience, its meaning grows. Such words as *force, law, wealth, marriage,* bear for us very different meanings from those they bore to our barbarous ancestors.
>
> (EP2: 10)

Symbols possess two important properties – they are rooted in reality and they enter into systems of thought with each other. Because 'secondness'

has already been involved in their construction, however, they represent *real* facts and *real* laws; they are not *'mere symbols'*:

> Many philosophers say they are 'mere symbols'. Take away the word *mere* and this is true. They are symbols; and symbols being the only things in the universe that have any importance, the word 'mere' is a great impertinence. In short, wherever there is thought there is Thirdness.
>
> (EP2: 269)

We can now turn to consider the second version of symbol creation outlined above. Would Peirce agree with the view that symbols are formed through social convention, or through consensus? The Peircean contention that symbols contain underlying 'objects of thought' will, of course, conflict with this claim, but we should still evaluate whether the social dimension has any role for Peirce. Some commentators insist that Peirce pursues a social model of meaning (Eco: 1995: 219; Liszka: 1996: 99) and we need to identify whether the social dimension does, indeed, play this role. Is it the case, for example, that our 'objects of thought' are also shaped by social interaction?

In relation to this question, it is clear that Peirce still has to explain, in his model of symbol formation, the differences which clearly exist between individual perspectives. If symbols are created through the evolution of the 'object of thought' in the mind, Peirce must clarify what happens when two individuals meet and they find that they possess quite different 'objects of thought'. How do they resolve their differences? This problem introduces the issue of *communication* into Peircean semiotics.

As noted in the Introduction, Peirce was living in a period where meaning creation was perceived in quite different terms to our own. The belief that meaning is created according to social 'rules' was still in its infancy. Peirce was writing before the *'Linguistic Turn'* in philosophy and the corresponding view that meaning is created through *'language games'* (Wittgenstein: 2009). As a result, Peirce talks relatively little about communication as such (Habermas: 1995: 243), although it does form the branch of semiotics he calls *'speculative rhetoric'* – the *'transmission of meaning by signs from mind t*o *mind'* (CP1: 444).

But we should now identify how Peirce construes communication - and the role of the symbol in this process. It is important, however, to place his treatment within his broader model of sign action. We have already seen (in Fig. 6) that, for Peirce, a sign is determined by the 'object of thought' and that its outcome is a new interpretant, or identity. This happens, primarily, within the mind of the individual and it involves the action of 'secondness' - which constantly forces us to revise our 'objects of thought'. But, critically, for Peirce, this action of 'limitation' on any 'object of thought' also occurs in our acts of communication.

What happens in communication is that an ‘object of thought’, present in one mind, is expressed in words (symbols) and this, in turn, creates an ‘object of thought’ in a second mind - but now in the form of an interpretant. Peirce’s account of communication thus parallels the activity of understanding signs. And the interpretant (produced in the second mind) can then be re-expressed as a new ‘object of thought’ in on-going ‘semiosis’. As Peirce says:

> A sign or *representamen*, is something which stands to somebody for something in some respect or capacity. It addresses somebody, that is, creates in the mind of that person an equivalent sign, or perhaps a more develop sign. That sign which it creates I call the *interpretant* of the first sign.
>
> (CP2: 228-9)

The question, of course, is whether the words (symbols) used by the speaker will always entail the same ‘object of thought’ for the listener? The symbol used by the first speaker is, inherently still a ‘vague’ in the mind of the receiver. As such, will the original ‘object of thought’ correspond with the resulting interpretant? This is, of course, unlikely to be the case; the initial symbol could be broader, or narrower, in scope than the received representamen and it could also have different indexical links in the mind of the utterer compared with the receiver. As we saw before, Peirce uses the example of the two travellers in the coach talking about ‘Charles the Second’. There is a possibility that they are referring to different kings (Charles the Second of France?) and, even if this is not the case, then it is highly likely that the indexical components of their respective ‘objects of thought’ will be different from each other. One of the travellers may be a scholar of seventeenth century history and the other may not even know when ‘Charles the Second’ reigned. As Peirce argues:

> When an assertion is made, there really is some speaker, writer, or other sign-maker who delivers it; and he supposes there is, or will be, some hearer, reader, or other interpreter who will receive it. It may be a stranger upon a different planet, an aeon later; or it may be that very same man as he will be a second after……
>
> The assertion which the deliverer seeks to convey to the mind of the receiver relates to some object or objects which have forced themselves upon his attention; and he will miss his mark altogether unless he can succeed in forcing those very same objects upon the attention of the receiver.
>
> (CP3: 433-4)

In this scenario there is likely to be a clash of perspectives which parallels the epistemological ‘outward clash’ of secondness that we encountered earlier. The two travellers need to identify, through their communication, what their respective ‘objects of thought’ entail. In otherwords, they need to ascertain what is included within them. This procedure will probably involve a discussion of indexical relationships – the connections that ‘Charles the Second’ had with the world (i.e. his relationships with France, with

parliament, or, indeed, with Nell Gwynne). Only if all of these are agreed will the two travellers possess the same 'object of thought'. Full correspondence will, doubtless, be impossible, but *some* level of convergence about the Stuart king will always be achievable in practice. The travellers will be able to establish ***'adequate'*** (cf. Spinoza) similarities between their 'objects of thought' to make an effective conversation possible - and these convergences will continue to evolve as they talk.

We have, as a result, the same epistemological model that we encountered earlier in Peirce's account of perception – a transition from a 'vague' to a more determined 'object of thought'. The difference, in communication, is that 'secondness' is delivered by the language of other individuals. It is clear, therefore, that a social aspect of concept formation is important to Peirce. Communication help us develop our pre-formed 'objects of thought' and it allows us to identify where they may be mistaken. As put Peirce argues:

> We must not begin by talking of pure ideas, - vagabond thoughts that tramp the public roads without any human habitation, - but must begin with men and their conversation.
>
> (CP8: 112)

But does this mean that Peirce accepts that our 'objects of thought' have a social aspect to them? Does he tacitly agree, after all, with a form of 'socially constructed' meaning, or knowledge? On the surface, this appears to be the case. But it is clear that Peirce sees the social realm as only providing a mechanism to *refine* our meanings. He is not suggesting, in line with Social Constructionism, that meaning *itself* is created on a social basis.

And another critical feature of Peirce's model also needs to be noted. It is clear that communication, for Peirce, actually involves *disagreement* between individual 'objects of thought'. The evolution of our 'objects of thought' is not, therefore, achieved through individuals simply agreeing with each other, or sharing meanings; it is established by the 'outward clash' between their respective 'objects of thought'. The convergence of two 'objects of thought' in two different minds is thus achieved as they mutually *limit the scope* of what is included in their symbols. Agreement occurs through mutual limitation - rather than through consensus.

Some commentators, however, take Peirce to mean that we establish knowledge on the basis of consensus. Liszka, for example, interprets Peirce in this manner and talks of *'the achievement of genuine consensus'* (Liszka: 1996: 99). Peirce proposes, in contrast, that the role of others is to provide *multiple different perspectives* on a particular 'object of thought'. Agreement between individuals, is not, therefore, what creates a shared meaning in a symbol. Rather, the mutually advantageous use of a symbol only arises only in the *absence of differing opinions*.

Interestingly, however, Peirce's framework actually provides those who advocate an account of social meaning with a model of how it might be constructed. Stjernfelt is quite correct when he claims that we should be sceptical about the way in which socially created meanings might be shared within a community:

> How are we to establish the meaning of a lexeme if it consists in nothing but millions of vague, fleeting, instantaneous mental events which we are only able to address via the insecure roundabout of trusting people's own introspective reports about their own mental experiences?
>
> (Stjernfelt: 2014: 15)

But the Peircean account of communication, outlined above, provides us with a way of grasping how meanings might, indeed, be spread in a social context. Each time a word is used by an individual it creates a putative 'object of thought' in the mind of another. This will, of course, have indexical components, which need to be discussed, but the use of a symbol has created an 'object of thought' in the mind of the listener without any recourse to the *'reporting'* of the speaker's thoughts. It is in this way that meaning may be disseminated across a culture without a requirement for some kind of agreement between the individuals within it.

As we shall see, this account of symbol creation also forms the basis of Peirce's account of truth. He talks, on occasions, of the benefits of a *'community of inquirers'* (EP1: 54) in scientific discovery. It is this feature of Peirce's thought that leads some commentators, such as Liszka, to assume that Peircean truth has a strong social component. But what Peirce is proposing is that a broader *'community of inquirers'* is simply more likely to ensure that we achieve a knowledge of what a particular 'object of thought' entails (Nubiola and Barrena: 2014: 437- 441). This is because a larger *'community'* will bring more perspectives to bear in limiting a particular symbol's meaning. True(er) knowledge can, as a result, be established in a way which exists despite the *'vagaries of me and you'* (EP1: 52). Critically, however, a large number of inquirers is not beneficial because it creates greater *consensus*, but rather because it ensures more perspectives are available and more limitations will be made on an 'object of thought'.

With this argument it is also possible to discern, once again, the influence of Hegel on Peirce. Hegel also takes that view that the individual is unable to form a *full* conception of the truth by themselves. They need the help of society to achieve this:

> The Idea is the Truth: for Truth is the correspondence of objectivity with the notion: - not of course the correspondence of external things with my conceptions, - for these are only *correct* conceptions held by *me*, the individual person (Hegel's italics).
>
> (Hegel: 1892/2014: 229)

Hegel goes on to state, invoking the Leibnizian idea of perspective, that:

> Every individual being is *some one aspect of the Idea*: for which, therefore, yet other actualities are needed, which in their turn appear to have a self-subsistence of their own. It is *only in them altogether and in their relation* that the notion is realised. The individual by itself does not correspond to its notion. It is this limitation of its existence which constitutes the finitude and the ruin of the individual (my italics).
>
> (ibid)

For both Hegel and Peirce, therefore, the social realm is important in meaning creation – but only because it provides a range of perspectives on an individual's emerging 'object of thought'.

This Peircean account of symbol creation is, of course, open to criticism. What happens if particular individuals want to *impose* their own 'objects of thought' on other people? Peirce, writing in the nineteenth century, does not fully recognise, or indeed debate, the effects of power and ideology. However, he does, occasionally, discuss what might happen in such situations and (rather optimistically, we might feel), argues that truth will triumph in the end.

In the *'Fixation of Belief'* (EP1: 109-123), he identifies a number of ways in which a belief (i.e. the meaning of a symbol) can be imposed on others. The *'method of authority'* (ibid: 117) is seen by Peirce as being potentially successful in the short term, and able to achieve *'majestic results'* due to the enslavement of the population. But, he argues that, even in '*the most priest-ridden states some individuals will be found who are raised above that condition'* (ibid: 118), and this will lead to false beliefs being overturned:

> The willful adherence to a belief, and the arbitrary forcing of it upon others, must, therefore, both be given up, and a new method of settling opinions must be adopted, which shall not only produce an impulse to believe, but shall also decide what proposition it is which is to be believed.
>
> (ibid: 118)

The second method is that of *'tenacity'* and it entails simply ignoring any empirical evidence to the contrary. Peirce argues that this '*will be unable to hold its ground in practice'* (ibid: 116). Likewise, the third method, the *'a priori'* method, of fixing belief is rejected by Peirce on similar grounds (ibid: 119). Peirce concludes that there is only one method of ascertaining the truth, and this he calls the *'method of science'* (ibid: 120).

This fourth method of 'fixing belief' limits the social aspect. He points out, somewhat paradoxically, that what defines this scientific approach is that it leads to beliefs created *'by nothing human, but by some external permanency – by something upon which our thinking has no effect'* (ibid:

120). Far from suggesting, therefore, that we agree between ourselves as to what constitutes truth, Peirce argues that what is 'true' are the facts upon which our opinion *'has no effect'*. Elsewhere, Peirce indeed, defines the '*real'* as being that which is *'as it is regardless of what you or I may think about it'* (EP2: 343). This is not the Social Constructionism of the twentieth century.

So, to summarise, Peirce does, indeed, accept that there is a social dimension in the development of our 'objects of thought'. This takes place when we start to converse with other individuals using our symbols. But Peirce neither agrees that these initial 'objects of thought' are 'socially constructed', nor does he assent to the argument that they are arrived at by 'consensus'. Symbols find their foundations, and their meanings, in their iconic and indexical components and this embeds them in empirical reality. The social dimension intervenes, however, when individuals discover that they have differing 'objects of thought'. These differences are resolved through our communication which allows us to impose new limits on the 'objects of thought' contained within our symbols.

Another important aspect of the Peircean symbol is the fact that, because it is a third, it involves 'sublation'. In sublation, the iconic and indexical elements of the sign are 'preserved', but they are also 'taken up' to a higher level to form a new identity. The Peircean symbol thus parallels the Hegelian 'Notion':

> The **Notion** is the principle of freedom, the power of substance self-realized. It is a systematic whole, in which each of its constituent functions is the very total which the notion is, and is put as indissolubly one with it. Thus in its self-identity it has original and complete determinateness … The notion, in short, is what contains all the earlier categories of thought merged in it.
>
> (Hegel: 1892/2014: 187)

Peirce, therefore, argues that the symbol transforms its underlying iconic and indexical properties. We should question, however, whether the idea of 'sublation' should be permitted in any account of the Notion, or symbol. It allows Hegel, and Peirce, to maintain that these are more than the sum of their parts. This suggests that there might be a 'gap' between the iconic and indexical qualities of the 'object of thought', and the symbol itself. Does this create a new form of dualism, masked by the idea of sublation?

This apparent problem, however, is actually fundamental to the symbol-making process. A sign is, and must always be, *something that stands for something else.* If the 'sublated' symbol were no more than the sum of its iconic and indexical qualities, then it would not be a symbol (a new identity) after all. In otherwords, a genuine symbol cannot exist unless it asserts that a newly sublated identity is more than the sum of its parts.

The ‘secondary dualist’ might respond, however, that what Hegel and Peirce call ‘sublation’ is, in fact, no more than ‘interpretation’ under another guise. They could argue that the creation of a new identity is simply our *interpretation* of a set of iconic and indexical experiences.

But this would be to view Hegel and Peirce too simplistically. Firstly, the new identity is *not* an interpretation – it is an *identity* that exists in the world. Secondly, they are using a model of concept development that is very different from the Rortian model of the ‘mirror’ which entails ‘subjective’ interpretations. Instead, they view concept formation from icon, to index, to symbol, as an iterative development which involves reality itself. As such, the model has little room for subjective ‘interpretations’ and it also possesses an intrinsically logical character. Thirdly, there is a qualitative ‘leap’ involved in the final creation a symbol, but this always remains an active *hypothesis* for both Hegel and Peirce. There is, as a result, some similarity between the notions of ‘sublation’ and ‘interpretation’, but they remain categorically different processes. The latter is a subjective act of evaluation, whilst the former entails an act of synthesis.

To conclude this section, it is worthwhile summarising the way in which Peirce views the formation of a concept (or sign) with an actual example. Let us consider how Peirce would account for the development of the concept of a ‘table corner’. To begin with the mind has no such concept, but, over time, an individual may notice similarities between different ‘corners of tables’ and start to see them as being discrete entities in their own right. This is the *iconic stage* of sign development – an identity is formed on the basis of a similarity. Over time this putative identity may accrue certain indexical properties and, as such. an ‘object of thought’ will begin to develop. ‘Corners of tables’ will be seen as the kinds of things that bump your leg, or which three year olds have a tendency to run into. At this stage a more fully-fledged sign is created, but we still do not have a *symbol* that stands for a ‘corner of a table’. This may happen if it becomes useful to depict, or talk about, ‘corners of tables’ in a way that is recognised by others, or which can be used to represent their identities and the indexical properties that they contain.

This final development of the sign may, or may not, ever happen – perhaps there are some societies in which a symbol has already been created to capture such a concept? Not all signs reach the stage where they become fully developed symbols. And, of course, even if they do, they are still open, potentially, to further determination. Different symbols could be developed to stand for different kinds of ‘corners of tables ’- if were felt that this would be useful.

However, it has been argued that the symbol is not, it turns out, a ‘conventional’ sign type. In Peircean hands, it represents the fruition of a developmental process that begins with icons and which includes indices. The symbol is a ‘third’ and, as such, it creates a *new identity,* that exists in the world, and which also has law-like qualities.

We have noted, however, that whilst the Peircean symbol can be created purely in the mind of an individual, there is an important role for the social dimension in developing its precise extent (breadth), and its specific entailments (depth). Through their character as communication vehicles, symbols also have a social aspect and they allow us to encounter the ‘objects of thought’ of others. Through communication, therefore, symbols evolve their meanings, and accommodate other perspectives. The social dimension, for Peirce, thus facilitates the growth of human knowledge, but this knowledge is always founded upon the initially formed ‘object of thought’ that, critically, forms at the level of the individual mind. As such, the symbol should not be viewed as involving either conventionality, or arbitrariness.

As a *coda* to this section, it is, perhaps, also worth reflecting on exactly why the ‘received’ view is so convinced that symbols are a matter of social ‘convention’. The answer lies, of course, in the fact that it tacitly assumes that only conventional ‘objects’ can exist in the world. As such, the ‘received’ view must dismiss the reality of our ‘objects of thought’ and construe them, instead, in terms of mere convention. It is, therefore, the underlying limitation of what is allowed to constitute ‘reality’ that really drives the perspective that symbols are matters of convention. Whilst Peirce can identify meaning in our ‘objects of thought’, the ‘received’ view has no alternative to which it can turn.

6.6) Peirce: The 'Third Trichotomy'

The third trichotomy of Peirce's classification will be discussed only briefly. The main revisions to Peircean semiotics that are proposed in this thesis are largely focused on the second trichotomy that we have just evaluated. The purpose of this sub-section is simply to show, therefore, how his typology of signs comes to fruition in this column of his classification, and to demarcate the critical boundaries between the second and third trichotomies. Once we have reached the stage of the symbol, in the second trichotomy, we have achieved the establishment of the genuine sign *per se* – the third trichotomy is concerned, less controversially, with how we subsequently use it.

As has been argued, the second trichotomy deals with the development of the 'object of thought' in the sign and the indexical connections that are included, or not included, within it. Some of these 'objects of thought' are directly perceived, some are inferred, and some are social in nature. As a result, we no longer experience simple objects, or events, but rather we encounter new identities such as 'tables', 'chairs', 'giving', and 'murder'. We know how these 'objects of thought' 'behave', or will impact upon us, because of the indexical properties they contain. When they are sublated into 'thirds' we use symbols to represent them in our thoughts.

It is important to emphasise, however, that we have only been concerned, so far, with how the 'object of thought' is formed within the sign and the resultant *identity* that it creates. We have not reached a stage where we can affirm, in specific propositional statements, the types of relationships that objects enter into in the real world. For example, we may have created the 'object of thought', or universal, of 'cat'. We know the sorts of things that cats do (what their identity entails), but we are still not able to construct a *proposition* to the effect there is a cat in front of me right now. This is the purpose of the third trichotomy – it is concerned with making *propositions* about world and it uses the signs (or concepts) that have been created in the second trichotomy.

Taking the first element of the third trichotomy, Peirce defines the 'rheme' (the 'first of a third') as a 'term'. It is a symbol that has the potential to act within a proposition, but it is not yet employed in one. This parallels the qualisign which is a quality that has not yet been 'embodied' in a sinsign:

> A Rheme is a sign which, for its Interpretant, is a sign of qualitative possibility, that is, is understood as representing such and such a kind of possible Object. Any rheme, perhaps, will afford some information; but it is not interpreted as doing so. (EP2: 292)

Nöth describes the rheme as follows:

> Rhemes, being single words in isolation, do not convey any information. It is logically impossible for a rhematic sign to be also informative.
>
> (Nöth: 2014: 16)

And Peirce describes their status as a 'term' that can be deployed in propositions:

> A rhema is somewhat closely analogous to a chemical atom or radicle with unsaturated bonds.
>
> (CP3: 421)

At the next stage, the dicisign (or dicent sign), however, does act as a *proposition*. It claims to describe a state of affairs in the world – such as there being 'a cat sitting in front of me'. A proposition is capable, therefore, of being true or false. It is important to note here that this possibility is very different from the action of indices that we have encountered in the second trichotomy. In the latter case, Peirce was merely concerned with the empirical actions of secondness that construct an 'object of thought', and how we learn about a particular *identity*. This is quite different from the empirical question at stake here - where we consider actual relationships *between* two 'objects of thought' (cats and mats).

In asserting such a relationship the dicent creates a sign which is a proposition. And we may also create further signs that can be used to communicate further, and more complex, information:

> The readiest characteristic test showing whether a sign is a Dicisign or not, is that a Dicisign is either true or false, but does not directly furnish reasons for its being so. This shows that a Dicisign must profess to refer or relate to something as having a real being independently of the representation of it as such, and further that this reference or relation must not be shown as rational, but must appear as a blind Secondness.
>
> (EP2: 275)

The point that Peirce highlights in the middle of this quotation is important – the dicisign (because it is 'just' a proposition) only '*professes'* that two signs share the same object – it asserts this, but it does not *'furnish reasons for its being so'*. It falls to the third element of this trichotomy – the 'argument' – to provide the reasons for believing in any particular proposition. And the 'argument' achieves this by placing the proposition in a system of other truths about the world:

> An *Argument* is a sign which, for its Interpretant, is a sign of a law. We may say that a Rheme is a sign which is understood to represent its Object in its characters merely; that a Dicisign is a sign which is understood to represent its Object in respect to actual existence; and that an Argument is a sign which is understood to represent its Object in its character as a sign.
>
> (EP2: 292)

As Liszka points out, for Peirce:

> The *argument* is a sign whose interpretation is directed to the systematic, inferential, or law-like connections with other signs; it determines the interpretant toward the inferential form or rule like character of the sign.
>
> (Liszka: 1996: 42)

It is at this stage that knowledge enables us to place a proposition within a system of other empirical beliefs. It is also at this point that we are able to say *why* something is true, or *why* something is false.

The third trichotomy combines different signs, but the identities that it utilises have already been created in the second trichotomy. This means that both 'dicisigns' and 'arguments' are empirically rooted. It follows that, when a proposition states that *'all men are mortal'*, this cannot be dismissed as being a mere (or analytic) result of the terms being used. For the two rhemes (terms) involved ('men' and 'mortal' in this case) have been derived from experience and this means that any proposition involving them has *real empirical* content.

This leads to the conclusion, as Stjernfelt correctly suggests, that, for Peirce, there are such things as *'natural propositions'*:

> A most remarkable implication of a Peircean notion of Dicisigns is the possible naturalization of propositions. Propositions are taken to function without the intermediary of language or consciousness, and propositions are taken to exist before the existence of human beings……. One advantage is that the purely functional definition of propositions liberates Dicisigns from the confinement to human language, intention, and consciousness, that is, beyond linguistic-turn philosophy as well as philosophy of mind.
>
> (Stjernfelt: 2014: 105)

This raises the intriguing possibility that we possess empirical knowledge of the world as a direct result of the terms that we use in our language. And this leads to a discussion of Peirce's 'concept of truth' in the next chapter.

7) The Peircean 'Concept' and his Pragmatism

7.1) The Pragmatic Maxim

In this, our last chapter on Peirce, we will consider how the Peircean 'concept' links his pragmatism. We will find that the interpretation of the concept, put forward in this thesis, has implications for this other important facet of Peirce's philosophy. He is not only known as one of the founders of semiotics, but also enjoys a similar status with regard to pragmatism. In this chapter we will see how these two aspects of his work are intimately related through his account of the concept.

In an essay on Peirce, and his influence on educational theory, Houser (1987) quotes Percy:

> Charles Peirce was an unlucky man. His most important ideas ran counter to the intellectual currents of his day, were embraced by his friends – and turned into something else. William James took one idea and turned it into pragmatism which, whatever its value, is not the same as Peirce's pragmaticism. Peirce's triadic theory has been duly saluted by latter-day semioticists – and turned into a trivial instance of learning theory….. Freud was lucky. The times were ready for him and he had good enemies. It's our friends we should beware of.
>
> (Percy: 1972: 160)

We have already noted the ways in which Peirce's theory of signs has been misconstrued in the secondary literature. Percy is correct in claiming, however, that a similar fate has also befallen his *'pragmaticism'*. On this occasion, however, Peirce was aware of the misinterpretations of his position and adopted this, his own distinct term, as a means of distancing himself from James's 'pragmatism'.

Peirce's 'pragmaticism' is often viewed as a major theme of his later philosophy and as something that was not present in his earlier writings. It is of some significance, consequently, that Peirce acknowledges that this aspect of his thinking has links with Hegel (CP5: 436). This strongly suggests that much of his 'pragmatic' thinking is implicitly present in his earlier work, but not expressed in overt terms. It is also worth noting that neither Peirce, nor James, are the first to use the term *'pragmatic'*. James suggests that it was first used by Peirce in 1878 in *'How to Make Our Ideas Clear'* (EP1: 124-141; James: 1908: 46); but it can actually be found, and in only a slightly different context, in Hegel (1892/2014: 166).

Perhaps the clearest formulation of Peirce's 'Pragmatic Maxim' is as follows:

> Consider what effects that might conceivably have practical bearings we conceive the object of our conception to have: then, our conception of those effects is the whole of our conception of the object.
>
> (EP2: 135)

This is usually interpreted as a statement about *'effects'*. Commentators, as a result, infer that the Maxim is about *consequences* and how *future anticipated behaviour* determines meaning There are numerous examples of this interpretation in the secondary literature. Here are several, starting with James:

> The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to any one if this notion rather than that notion were true?
>
> (James: 1908: 45)

> Pragmatism, the philosophical doctrine that the meaning of any conception consists in how that conception may affect behaviour (with behaviour broadly construed to include thinking).
>
> (Houser: 1987: 255)

> The pragmatist doctrine [of truth] depends upon the axiomatic assuming of a particular position on what 'usefulness' is.
>
> (Valsiner and Van Der Veer: 2000: 203)

> Because, in his view [Peirce], the only function of thought is to establish modes of behaviour and action, we merely have to determine what modes of behaviour a thought produces in order to develop the meaning of that thought, since what an object means consists simply in the modes of behaviour that it involves.
>
> (Arens: 1994: 6)

> We can only know what a word or concept means, Peirce asserted, based on its effect upon the conduct of human behaviour.
>
> (Chiasson: 2002: 11)

> The 'cash value' of a word or concept was for them [Pragmatists] the difference it made in life and action. No difference in life, no difference in meaning.
>
> (Davis: 1972: 88)

These quotations (and there could be many more) illustrate a widespread emphasis on 'effects'. These are, indeed, an important constituent of the Maxim, but we should not conclude that this is all it is about. As Peirce points out:

> It must be admitted, in the first place, that if pragmaticism really made Doing to be the Be-all and the End-all of life, that would be its death.
>
> (EP2: 341)

The most critical part of the Pragmatic Maxim can be found in its last line where Peirce highlights that he is talking about the *'whole of the conception of the object'.* This part of the Maxim is so important to Peirce that in his essay *'What Pragmatism Is'* he writes this part, in obvious frustration, using capital letters:

> Then your conception of those effects is the WHOLE of your conception of the object.
>
> (EP2: 338)

With the emphasis now placed on the word 'whole', the Pragmatic Maxim attracts quite a different meaning. Its subject matter is now re-framed; it becomes a proposition about *what it is for something to constitute a 'whole conception'* (of an 'object of thought'). This effectively translates the Maxim into an assertion about the nature of truth itself, rather than one concerning how important particular 'effects' may, or may not be, in meaning creation.

James takes Peirce's 'Pragmatic Maxim' and revises it only slightly. But the alterations James makes have far reaching consequences. In his lecture, *'What Pragmatism Means'*, James states the Maxim in his own terms. These look, superficially, very similar to Peirce's, but are entirely different in their meaning:

> Mr. Peirce, after pointing out that our beliefs are really rules for action, said that, to develop a thought's meaning, we need only determine what conduct it is fitted to produce: that conduct is *for us* its sole significance…… To attain perfect clearness in our thoughts of an object, then, we need only consider what conceivable effects of a practical kind the object may involve – what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, whether immediate or remote, is then *for us* the whole of our conception of the object, so far as that conception has positive significance at all (my italics).
>
> (James: 1908: 46-47)

James's version clearly covers most of what is included in Peirce's formulation, even mentioning the 'whole' conception, but he then limits the scope of the Maxim by insisting, twice in this passage, that it only works *'for us'*. In making this emphasis he thereby 'psychologises' the Maxim. It is no longer a proposition about the nature of truth itself; it is now a Maxim about how concepts (subjectively) come to mean things *'for us'*. James, of course, also believes that his version of the Maxim still remains a *'doctrine of truth'* (Dea: 2014: 478), but, in effect, it is now reduced to a theory of how meaning is formed at an individual level. At one point, for example, James even claims that the Maxim can be used to justify the religious belief of an individual because of the 'value' that it creates:

> Interested in no conclusions but those which our minds and our experiences work out together, she has no *a priori* prejudices against theology. *If theological ideas prove to have a value for concrete life, they will be true, for pragmatism, in the sense of being good for so much.*
>
> (James: 1908: 72-3)

As such, the Pragmatic Maxim is no longer a theory about the nature of truth, as Peirce intended. It is now a *'psychological'* theory (Misak: 2013: 54-57; Otto Apel: 1981: 5) about how we individually create meaning. Turrisi makes this distinction clear:

> Pragmatism's usefulness on the level of directing its practitioners to specific conclusions is eminently demonstrable. But as Peirce pointed out in his Baldwin's *Dictionary* article, its general meaning is a different matter. Peirce regarded the practical skill of using pragmatic technique as valuable, but not in any great need of elucidation. By contrast, readers of William James's works prior to 1903 were treated almost exclusively to descriptions of pragmatic skills and techniques implying its value for practical action. Justifications of pragmatism even later in James's works – for example in his 1907 Lowell lectures on pragmatism – are made in terms of its usefulness, under the presumption that practical utility is its own best defense.… The direction of pragmatic studies typified by James's work – which was not grounded on any greater justification than efficacy – convinced Peirce that pragmatism had gone too far without its necessary *logical* justification.
>
> (Turrisi: 1997: 29)

The emphasis of James on *'for us'* also has the effect of relativising the Maxim. This interpretation has been passed down to philosophers in the twentieth century in a way that subverts Peirce's original intentions. As a result, we find, Rorty, for example, highlighting pragmatism as *'anti-essentialist'*:

> My first characterization of pragmatism is that it is simply anti-essentialism applied to notions like 'truth', 'knowledge' language', 'morality', and similar objects of philosophical theorizing.
>
> (Rorty: 1982: 162)

He goes on to criticise such interpretations, but still concludes that pragmatism should be described in terms that deny a role for reality:

> Let me sum up by offering a third and final characterisation pragmatism: it is the doctrine that there are no constraints on inquiry save conversational ones – no wholesale constraints derived from the nature of the objects, or of the mind, or of language, but only those retail constraints provided by the remarks of our fellow inquirers.
>
> (ibid: 165)

Such interpretations are clearly far from Peirce's original intentions. Peirce is concerned with what it is for something to be empirically true - and he concludes that this involves knowing the sum of what is contained within a *'whole conception'*. Such a conception will include all of the 'effects' of a

thing, but the focus remains, for Peirce, on the conception itself – not on an account of how meaning can be framed for an individual.

This way of thinking about a concept is, of course, something that we have already encountered in Peirce. He characterises a concept as an identity that has indexical elements attached to it. This places an emphasis on the role of identity in the Maxim. In '*How to Make Our Ideas Clear'*, Peirce states, referring to a concept:

> To develop its meaning, we have, therefore, simply to determine what habits it produces, for what a thing means is simply what habits it involves. Now the identity of a habit depends on how it might lead us to act, not merely under such circumstances as are likely to arise, but under such as might possibly occur, no matter how improbable they may be.
>
> (EP1: 131)

It is the sum of the indices (or 'effects') that are *contained* within a concept which determine what a concept means. We should note here that Peirce specifically mentions that meaning is also determined by the indexical connections that *'might possibly occur'*. The meaning of a concept is thus defined also by the sum of its possible relationships – *not* just those which we have so far observed. And Peirce goes on to argue that it is these relationships that define an identity:

> …and we can consequently mean nothing by wine but what has certain effects, direct or indirect, upon our senses; and to talk of something as having all the sensible characters of wine, yet being in reality blood, is senseless jargon.
>
> (ibid)

Elsewhere, as we saw earlier, Peirce also discusses the hardness of a diamond and he comes to the same conclusion. A diamond is 'hard' because it behaves in a certain way in certain circumstances. This is what is entailed in *being* a diamond.

Because identities are involved, it is important to note that the 'Pragmatic Maxim' works only at the level of universals. Hookway, for instance, correctly points out that it does not apply to questions relating to singularities - such as whether Caesar '*sneezed three times on the morning he first crossed to England'* (Hookway: 2004: 147). Peirce makes this point himself, insisting that the Maxim can only speak of general kinds (CP5: 426). He also argues that when we claim that diamonds are 'hard' we are stating a fact about a *class of objects*. It may, of course, be the case that the next diamond that we encounter is, in fact, 'soft' and we may need to revise our initial assertion. If this happens we will either conclude that our original definition of diamonds is wrong (an unlikely outcome), or we will create a new sub-category of 'soft' diamonds (a more likely alternative). In this interplay of form and content, this would mean that the 'truth' that ordinary diamonds are 'hard' would still be preserved:

> And do not overlook the fact that the pragmaticist maxim says nothing of single experiments or of single experimental phenomena (for what is conditionally true *in futuro* can hardly be singular), but only speaks of *general kinds* of experimental phenomena.
>
> (CP5: 426)

The importance of the 'whole conception' is often overlooked by commentators who then, inevitably, go on to emphasise the importance of *context* in the Pragmatic Maxim. Hookway, for example, sees it as being a rule for evaluating the truth content of *specific* propositions, *instead* of being a theory about meaning itself:

> The pragmatist maxim is a methodological rule for clarifying propositions, it is not directly part of a systematic semantics or theory of meaning for expressions of a natural language.
>
> (Hookway: 2012: 9)

This shift in focus, however, has the unfortunate effect of inverting the operation of the Maxim once more. By ceasing to focus on what it is to be a certain concept, it becomes a statement of how particular meanings are defined by *context*. This relativises the 'Maxim' again. Hookway goes on to argue, for instance, that:

> A full understanding of the pragmatist maxim probably requires an understanding of our cognitive contexts, of the sorts of information we should take account of in reflecting about the consequences of our actions in different possible circumstances.
>
> (ibid: 10)

Context thus becomes all important in determining meaning; it amounts to another way of talking about 'effects'. Such a view would be rejected by Peirce who construes the matter the other way around – for him, a context is what is *included* in the 'whole conception'. When we discussed Social Constructionism, at the beginning of this thesis, we noted that the absence of an 'essentialist' self results in the conclusion that the individual is 'fragmented' and relationally formed. For Peirce, however, the sum of the relational characteristics of an 'object of thought' are precisely what defines an individual – it represents not a rejection of the notion of identity, but rather its very definition.

Equally, when we apply this relational framework to Frege, we can see where he and Peirce diverge from each other. Frege's notion of 'sense' is based on the insight that we often have different ways of talking about the same thing – for example the 'Morning Star' and the 'Evening Star' (Frege: 1892/1997). Different meanings and 'senses' can be formed using the same reference. Peirce would have gladly acknowledged this, but would not have derived the notion of Fregean 'sense' as a result. He would have simply pointed out that Frege has correctly identified the relational characteristics

of an ‘object of thought’. Frege’s insight, therefore, would be treated by Peirce as no more than a reflection of the relational nature of reality.

In summary, the Pragmatic Maxim, is often construed in ways that reverse Peirce’s original intentions. It has become, in the hands of some twentieth century commentators, a way of thinking how meaning works at an individual, and subjective, level. This approach makes it relativistic in nature. But what Peirce is actually proposing is an account of how meaning, itself, is constituted on a relational basis. Effects are certainly a vital part of this – but Peirce’s key point is that it is the *summation of all effects* that creates the meaning of an individual concept. This is quite different from the proposition that perceived ‘effects’ establish a particular meaning, for a particular individual, and in a particular context. The whole purpose of Peirce’s Pragmatic Maxim is to demonstrate that the meaning of a concept includes *all* of its potential relational contexts. This, after all, is precisely what the ‘dynamic object’ is.

7.2) Peirce’s Concept of Truth

If the Pragmatic Maxim is understood as defining the meaning of a concept in terms of the ‘whole’ of its conception, then this also has important consequences for Peirce’s concept of truth. And it establishes important connections with other themes in this thesis.

When Peirce asserts that the meaning of a concept involves the ‘whole’ of its connections with the world, he is adopting a position that is close to the Leibnizian model of the Universe as a web of inter-related monads. These, as we saw in chapter two, are identities that are defined by the sum of their relationships with each other. Leibniz describes their action as follows:

> And as, because the world is a *plenum*, everything is connected and each body acts upon every other body, more or less, according to the distance, and by reaction is itself affected thereby; it follows that each monad is a living mirror, or endowed with an internal activity, representative according to its point of view of the universe, and as regulated as the universe itself.
>
> (Leibniz: 1714/1951: 523)

Peirce is well aware of this Leibnizian argument and his pupil, John Dewey, in his book on Leibniz, also reiterates this position. Interestingly, Dewey can be found using the notion of a *‘whole content’*:

> The monad is an individual, but its whole content, its objectivity or reality, is the summation of the universe which it represents.
>
> (Dewey: 1888: 57)

Hegel is, of course, aware of this Leibnizian background and it informs his own account of the 'Absolute'. He states, making an overt connection between his own 'object' and the Leibnizian monad:

> The definition, which states that the Absolute is the Object, is most definitely implied in the Leibnitzian Monad. The Monads are each an object, but an object implicitly 'representative', indeed the total representation of the world.
>
> (Hegel: 1892/2014)

This Leibnizian model means that each monad is related to the rest of the Universe in a way that uniquely defines it. It comprises the coming together of a specific identity and a set of indexical relations with rest of the world. These Leibnizian points foreshadow Hegel's vision of the 'Notion', and Peirce's pragmatic account of the concept. As a result, when we become more familiar with a particular identity (or monad), we ascend from 'clear ideas' (that simply indicate that we have recognised it *as* an identity), to 'distinct ideas' (where we learn the indexical relations of that identity) and we may finally reach 'perfect ideas' (which are only known by God). This progression, or hierarchy ideas, is also reflected in the way that the human mind moves from Leibnizian 'nominal' to 'real definitions' – a trajectory that has Peircean parallels in his 'immediate' and 'dynamic' objects.

This vision of a relational Universe, that we get to know 'by degrees', has implications for Leibniz's concept of truth. Critically, it involves the notion of '*containment'.* In a letter to Arnauld, Leibniz states:

> It is that always, in every true affirmative proposition, whether necessary or contingent, universal or particular, the notion of the predicate is in some way included in that of the subject. *Praedicatum inest subjecto* (predicates are contained within their subject); otherwise I do not know what truth is.
>
> (Leibniz: 1686: Loemker: 1989: 337)

This definition of truth, and what it involves, has parallels with Peirce's Pragmatic Maxim. It asserts that what is *contained* within a concept (e.g. its predicates, or 'effects') determines what a concept means – its *'whole conception'*. This convergence between Peirce and Leibniz is seldom noticed in the secondary literature – a considerable oversight given that it determines much of Peirce's thinking. Belluci's article on Leibniz is a notable exception to this. He claims that:

> Peirce's original formulation of the pragmatist principle has its roots in Leibniz's theory of cognition.
>
> (Belluci: 2013: 339)

And Belluci goes on to point out that Peirce (MS: 649) talks of *'pragmatic adequacy'* – picking up on the notion of 'adequate ideas' that we have encountered in Spinoza and Leibniz.

To the modern mind, however, Leibniz' account of truth seems to be flawed. He appears to suggest that we treat statements about reality as if they were *analytic*. They seem to be true on the basis of the meanings of their terms. Our concepts, if they are determined by the predicates they contain, seem to reduce all of our propositions about the world to the level of tautologies. But Leibniz is writing almost a century before Kant made his distinction between synthetic and analytic truths. To the modern reader, what Leibniz seems to be proposing is that our statements about the world are analytic – but what Leibniz is, in fact, suggesting is a way of thinking about truth than transcends this distinction. Leibniz is, in fact, proposing a formulation of truth that insists that our empirical truths are (in Kantian terms) *simultaneously* analytic and synthetic. As such, Leibniz combines both 'coherence' and 'correspondence' theories of truth.

We can clearly discern, in Peirce's account of concept formation, and his Pragmatic Maxim, a position that equates to this radical Leibnizian stance. We have seen that Peircean concepts are initiated as putative identities (icons), that they accrue connections with the world (via indices), and that they are eventually captured in the form of symbols. At this symbolic level they are then incorporated into systems of other symbols that form structures which are internally coherent. Here we have the requisite elements for a formulation of truth that combines both empirical foundations (correspondence) and internal consistency (coherence). This is possible because the meanings of our terms are not nominalistically 'plucked from the air', but are developed on the basis of our previous empirical experience - the determining actions of secondness. Peirce, as we highlighted, maintains that meanings determine the words we use – not the other way around.

And Almeder confirms this view of Peircean truth. He identifies no less than thirteen ways of interpreting Peirce concept of truth, but concludes that the most effective ones are those that involve a *combination* of 'coherence' and 'correspondence' theories (Almeder: 1985: 89).

This Peircean view of truth – as involving a combination of the empirical and the logical - is, of course, further evidence of his Hegelian approach to knowledge. For both philosophers, our concepts have an internal coherence with each other and they are also rooted in our experience. This is what leads Hegel to claim that '*what is reasonable is actual; and what is actual is reasonable'* (Hegel: 1892/2014: 5), whilst Peirce argues that we experience *'concrete reasonableness'* (CP5:3). And, in this, he possibly echoes the concept of '*petrified intelligence'* first employed by Schelling (Hegel: 1970: 15; Stone: 2005; Otto-Apel: 1981: 34).

Hegelian dialectics, as we have seen, enables the mind to achieve, through the interplay of form and content, a position where our Notions correspond with our experience. We find that our Notions and reality converge on each other:

> But the *goal* is as necessarily fixed for knowledge as the serial progression; it is the point where knowledge no longer needs to go beyond itself, where knowledge finds itself, where Notion corresponds to object and object to Notion.
>
> (Hegel: 1977: 51)

This parallels the position that we have just encountered in Peirce - where we possess a form of knowledge that is both synthetic and analytic. Winfield, discussing Hegel's stance, argues that:

> This enables the ensuing movement [dialecticism] to be analytic and synthetic at once. As in logic's self-thinking of thought, here each advance is synthetic by presenting something not already contained in what precedes it, yet analytic insofar as it provides nothing that is not contained within the whole that is in the process of determining itself.
>
> (Winfield: 2006: 30)

And Houlgate concurs with Winfield's account by viewing Hegel's dialectical process as combining the analytic and the synthetic:

> Hegelian logic is 'analytic' to the extent to that it merely renders explicit what is implicit or unthought in an initial category. However, by explicating the indeterminate category of being, we do not merely restate in different words what is obviously 'contained' in it, we watch a new category emerge. It is this transformation of categories into new categories which *prevents* the development of Hegel's logic being straightforwardly analytic.
>
> (Houlgate: 2005: 38)

These arguments result in a philosophical position being established where our concepts of meaning *and* truth are able to converge on each other. In the nominalist view, truth can only relate to the correspondence of our perceptions with some 'noumenal' reality 'behind' them, whilst meaning is created by the mind itself. In the position developed by Peirce, and also by Hegel, these distinctions are dissolved. Each identity, captured in a synthetic concept, is defined by its relationships with the world and these also define, pragmatically, what its meaning is. We have overcome the dualisms of nominalism and brought the concepts of truth and meaning back together again.

This argument, however, can be developed further. If we take Hegel's and Peirce's position and frame it in more 'Kantian' terms, we find that they are both espousing a form of truth that we could possibly describe as *'a posteriori analytic'*. By this, I mean that our statements about the world enjoy an 'analytical' quality (because of the meanings they contain), but, at

the same time, they are not true in a tautological sense. This is because the terms that these statements utilise have been framed, and determined, by our experience - and so they contain synthetic content.

When Kant divided truth into four types – *'a priori'* and *'a posteriori'*, *'analytic'* and *'synthetic'*, he concluded that it is possible to achieve *'a priori synthetic'* truth. Leaving aside the question of whether such a claim was justified, the more important question is one that asks why he did not adopt the other alternative – that of *'a posteriori analytic'* truth. He was too great a philosopher not to have considered this option, but it would not have appealed to him. As a self-proclaimed flag-bearer of the Enlightenment it would have entailed an unacceptable consequence - a return to Leibniz.

It is possible to argue, however, that both Hegel and Peirce are proposing this alternative vision of truth. The mechanism that, of course, enables them to maintain such a position is the *concept* itself. The way in which they both construe the concept's development is what enables them to arrive at this view. If we accept their claim that our concepts are formed by combining the empirical and the rational, then it is possible to envisage a form of truth that is simultaneously analytical in structure and which is also rooted in our experience.

The argument that is being put forward here also has some parallels with Quine's *'Two Dogmas of Empiricism'* (Quine: 1951). In this paper he argues that it is not possible to draw a clear distinction between analytic and synthetic statements and he describes this division as *'an unempirical dogma of empiricists, a metaphysical article of faith'* (ibid: 34). He believes that the distinction is based on the empiricist belief that we can verify our beliefs through our experience and that it is on this basis that we can impose a *'cleavage between the analytic and the synthetic'* (ibid: 38). Arguing that this is not possible, he concludes that our statements about the world *'face the tribunal of sense experience not individually, but only as a corporate body'*.

The view of truth being proposed here does not mean, of course, that our statements about the world are always true. We utilise concepts fashioned by our experience, but this does not mean that they are always fool-proof. The fallibility of our concepts, however, marks the relevance of Peirce's concept of secondness. It is this category of experience that continually throws up 'surprises' and which means that our concepts always remain contingent. Peirce, on one occasion, describes the progress of human knowledge as like *'walking on a bog'*. This metaphor emphasises its contingent nature:

> It feels from that moment that its position is only provisional. It must then find confirmations or else shift its footing. Even if it does find confirmations, they are only partial. It is still not standing upon the bedrock of fact. It is walking upon a bog,

> and can only say, this ground seems to hold fast for the present. Here I will stay till it begins to give way.
>
> (CP5: 589)

It is also of interest to conclude this chapter with a brief discussion of how Peirce's concept of truth parallels some of the arguments put forward by Kripke. The latter famously suggests that we are able to know 'necessary' truths about the world. Using the notion of *'rigid designation',* Kripke asks, in *'Naming and Necessity'* (Kripke: 1980), whether the proposition that *'gold is a yellow metal is necessary'* (ibid: 123) and '*is it a necessary or a contingent property of gold that it has the atomic number 79?'*. Kripke answers, affirmatively, that it is necessary for gold to have these properties simply because this is just what 'being gold' amounts to:

> Given that gold *is* this element, any other substance, even though it looks like gold and is found in the very places where we in fact find gold, would not be gold. It would be some other substance which was a counterfeit for gold. In any counterfactual situation where the same geographical areas were filled with such a substance, they would not have been filled with gold. They would have been filled with something else.
>
> So if this consideration is right, it tends to show that such statements representing scientific discoveries about what this stuff *is* are not contingent truths, but necessary truths in the strictest possible sense.
>
> (ibid: 125)

Kripke concludes, as a result, that 'necessary truths' are founded upon our knowledge of *identities* (rather than 'things'). These properties, he claims, are not contingent because they are intrinsically *included* in these identities.

Kripke's approach is very close to that of Peirce. The latter begins with the icon, or an identity, acting as a 'placeholder' (*footnote twenty*) (stripped of any empirical baggage) around which indexical qualities then coalesce. Kripke starts from much the same standpoint – gold is assumed to be a certain kind of *'stuff'* (e.g. at first it is an empty 'placeholder') which we subsequently *'fill in'* with the empirical components (or properties) of what this *'stuff'* might be like. This way of forming the identity of gold renders the properties of gold 'necessary', rather than contingent, and it does so in a manner that is *a posteriori*. And it will be noted that Peirce's account of wine (see section 7.1) corresponds with Kripke's account of how the identity of gold is formed.

Unfortunately, Kripke, in contrast to Peirce, then proceeds to argue that the identity of gold must have been fixed, *nominalistically*, in a naming process and that it is, as a result, a *socially constructed* definition:

> In general our reference depends not just on what we think ourselves, but on other people in the community, the history of how the name reached one, and things like that. It is by following such a history that one gets to a reference.
>
> (ibid: 95)

Kripke, therefore, concludes that identities are '*fixed'* by the community. But Peirce does not need to adopt this approach. For him, it is the combinatory actions of the icon and the index that enable us to 'fix' the contents of an 'object of thought', and to give it meaning.

Leaving this Kripkean byway aside, however, it seems clear that the 'positing' of an identity (i.e. the creation of a 'placeholder' without initial empirical qualities) represents the critical epistemological step that allows us to bridge the 'gap' between the experiential and the conceptual. This is the fundamental strategy of both Hegel and Peirce. Hegel performs this task by invoking 'Essences', whilst Peirce achieves the same result with the icon. This leads them both to establish an account of human knowledge founded on concepts that are universal, and yet contingent.

To conclude this chapter, it is clear that Peirce's account of truth is closely linked to his pragmatism, his understanding of the concept, and, in turn, his description of sign action. It is thus possible to grasp the deeper connections between his pragmaticism and his semiotics. As suggested above, I would argue that these linkages can be traced back to the influence of Leibniz, and Hegel, on Peirce. By focusing on the development of concepts and construing them as emerging identities, Hegel and Peirce are able to circumvent the problems of dualism. They are both, as a result, able to develop an account of truth that is synthetic, but which also displays 'analytic' qualities.

8) Vygotsky: the 'Higher Psychological Processes'

Having analysed the ways in which Peircean thought is informed by Hegel, we can now turn to Vygotsky and his account of concept formation. The parallels with Hegel are easier to discern here because Vygotsky openly acknowledges his debt to Hegel and because he is also clear that his main focus is the activity concept formation. Vygotsky does sometimes talk in terms of signs, but his approach to concept formation is more clearly framed within the Hegelian template.

8.1) Dialecticism in Vygotsky

It is acknowledged that Vygotsky borrows the dialecticism of Hegel in his treatment of concept formation. However, his dialectics are often misunderstood by commentators who interpret it in ways that misconstrue Vygotsky's intended meaning. In particular, there is a tendency in the secondary literature to shift the workings of dialecticism away from a cognitive perspective (that is more Hegelian in character), and towards a form of dialecticism that describes the relationship between the individual and society. In this perspective, it ceases to be an account of what happens *within the mind* of an individual and becomes, instead, an account of relationships between individuals *within the social dimension*.

With Hegel and Peirce, we have already seen that their accounts of concept formation involve mediating entities. With Hegel, the mind posits an 'Essence' which evolves, dialectically, to create the 'Absolute'. Peirce, whilst rejecting the notion of dialecticism itself, still argues that an 'object of thought', formed in the icon, evolves into a symbol. In both cases, a process of concept formation involves a mediating entity which synthesises the empirical and the mental.

Vygotsky also adopts this Hegelian template in his account of concept formation. Within this, a *'third system'* is created that is different to the purely empirical inputs of 'natural perception' and the reactions of the mind to these - as espoused in conventional 'stimulus and response' models:

> The system of activity of the child is determined at each given step by both the degree of his organic development and the degree of his mastery of tools. The two different systems develop jointly, forming, in essence, a third system, a new system of a unique type.
>
> (Vygotsky: 1997b: 21)

In suggesting this approach, Vygotsky proposes that we adopt a new discipline that avoids the *'animalization of child psychology'* (Vygotsky and Luria: 1994: 101) and he calls this *'dialectical psychology'*:

> Dialectical psychology's whole uniqueness precisely resides in the attempt to define the subject matter of its study in a completely novel way. This subject matter is the integral process of behaviour which is characterised by the fact that it has its mental and physiological side. [Dialectical] psychology studies it as a unitary and integral process and only in this tries to find a way out of the blind alley that was created.
>
> (Vygotsky: 1997a: 114)

And, moreover, this approach explicitly involves a rejection of dualism:

> Dialectical psychology proceeds first of all from the unity of mental and physiological processes. Because for dialectical psychology mind is not, in the words of Spinoza, something that is situated outside nature or as a kingdom within a kingdom, it is part of nature itself, directly linked to the functions of the higher organised matter of our brain.
>
> (ibid: 112)

Vygotsky's own account of dialecticism can be contrasted with the interpretations of some commentators. These often fail to recognise that the idea of 'dialecticism' in Vygotsky involves this mediating *'third system'*. Instead, they assume that Vygotsky means by 'dialecticism' a mediating (but quite different) form of social interaction between individuals. Ma, for example, talks of *'how mind and culture shape each other dialectically'* (Ma: 2014: 377). And C. Lee sees dialecticism as simply being a matter of *'give and take'* between interlocutors:

> The use of language as both a socially communicative act and a medium for internal organisation of experience requires a give and take, a dialectical interaction among interlocutors. Wertsch calls this dialectical dialogue semiotic mediation.
>
> (C. Lee: 2005: 254)

Equally, Bidell, compares Vygotsky with Piaget, and views the former's dialecticism in social, and participatory, terms:

> Vygotsky presents a dialectical conception of relations between the personal and the social….
>
> (Bidell: 1992: 308)

> Vygotskian scholars over the years have successfully introduced alternatives to individualism and interactionism by rebuilding developmental constructs and methods around the dialectical metaphor of *participation* (my italics).
>
> (ibid)

Equally, there are other commentators who conflate Hegelian dialectics with the dialectical materialism of Marx. The latter involves the effects of the social on the consciousness of the individual and these can look very similar to Vygotsky's account of how the social informs our concepts. B. Lee argues, for example, discussing Vygotsky:

> As new levels of the organisation of productive forces and relations develop, new forms of consensus emerge. Particular economic social structures exist as moments in the dialectical interplay between productive forces and relations.
> (B. Lee: 1985: 71)

These interpretations suggest a dialectical interplay of thesis and antithesis between the social, and the individual, and that this enables us to form synthesised concepts.

In fact, when we read Vygotsky, we find he is very keen to distance himself from 'dialectical materialism', and he views it as being different from the dialecticism of Hegel. The latter is concerned primarily with *cognition* and how we move from 'indeterminacy' towards 'determinacy'. This issue is not one that arises in 'dialectical materialism' and, equally, Vygotsky is not concerned, as Marx is, with the way in which a society progresses (*footnote twenty one*). At one point, in fact, Vygotsky goes out of his way to state:

> The *direct* application of the theory of *dialectical materialism* to the problems of the natural science and in particular to the group of biological sciences or psychology *is impossible*, just as it is *impossible to apply it directly* to history and sociology.
> (Vygotsky: 1997a: 330)

And he continues, specifically highlighting a number of Hegelian dialectical terms as being more relevant to his work than the concepts employed by Marx:

> It suffices to imagine Marx operating with the general principles and categories of dialectics, like quantity-quality, the triad, the universal connection, the knot [of contradictions], leap etc – without the abstract and historical categories of value, class, commodity, capital, interest, production forces, basis, superstructure etc.
> (ibid)

Vygotsky, in contrast, conceives dialecticism, as Hegel and Peirce do, as operating within the individual mind. There are *'two lines of development'* involved in this; *'the elementary processes which are biological in origin'* and the *'higher psychological functions, of socio-cultural origin'* (Vygotsky: 1978: 46). The interaction of these two planes forms a type of dialecticism which determines our synthesised concepts. These two lines of development broadly parallel the intersection of Peirce's three categories of existence with his three elements of the sign. Critically, although there is clearly a social input involved, for Vygotsky, this dialectical activity takes place *within* the mind, and results in mediating entities being formed there.

Vygotsky's more 'internal' focus for dialecticism also becomes more evident when we consider Vygotsky's differentiation of what he calls *'formal logic'* from *'dialectical logic'*. The former is something we have already encountered in our discussion of 'secondary dualism'. It involves the notion that we perceive 'atomised' perceptions and then abstract common qualities from them. For Vygotsky, *'formal logic'* works as follows:

> The path to generalization is thus a path which leads away from the riches of concrete reality toward the world of concepts, the kingdom of empty abstractions, far from living life and from living knowledge.
>
> (Vygotsky: 1993: 204-5)

Whilst Vygotsky views 'dialectical logic' in contrasting terms:

> In dialectical logic, it is quite the opposite. A concept seems richer in content than it does in a presentation. Thus the path to generalization is not a path formally divided into separate indications. Rather, it is an uncovering of the links of the relationship of a given matter with another. If the subject becomes truly intelligible, not through immediate experience, but in all the many links and relationships which define its place in the world and its connection to the rest of reality, then one's understanding is a deeper, more real, truer, and more complete reflection than the envisaged one.
>
> (ibid)

And:

> The internal connection of things is disclosed with the help of thinking in concepts, for to develop a concept of some object means to disclose a series of connections and relations of that object with all the rest of reality, to include it in the complex system of phenomena.
>
> (Vygotsky: 1998: 54)

This last quotation could almost have been written by Peirce himself - when describing the effect of indexical signs on an emerging 'object of thought'. The Peircean sign evolves as it becomes indexically connected with the world, as does the Vygotskian concept. With this Vygotskian focus *on dialectical logic*, it is clear that Vygotsky is talking about much more than a social *'give and take'* between interlocutors.

At a deeper level, we also find that Vygotsky inherits another, and related, aspect of Hegel's dialecticism. This is a shared emphasis on the issue of 'form' and 'content', and how these relate to each other. Hegel rejects both the view that form and content are conjoined through an *interpretative* process and also the notion that content is 'fixed' in perception. Hegel argues that dialecticism enables us to adjust the content of our perceptions to any given form and that this, in turn, permits form to adjust to the content of our perceptions:

> The essential point to keep in mind about the opposition of Form and Content is that content is not formless, but has the form in its own self, quite as much as the form is external to it. There is thus a doubling of form. At one time it is reflected into itself; and then is identical with the content. At another time it is not reflected into itself, and then is the external existence, which does not at all affect the content. We are here in presence, implicitly, of the absolute correlation of content and form: viz. their reciprocal revulsion, so that content is nothing but the revulsion of form into content, and form nothing but the revulsion of content into form. This mutual revulsion is one of the most important laws of thought.
>
> (Hegel: 1892/2014: 157).

This dialectical way of thinking refutes the argument that identities are 'given' in perception (the 'Myth of the Given'); it is always possible to transform one identity into another or, as Vygotsky puts it, *'quantity into quality'*:

> The overcoming of the errors of mechanistic natural science lies in the acknowledgement of this dialectical principle of the transition of quantity into quality.
>
> (Vygotsky: 1997a: 188)

In a dialectical system, therefore, new identities are always capable of being formed. This is precisely the activity that we encountered with Peirce's 'thirds'. The human mind does not need to accept the identities that are given to us in *'natural perception'*.

Dialecticism is closely related to another concept in Vygotsky's thought that is also widely misunderstood; this is the notion of 'mediation'. Commentators, if they assume that dialecticism is concerned with the social interaction of individuals, often extend this particular way of thinking to include Vygotskian 'mediation'. We will now evaluate how Vygotsky envisages mediation in the light of his dialecticism.

8.2) 'Mediation' in Vygotsky

We have already encountered the idea of 'mediation' in Hegel and in Peirce. We will now consider how it also forms one of the cornerstones of Vygotsky's thinking. As Wertsch notes (Wertsch: 1991), the concept of mediation runs through Vygotsky and it is central to his account of concept formation. But the key questions that we need to address are these: in Vygotsky's view, what, precisely, is being mediated; and, secondly, where is this mediation taking place?

Before we analyse Vygotsky's views on mediation we should, again, consider the secondary literature on this subject. These approaches have sometimes, however, been framed by needs which are quite extraneous to Vygotsky's work. Firstly, Vygotsky has been used by academics to highlight

the *social* nature of the learning process. They have been eager to play down Piagetian interpretations of this activity which are more individualist (Bidell: 1992; Daniels: 2016). As a result, they seek to emphasise the social dimension in meaning making and they borrow Vygotsky's work in their support. Secondly, Vygotsky is also invoked by commentators who reject the 'transmission' model of the child learning. This construes the learning process as a matter of simply conveying information into the child's mind. This is rightly criticised as a flawed approach, but the educational literature has, as a result, emphasised the *interactive* nature of the learning process in Vygotsky. And this easily slips, as we will find, into an account of the learning process that is primarily social in character.

Thirdly, and quite separately, interpretations of Vygotsky in the USSR, after his death, also resulted in an emphasis on meaning creation as a social activity. In the Kharkov school (including Leontiev), there was a need to create distance from Vygotsky and to render his thought more acceptable in the political climate of the time. This, again, resulted in a focus on the existence of a *social dimension* in between 'stimulus and response' (S-R):

> Objects of human experience – and therefore objects in psychological experiments – are socially and culturally meaningful things and not just abstract stimuli. Activity then takes the place of the dash in the formulation 'S-R', turning it into a formula 'object-activity-subject', where both the object and subject are historically and culturally specific.
>
> (Kozulin: 1996: 103)

'Activity' was thus positioned by the Kharkov school as being in a mediating role. It follows that meaning was viewed as formed through social mediation:

> As a general conclusion, the Kharkovites came to believe that the structure of cognitive processes more or less repeats the structure of external operations.
>
> (Kozulin: 1996: 111)

This, of course, still seemed faithful to the Vygotskian view that the 'social' plays a role in meaning creation – but 'meaning' was now construed as something created externally, and then latterly *transferred to* the mind.

There has thus been a significant tendency, in parts of the secondary literature, to highlight the social aspects of Vygotsky's account of concept formation. These interpretations do seem to be thoroughly supported, however, in Vygotsky's writings. He states, for example, that:

> Human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them.
>
> (Vygotsky: 1978: 88)

> The most important and basic of genetic laws, to which the study of higher psychological functions leads us, reads that every symbolic activity of the child was once a social form of co-operation and preserves throughout its development, to its highest point, the social method of its functioning.
>
> (Vygotsky and Luria: 1994: 138)

> The history of higher mental functions is disclosed here as the history of converting means of social behaviour into means of individual-psychological organisation.
>
> (Vygotsky: 1999: 41)

But we need to be careful to specify exactly how the social dimension operates in Vygotsky's analysis – and how the social relates to his notion of 'mediation'.

We will now look at a number of interpretations of Vygotskian 'mediation' in the secondary literature. At the end of this section, I will then put forward an alternative account which suggests that the real locus of Vygotskian mediation remains (as it is for Peirce) within the mind of the individual. This account, I will argue, better reflects the influence of Hegel, and it also draws Vygotsky much closer to Peirce.

In the secondary literature there are a range of interpretations of Vygotskian 'mediation'. These often overlap with each other, but they variously include:

- Mediation as language, or communication
- Mediation as semiotics, or sign action
- Mediation as activity – including construction and negotiation
- Mediation as participation, or as a shared medium of 'culture'

One of the most common interpretations of Vygotsky is that, by 'mediation', he means the action of words, or of speech. And there seem to be plenty of examples where Vygotsky confirms this view. After all, Vygotsky places the 'word' at the centre of his account of concept formation. As a result, we find commentators asserting that language is critical to Vygotskian mediation:

> He understood the development of higher functions in terms of mediated social, collaborative activity. Language is the most crucial of these 'mediational means'.
>
> (Daniels: 2016: 48)

> Vygotsky focused on language as the instrument which would transfer social experiences to the individual.
>
> (Popkewitz: 1998: 538)

> Language is particularly emphasised by Vygotsky, as it is vital in mediating between individuals and between the interpsychological and intrapsychological processes of the individual.
>
> (Ma: 2014: 379)

This emphasis on language also extends to an assertion that it is through *signs* that the child gains a deeper understanding of the world. Again, there seems to be much evidence in the work of Vygotsky to support this view - as he insists that the use of signs is a part of the development of the *'higher psychological processes'*. C. Lee argues, for example:

> Through an on-going process of semiotic mediation occurring in specific cultural, social and historical contexts, the young learn the skills, values and knowledge of the community of which they are a part.
>
> (C. Lee: 2005: 254)

This suggests that 'mediation' should be construed a semiotic medium where signs help the child develop their concepts – as they become more familiar with cultural signs. When discussing 'mediation', Daniels also expresses the same view:

> Activity theory posits psychological development and thus psychological analysis as grounded in practical cultural activities. The symbolic approach understands psychology in terms of collective symbols and concepts.
>
> (Daniels: 2016: 76)

The notion of 'activity', mentioned above, is also important. It has been frequently used by commentators (and not just Soviet ones) to interpret mediation. In this approach, it is the activity of individuals, interacting with each other, that allows meanings to form in the mind of a child. As Stetsenko observes, this leads to various interpretations:

> It is no accident that many of the different units of analysis that have been chosen by scholars working in the Vygotskian tradition relate to acting and activity – mediated action (Wertsch), activity or event (Rogoff) activity system (Cole and Engestrom) and activity setting (Tharp and Gallimore).
>
> (Stetsenko: 2017: 148)

Daniels goes further, and summarises these 'activities' under their respective titles as *'Situated Learning'* (Daniels: 2016: 70), and '*Distributed Cognition'* (ibid: 70), *'Activity Theory'* (ibid: 83) and *'Cultural Historical Activity Theory (CHAT)'* (ibid: 78). What is common to all of these approaches is the belief, often attributed to Vygotsky himself, that meaning is created *exclusively* in the social sphere through some social activity and interaction. These models assume that meaning can only be created in a social context and, as a result, it must then be transferred to the mind of the child. This happens through an individual's participation in the social domain. Such an interpretation of 'mediation' assumes that it must be a social phenomenon, whilst Vygotsky, in fact, as we shall see, views it as an activity taking place within the mind of the child.

The assertion that meaning is created socially, and then transferred to the mind of the child, also brings its own problems. Advocates of this model

then have to explain how this apparent 'transfer' takes place. This is called the problem of *'interiorization'*. Bruner, an advocate of a 'cultural' approach, can be found questioning whether Vygotsky provides an adequate account of how this requisite 'transfer' takes place:

> Let me turn to another approach to mind and culture, one whose popularity rests, I sometimes despair, on obscuring many of the issues we have been discussing. It is the 'interiorization' position associated with Vygotsky and his followers.
>
> (Bruner: 2001: 202)

And Bruner goes on to explain:

> Indeed, interiorization theory obscures the vexing question of the commensurability of culture and mind by simply asserting that the latter 'interiorizes' the former. Vygotsky and Vygotskians have provided rich accounts of how the child's mind grows and how it uses 'external' forms, but they have had little to say about how this is accomplished.
>
> (ibid: 203)

Later, however, we will see that Vygotsky does not require a theory of *'interiorisation'* as proposed by Bruner. And this is because meaning is created as a mediating system *within* the mind of the child.

Elsewhere, Cole takes Vygotsky's concept of mediation and translates it into a slightly different claim that meanings can only exist in the 'medium' of culture. He proposes, in an article ominously entitled *'Putting Culture in the Middle':*

> Culture as a system of artifacts and mind as the process of mediating behaviour through artifacts in relation to a supra-individual 'envelope' with respect to which object/environment, text/context are defined. This approach allows me to make use of the notion of culture as medium and of context as both that which surrounds and that weaves together.
>
> (Cole: 2005: 220)

As a proponent of the *'cultural-historical'* approach, Cole also claims that meaning exists in a culture as *'artifact-mediated'* objects:

> The initial premise of the cultural-historical school is that human psychological processes emerged simultaneously with a new form of behaviour in which humans modified material objects as a means of regulating their interactions with the world and one another.
>
> (Cole: 1996: 108)

But Miller is critical of Cole on this point:

> It appears that in Cole's account of the Russian cultural-historical school, Vygotsky's most distinctive and definitive ideas, such as the crucial role of signs as psychological tools and their functional difference from material tools, are simply ignored. Although he adopts the term *mediation* from Vygotsky, Cole does not explicitly point out that his concept of *artefact-mediated action* differs

> fundamentally from that of Vygotsky's sign mediation; that *artefact-mediated actions* refer to actions carried out by people in the world using artefacts to better achieve their purposes whereas sign mediation refers to operations that are carried out internally on psychological functions such as attention and memory.
>
> (Miller: 2011: 206)

Miller also criticises another interpretation of Vygotskian thinking on mediation – that proposed by Wertsch. The latter espouses what he calls a *'sociocultural approach'* (Wertsch: 1991), and he argues that Vygotsky suggests a form of 'semiotic mediation'. In doing so, Wertsch argues that Vygotsky is guilty of a form of *'decontextualised rationality'*. Ironically, Wertsch reaches this conclusion largely because he sees signs (assumed to be symbols?) as being necessarily detached from reality:

> By taking maximal advantage of the *semiotic potential of decontextualization*, it is possible to operate strictly within an abstract system, with all the attributes of mastery, conscious awareness, intellectualisation, and volition that Vygotsky associated with scientific concepts (my italics).
>
> (Wertsch: 1996: 30)

Such a view of 'semiotic mediation' is clearly, and evidently, contrary to Peirce. But, as a result of his perspective, Wertsch places 'mediation' in a social realm of culturally determined signs and not in the mind of the child. Miller goes on to criticise this and insists, rightly, that Vygotskian mediation must focus on *'word meanings'*:

> As we have seen, associating Vygotsky with the term 'mediated action' is like associating Freud with consciousness. It is a convenient half-truth that serves to obscure the fact that Vygotsky's central concern is word meaning and the mediation of *mental* functions…… Wertsch discusses Vygotsky's emphasis on verbal mediation without even mentioning his emphatic point that sign mediation results in internal changes in the person using signs as opposed to external changes in the world brought about by mediated actions involving the use of tools.
>
> (Miller: 2011: 233)

Highlighting other attempts to 'socialise' mediation, Daniels also quotes Lave (1993) who views cognition, itself, as being social formed. It is, as a result, '*stretched over, not divided among – mind, body, activity and culturally organised settings (which include other actors)'* (Daniels: 2016: 72). This renders meaning, itself, as a social phenomenon. Likewise, Daniels also mentions Hutchins (1995) who argues that *'doing without a social organisation of distributed cognition is not an option'* (Daniels: 2016: 70). And this position can easily slip into Social Constructionist accounts of Vygotsky that suggest meaning can only be constructed socially:

> We can say that such a vision implies the idea that reality is the product of social, conversational, or discursive constructions and that our constructions of reality are always social and historical, not individual.
>
> (E. Moura da Costa and S. Calvo Tuleski: 2017: 1192)

The belief that reality, and therefore meaning, are socially constructed also surfaces in the work of Lave and Wenger who suggest that meaning is mediated because it is *negotiated*:

> A theory of social practice emphasises the relational interdependency of agent and world, activity, meaning cognition, learning, and knowing. It emphasises the inherently socially negotiated character of meaning and the interested, concerned character of thought and actions of persons-in-activity. This view also claims that learning, thinking, and knowing are relations among people in activity in, with, and arising from the socially and culturally structured world.
>
> (Lave and Wenger: 2005: 151)

Finally, the cultural aspects of mediation also emerge in the work of Cole. He references Bruner, and states that mediation is a matter of 'cultural psychology':

> Jerome Bruner's vision of cultural psychology also emphasises the premise that human experience and action are shaped by our intentional states. It locates the emergence and functioning of psychological processes within the social-symbolically mediated everyday encounters of people in the lived events of their everyday lives.
>
> (Cole: 1996: 103)

An important facet of this interpretation of Vygotsky is, of course, that it also seems to address one of Vygotsky's other concerns – that we overcome the problems of dualism. By making the individual part of a participatory whole, the problems of dualism seem to be resolved; the individual is now defined as being part of a social structure. However, this is not, as we shall see, the solution that Vygotsky himself pursues.

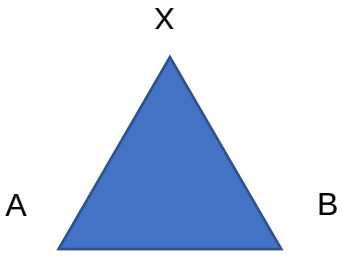
To summarise the position adopted by much of the secondary literature in relation to Vygotskian 'mediation', we find that it construes this notion in largely social terms. Meaning, it seems, is created between individuals (using an array of social verbs such as 'participating', 'negotiating', 'constructing' etc) and it is then transferred to the mind. The question, however, is this: is this actually what Vygotsky proposes when he discusses 'mediation'? Certainly, Vygotsky has a role for the social in his account of meaning creation. But would he agree with claims that meaning is created *within* a mediating, or participatory, realm? And what light is shed on Vygotsky's position if we take into account an Hegelian vision of mediation?

Vygotsky describes 'mediation' as follows:

> Let us now compare the natural and cultural mnemonics of a child. The relation between the two forms can be graphically expressed by means of the schematic triangle in figure 5.1: in case of natural memorisation a direct associative or conditional reflexive connection is set up between two points, A and B. In case of mnemotechnical memorisation, utilising some sign, instead of one associative connection AB, the others are set up AX and BX, which bring us to the same

result, but in a roundabout way. Each of these connections AX and BX is the same kind of conditional-reflexive process of connection as AB.

Figure 5.1



….. The inclusion of any process of a sign remodels the whole structure of psychological operations, just as the inclusion of tools remodels the whole structure of a labour operation.

(Vygotsky: 1994: 60-1)

There are a number of observations on this passage. Firstly, Vygotsky rejects the 'associationist' view which states that links between perceptions are established by identifying the *'connections'* between them. Secondly, he claims that these mediated entities *'remodel'* the *'whole structure of psychological operations'*. Thirdly, Vygotsky alludes to the fact that these mediating entities have similarities to human *'tools'*. The reader will recognise that this Vygotskian account is very similar to Peirce's description of 'thirds'.

Mention of *'tools'*, however, can, once again, be misleading because it suggests that Vygotsky means *external objects,* or *external signs,* as forms of mediation – e.g. words and symbols (or knots in string/notches on wood) And, indeed, these types of mediation are sometimes mentioned by Vygotsky himself (Vygotsky and Luria: 1994: 143). But it is also clear that this is not all that Vygotsky means. He also insists that mediating entities are internal to the mind – because they remodel the *'whole structure of psychological operations'.* This claim regarding the location of meaning-making is critical to understanding Vygotsky:

The transfer of social methods of behaviour to the interior of the systems of individual forms of adapting is not at all a purely mechanical transfer; it is not done automatically, but is connected with a change in structure and function of the whole operation and is a special stage in the development of higher forms of behaviour.

(Vygotsky: 1999: 53)

Vygotsky highlights the change in the *'structure and function of the whole operation'*. This is an internal change in the mind of the individual – not an external one.

Because the location of meaning creation is in the mind of the child, it follows that the mediating entities that it produces are to be found there too.

These mediating entities evolve (in Hegelian manner) into concepts, and Vygotsky sometimes calls them ‘signs’:

> Investigations, which we are not going to discuss here, have shown that all higher psychological functions are united by one common characteristic, namely that they are mediated processes, i.e. that they incorporate in their structure, as the central and basic part of the process in general, the use of the sign as a basic means for directing and mastering the psychological processes.
>
> (Vygotsky: 1994: 207)

Importantly, in *‘Thought and Language’* (Vygotsky: 2012), Vygotsky starts to call these mediating entities *‘word meanings’*. Valsiner and Van der Veer highlight that, later in his career, Vygotsky began to use the notion of ‘word meanings’ more frequently and that he often emphasised their importance (Valsiner and Van der Veer: 2000: 375; 383).

‘Word meanings’ are critical to an understanding of both Vygotsky’s account of dialecticism and his concept of ‘mediation’. ‘Word meanings’ are what is formed in the dialectical process and they evolve into concepts. In this respect they are similar to Hegel’s ‘Essences’ and Peirce’s ‘objects of thought’. And Vygotsky also considers ‘word meanings’ as being the most appropriate units of analysis for the psychologist to study. He argues that it is at this level that a child’s knowledge and development should be understood.

These units of analysis are synthetic, because they are formed dialectically, and, as such, they should not be broken down into their composite elements. Using the analogy of water, Vygotsky points out that water behaves in quite different ways to oxygen and hydrogen, in isolation, and that we cannot gain an accurate understanding of water, and its properties, by focusing on its components. Likewise, we cannot understand how humans think, or how they use concepts, if we fail to recognise the importance of our synthetic ‘word meanings’:

> Psychology, which aims at a study of complex holistic systems, must replace the method of analysis into elements with the method of analysis into units. What is the unit of verbal thought that is further unanalyzable and yet retains the properties of the whole? We believe that such a unit can be found in the internal aspect of the word, in *word meaning*.
>
> (Vygotsky: 2012: 5)

We also encountered ‘units of thought’ in Peirce’s account of the sign. In his description of ‘thirds’, he saw these as being ‘irreducible’ to their parts. ‘Thirds’ are formed in a way that means that they have properties that are more than the sum of their ‘dyadic’ parts. ‘Giving’, for example, is much more than the passing of object ‘A’ from ‘B’ to ‘C’. Interestingly, Peirce also uses a chemical analogy to explain ‘thirds’ - using the compounds of carbon as an example (EP2: 363) – to make exactly the same point as Vygotsky makes here. And it is with a certain inevitability that we find that both are

actually following Hegel in this respect. In *'The Science of Logic'* Hegel describes the difference between *'flesh'* and the *'nitrogen, carbon, hydrogen'* that constitute it. Hegel, as a result, criticises the:

> …reasoning of an empirical psychologist when he analyses an action into the various aspects which it presents, and then sticks to these aspects in their separation.
>
> (Hegel: 1892/2014: 237)

This position, shared by all three thinkers, reflects Peirce's insistence that we should resist individuating everything we experience into atomised elements. How we understand the world often involves 'thirds' which are mediated, and mind dependent, entities. In Vygotskian terms these units are 'word meanings'; they create a synthesis between thought and word:

> **Meaning is the path from the thought to the word.** Meaning is not the sum of all the psychological operations *which stand behind the word*. Meaning is something more specific – *it is the internal structure of the sign operation. It is what is lying between the thought and the word*. Meaning is not equal to the word, not equal to the thought (my italics).
>
> (Vygotsky: 1997a: 133)

Here, Vygotsky is rejecting the view (in 'secondary dualism') that meaning relates to something *'behind the word'*. Instead, he suggests that meaning stands, in mediation, '*between the thought and the word'* – and it is meaning itself which fuses the two together. As such, Vygotsky's 'word meanings' operate in the same way as 'objects of thought' do in the Peircean sign – in between the representamen and the interpretant. In this mediating role they form *'the internal structure of the sign generation'*.

As a result, it is clear that 'word meanings' are more than external 'tools' that provide a 'short cut' to understand the relationship between two separate entities. Rather, 'word meanings' have a role between thought (inner experience) and word/speech (outer experience), and they also form discrete 'units of analysis'. Vygotsky even describes them as an *'alloy'* (Vygotsky: 1978: 30), or as an *'amalgam'* (Vygotsky: 2012: 225) - thus highlighting their synthetic structure.

In the secondary literature, it is surprising how little emphasis is placed on Vygotsky's notion of 'word meaning'. To take just one or two examples, Moll does not mention 'word meaning' at all in *'L.S. Vygotsky and Education'* (Moll: 2014), and Daniels, in *'Vygotsky and Pedagogy'* (Daniels: 2016), makes just one mention of the term (ibid: 31). This is surprising given Vygotsky's insistence that word meaning forms the most critical unit of psychological analysis.

Other commentators take more notice of the concept, but then tend to misconstrue it. For example, Blunden states:

> ….His [Vygotsky's] chosen unit is word meaning – a unity of speech and thinking, of sound and meaning. A word is a unity of sound and meaning because a sound without a meaning is not a word and a meaning without sound is not a word – word has to be both. Word meaning is equally a unity of generalisation and social interaction, of thinking and communication.
>
> (Blunden: 2017: 137)

In this passage, Blunden correctly identifies that 'word meaning' is a unity of speech and thinking, but then concludes that it is a unity of *'social interaction'* and *'communication'*. Indeed, he goes on to state that 'word meaning' is an *'action'* (ibid: 138) - so we are back to 'activity' again. Blunden seems to be reluctant to view 'word meaning' as a synthetic unity in the mind.

If we look at Vygotsky's broader discussion of 'word meaning', and the *'higher psychological processes',* we find more evidence that 'word meaning' is a mediating entity in the mind. Vygotsky, for instance, insists that a child's understanding exists in these internal mediating entities because the activity of teaching words, without their underlying concepts, is a *'fruitless'* cause:

> Practical experience also shows that direct teaching of concepts is impossible and fruitless. A teacher who tries to do this usually accomplishes nothing but empty verbalism, a parrot-like repetition of words by the child, simulating knowledge of the corresponding concepts but actually covering up a vacuum.
>
> (Vygotsky: 2012: 159)

Vygotsky maintains that concepts are founded upon, and develop from, 'word meanings'. It is their underlying evolution that allows a child's understanding to flourish. And without these 'word meanings', the *'direct teaching'* of concepts (through words) would be impossible. Incidentally, if we did assume that a strictly social account of mediation is correct, this argument of Vygotsky's would lack validity. It could be argued that the meaning of words could be grasped within a social medium in activities such as 'participation' and 'negotiation' etc. This further suggests that Vygotskian 'mediation' is something that is more than mere social interaction.

Elsewhere, Vygotsky maintains that the synthetic 'amalgam' between thought and speech acts as a *'bond'*, but it is a bond that has a high degree of flexibility. Thought and speech are not linked together in a way that is inherently necessary and the *'amalgams'* that are created in 'word meanings' are always individual to the child. In addition, these 'bonds' are constantly evolving (in a dialectical fashion) over time:

> Thought and word are not connected by a primary bond. A connection originates, changes, and grows in the course of the evolution of thinking and speech.
>
> (Vygotsky: 2012: 223-4)

This means that the development of 'word meaning' is always dynamic. When the synthetic unity of a 'word meaning' is first established, it is just setting out on its evolutionary path. This, again, corresponds to the 'Essence' in Hegel and the Peircean 'object of thought'. Vygotsky, therefore, makes it very clear (and in contrast to Saussure's synchronic model) that 'word meanings' are diachronic. Vygotsky, in asserting this, argues that '*this insight must replace the postulate of the immutability of word meanings'* (ibid: 225). And, elsewhere, Vygotsky states:

> However, the meanings of words develop. At the time when a child first acquires a new word connected with a definite meaning, the development of this word does not stop, but is only beginning.
>
> (Vygotsky: 1994: 356)

In adopting this approach, Vygotsky avoids the difficulties that are inevitable if 'word meaning' is established through an 'associative' bond. In this, the perspective of 'associationism', the criterion for establishing the meaning of a word becomes, inevitably, the *consistency* of a word's usage. This will lead, ineluctably, to a view of meaning that is *immutable* – if for no other reason than that the mechanism of Humean 'constant conjunction' is being used to establish how meaning is established in the first place. In contrast, in Vygotsky's dialectical model of meaning, this mistake is entirely avoided. Riegel, putting forward a case for *'dialectical psychology',* agrees with this perspective:

> I reject the preference for stable traits, abilities or competences deeply rooted in western psychological thinking.
>
> (Riegel: 1976: 689)

One other important characteristic of Vygotsky's 'word meanings' is that they are generalisations (or universals). Indeed, he insists that their very meaning derives from this feature:

> Closer study of the development of understanding and communication in childhood, however, has led to the conclusion that real communication requires meaning – that is, generalization – as much as signs. In order to convey one's experience or thought, it is imperative to refer them to some known class or group of phenomena. Such reference, however, already requires generalization. Therefore, communication presupposes generalization and the development of word meaning: generalization, thus, becomes possible in the course of communication. The higher, specifically human forms of psychological communication are possible because man's reflection of reality is carried out in generalized concepts.
>
> (Vygotsky: 2012: 8)

The identification of 'word meaning' with generalisation is important because it shows how meaning is created. Meaning derives from construing

a particular experience as an instance of a *'class or group of phenomena'*. Later, Vygotsky argues:

> But perception in terms of meaning always implies a degree of generalization.
>
> (ibid: 180)

So 'word meanings' are created as the child makes distinctions between his, or her, *'inchoate'* perceptions, and classifies them as universals:

> All the psychological schools and trends overlook the cardinal point that every thought is a generalisation; and they all study word and meaning without any reference to development.
>
> (ibid: 230)

and:

> One will then discover that the connections between concepts are neither associative nor structural, but are based on the *principle of the relations of generality*.
>
> (ibid: 216)

This view that concepts are, in fact, generalisations both echoes Peirce's description of the 'object' in the sign, and his underlying account of 'perceptual judgments'. Vygotsky adopts the same approach in his analysis of 'word meanings'.

And in relation to the concept of meaning, itself, we find that Vygotsky shares the same perspective as Peirce. We have seen that for Peirce meaning is created within the sign as the 'object of thought' is formed. This is then captured in a symbol, or in a word. This is reflected in Vygotsky's treatment of the process of naming – this takes place after a mediating 'word meaning' has developed and the child knows how to use it:

> Further experiments show that the 'function of naming' is not the creation of a single discovery, but has its own natural history, and that probably at the beginning of speech formation the child does not discover that every object has its own name, but rather learns new ways of dealing with them – and that is what gives them names.
>
> (Vygotsky and Luria: 1994: 152)

Finally, it is worth noting that the concept of 'word meaning' is also distinguished, by Vygotsky, from 'ordinary' meaning. The latter lacks the critical feature of being a generalisation. Vygotsky makes this distinction because 'word meanings' have this key characteristic, whilst a 'word sense' depends on the context in which a word is uttered. Kozulin explains:

> He [Vygotsky] made a distinction between word meaning (*znachenie*), which reflects a generalized concept, and word sense (*smysl*), which depends on the context of speech.
>
> (Kozulin: 1996: 109)

This is yet more evidence that Vygotsky rejects the argument that 'word meanings' are created within a social context. If they were created socially, then they would surely be formed as 'word sense' (*smysl*) (and then transferred into the mind) and not as 'word meanings' (*znachenie*) (*footnote twenty-two*).

Another account of the distinction between 'word meaning' and 'word sense' can also be found in Wertsch's article *'Vygotsky's Two Minds on the Nature of Meaning'* (2000). Here, he maintains that the two terms are used by Vygotsky in fundamentally dualistic ways – *'znachenie'* is defined by Wertsch as pertaining to the *'external'* and to *'language'* (ibid: 23), whilst *'smysl'* is seen as relating to the *'internal'* and to *'thought'* (ibid). This explication is, of course, the almost the opposite of Kozulin's account. Wertsch goes on to analyse Vygotsky's use of the two terms in an explicit framework of Cartesian Dualism, and it is no surprise that Wertsch concludes that Vygotsky found himself in a *'quandary'* (ibid: 29). Wertsch, however, overlooks the possibility that 'word meaning', as a mediating entity, is Vygotsky's route out of the problems of dualism.

This particular issue becomes more interesting, however, if one explores a number of Russian dictionaries. The word *'znachenie'* is variously translated as *'meaning', 'value', 'significance',* or *'signification'* (e.g. Oxford Russian Dictionary: 1984: 162). The word also derives from the Russian verb *'to mean',* or *'to signify'*. These suggest alternative interpretations of *'znachenie',* and they place Vygotsky's account of concept formation in a potentially more semiotic framework. More importantly, they also tend to shift the focus away from *language* per se, and the explicit reference to the social dimension that this may involve. There is no mention, for example, of the term *'word'* in the dictionaries. Indeed, we could question whether this particular interpretation is designed to nudge Vygotsky in a direction that is more overtly social in orientation. It is also of note that Yasnitsky and Van der Veer (2016) discuss the translation issues around the word *'smysl'*, but they do not look at the issue of the meaning of *'znachenie'*. For the sake of consistency, however, I will continue to use the term 'word meaning' in the rest of this thesis; but we should note that it could also be translated as 'signification'.

In summary, 'word meaning' is a critical aspect of Vygotsky's thought. It is at the heart of his account of both dialecticism and mediation. Given our previous discussions, we can also see that it exhibits features which echo the synthetic unities of the Hegelian 'Essence'. Critically, 'word meanings' are formed internally, and they evolve within the mind of the child. As such, they are not simply the creations of the social dimension.

From our discussions above, we can also see how Vygotskian 'word meaning' parallels the 'object of thought' in Peirce. Both are formed in a manner which combines the empirical and the mental and they both permit a dynamic account of meaning development. Paradoxically, both concepts – the 'object' (in Peirce) and 'word meaning' (in Vygotsky) seem to have experienced the same exegetical 'fate' in the secondary literature. They have both been 'externalized' by secondary commentators – Peirce's 'object' as the initiating force in the sign, and Vygotsky's 'mediation' as a social 'activity'. This is because commentators have either been reluctant to abandon their own dualist tendencies, or because they have neglected the Hegelian heritage of these two thinkers.

8.3) The 'Natural History' of the Sign

In this section we will analyse the process of concept formation in Vygotsky and consider the influence of Hegel upon it. This will involve identification of how the social dimension becomes implicated in this process and we will also discuss how close Vygotsky's account is to the Peircean model. This will, in turn, create a platform for an account of the ZPD that has some interesting similarities with Peirce.

In *'Mind in Society'*, Vygotsky describes the process of concept formation as *'the natural history of the sign'* (Vygotsky: 1978: 46). As we have seen, in previous sections, it is an activity that involves the dialectical creation of mediated entities:

> Moreover, with the formation of concepts, the adolescent enters the path of development that sooner or later will bring him to mastering dialectical thinking.
> (Vygotsky: 1998: 46)

In terms of the underlying processes that are involved, in transforming experience into thought, Vygotsky describes two *'lines of development'* combining with each other to form the '*higher psychological processes'*:

> *Within* a general process of development, two qualitatively different lines of development, differing in origin, can be distinguished: the elementary processes, which are of biological origin, on the one hand, and higher psychological functions, of sociological origin, on the other. *The history of child behaviour is born from the interweaving of these two lines*. The history of the development of the higher psychological functions is impossible without a study of their prehistory, their biological roots, and their organic disposition.
> (Vygotsky: 1978: 46)

Vygotsky argues, therefore, that there are basic biological inputs from '*natural perception'* in child development, but that the *'higher psychological functions'* emerge when these intersect with inputs which are more

'sociological' in origin. These inputs are encountered in the form of received speech - as words provide the child with underlying *structures* for their emerging concepts. In contrast to this, Vygotsky criticises other writers who reduce speech to being a simple external expression of internal thought. If it is seen in this manner, he argues, we cannot uncover its true role in child development:

> As we know, some authors consider speech and reasoning as entirely different processes, one of which serves as the expression and the outer clothing of the other.
>
> (Vygotsky: 1994: 68)

Piaget is included by Vygotsky in his criticism on this point. Vygotsky describes the thoughts that emerge at the biological level as 'spontaneous' concepts, whilst defining those that speech engenders as 'non-spontaneous' concepts. In this underlying distinction he agrees with Piaget, but Vygotsky argues that Piaget then makes the mistake of believing these two sets of concepts remain apart:

> Piaget is only able to differentiate between the spontaneous and the non-spontaneous concepts, but he is unable to see the facts which unite them into a single system of concepts formed during the course of the child's mental development. He only sees the gap, not the connection.
>
> (ibid: 361)

In arguing that our concepts are informed by words, Vygotsky also criticises the Piagetian contention that thought 'comes first', and that speech is an 'outer' manifestation of it. Vygotsky *reverses* this process and maintains that speech informs thought. At one level, this seems to be non-controversial – of course, the speech of others influences us. But Vygotsky is making a much stronger point – that our concepts themselves are formed through the inputs of others – and that the outcomes determine how we view reality:

> Just as a mold gives shape to a substance, words can shape an activity into a structure.
>
> (Vygotsky:1978: 28)

Vygotsky claims he is able to identify the action of words through his experiments with '*double stimulation'* (Vygotsky and Luria: 1994: 159). The introduction of a second level of stimulation (via adult words, or signs) enables the child to form concepts more effectively in a problem-solving situation.

In adopting this position, Vygotsky is making a claim that neither parallels the nominalist view that 'words determine meanings', nor the Peircean position that 'meanings determine words'. He is suggesting, instead, that words (in the form of the speech of others) have a *partial* role in determining our meaning structures. Additionally, whilst Peirce suggests that words (as

symbols) emerge at the final stages of sign formation and as the *outcome* of sublated 'objects of thought', Vygotsky is suggesting that words intervene at an earlier stage in the process. Indeed, he argues that words are instrumental in the process of *forming meanings* themselves – rather than being the mechanisms that we subsequently employ to *capture* meanings. This, as we shall see, positions the Vygotskian 'word' in a way that has parallels with the Peircean icon. Words, for Vygotsky, aid the formation of meaning by providing an underlying framework for it:

> The system of symbols reconstructs the whole psychological process, and the speaking child masters its movement on a totally new foundation…. Movement detaches itself from direct perception and submits itself to symbolic functions included in the reactive act, thus breaking with the natural history of behaviour and turning a new page: that of the higher intellectual activity of man.
>
> (Vygotsky and Luria: 1994: 130-1)

Vygotsky is also keen to point out that the word meanings, developed in this process of concept formation, do *not* entirely replace natural 'spontaneous concepts'. This corresponds with the concept of 'sublation' that we have previously discussed in Hegel. Spontaneous concepts remain with the child, together with those that belong to the *'higher psychological processes'*. Indeed, they can form the basis for subsequent acts of synthesis. As such, the 'higher' and 'lower' psychological processes live alongside each other:

> Further, we believe that psychological analysis, penetrating beyond the external manifestation of phenomena and revealing the inner structure of psychological processes and, particularly, the analysis of the development of higher forms, compels us to acknowledge *the unity, but not the identity, of higher and lower psychological functions*. (Vygotsky's emphasis)
>
> (ibid: 163)

We will now consider, in detail, how Vygotsky perceives the process of concept formation. We will look at how 'word meanings' emerge from spontaneous concepts and consider the role of words, and 'outer speech', in this process.

In a clear parallel with Hegelian thought, Vygotsky divides the process of concept formation into *'three basic phases'* (Vygotsky: 2012: 117), but he also claims that there are also smaller stages within these. These stages are described as:

- 'Unorganised congeries', or 'heaps'
- Complexes (of which there are many kinds)
- Concepts

In Vygotsky's account of concept formation, these phases are described as a dialectical synthesis of two sets of separated inputs – spontaneous (or everyday) concepts from 'below' and speech, or words, from 'above'. The latter are derived from the social dimension in the form of received speech. In his additional accounts of how children learn 'scientific' concepts, the

same processes are also at work –'scientific' concepts merge with the 'everyday' experiences of the child. He insists that both dimensions are required for this process to work effectively – pointing out (as we have already noted) that it is impossible to teach concepts to children if they are merely 'words'. Vygotsky outlines the process of concept formation in several of his writings. In this analysis, I will focus mainly on the account in *'Thought and Language'* (Vygotsky: 2012).

In the initial phase of concept formation, the child identifies basic groups of objects:

> The young child takes the first step toward concept formation when he puts together a number of objects in an *unorganised congeries*, or 'heap', in order to solve a problem that we adults would normally solve by forming a new concept. The heap, consisting of disparate objects grouped together without any basis, reveals a diffuse, undirected extension of the meaning of the sign (artificial word) to inherently unrelated objects linked by chance in the child's perception. At that stage, word meaning denotes nothing more to the child than a *vague syncretic conglomeration of individual objects* that have somehow or other coalesced into an image in his mind. Because of its syncretic origin, that image is highly unstable.
>
> (ibid: 117-8)

This starting point broadly equates to the Hegelian description of undifferentiated 'Being'. There is no rational organisation in the way that the child groups objects, even though there is 'natural perception'. These 'heaps' are what Peirce would call 'vagues' – indeed Peirce even uses the concept of *'non-relative congeries'* (CP5: 493) – paralleling Vygotsky's terminology here. It could be argued that the business of making 'heaps' is qualitatively different from the perceptual process itself, but both thinkers view this process as one that intrinsically involves *classification*. This first stage takes place on the border of perception. These *'syncretic conglomerations'* of objects also have parallels, as noted before, with Spinoza and Leibniz, in relation to 'confused ideas'.

The second stage of concept formation is more complicated and involves what Vygotsky calls *'complexes'*. There are a number of sub-divisions within these which reflect the different ways in which a specific 'complex' may correlate with reality:

> In a complex, individual objects are united in the child's mind not only by his subjective impressions but also by *bonds actually existing between these objects*. This is a new achievement, an ascent to a much higher level.
>
> (ibid: 120)

These bonds involve the establishment of potential empirical connections between objects, and this corresponds to the next stage in concept formation. However, in a 'complex' the links that are hypothesised by the child have not reached the point at which they have been 'abstracted' – they remain firmly rooted in the *factual* domain:

> In a complex, the bonds between its components are *concrete and factual* rather than abstract and logical, just as we do not classify a person as belonging to the Petrov family because of any logical relation between him and other bearers of the name. The question is settled for us by facts.
>
> (ibid: 120-1)

Because of the various dimensions which can be used to do this, there are a number of ways (Vygotsky enumerates five) in which a 'complex' can be formed. Although only one of these types is described as 'associative', Vygotsky sees them as all having *associative* (and often contiguous) features (Vygotsky: 1994: 219). It should be noted that this stage also suggests that some degree of 'atomism' has crept into Vygotsky's account. The objects are being treated by him as separate entities – Vygotsky is not treating them as experiences that need further 'determination'. He is building up from the bottom, as it were, rather than determining a 'continuum':

Associative Complexes – based on the weakest of links being established – *'any bond the child notices between the sample object and some other blocks'* (Vygotsky: 2012: 121).

Collection Complexes – based upon functional links of what goes with what, *'Experience teaches the child certain forms of functional grouping: cup, saucer, and spoon; a place setting of knife, fork, spoon and plate; the set of clothes he wears'* (ibid: 123)

Chain Complexes – '*a dynamic, consecutive joining together of individual links into a single chain, with meaning carried over from one link to the next'* (ibid: 123). This complex type demonstrates a key attribute of complexes – that the objects in them enter *'the complex not just as the carrier of that one trait but as an individual with all its attributes'* (ibid: 124). This as we shall see is one of the defining differences between complexes and concepts.

Diffuse Complexes – these are created by the child because he or she thinks that '*attributes are sometimes considered similar, not because a genuine likeness, but because of a dim impression that they have something in common…. The diffuse complex is marked by the fluidity of the very attribute that unites its single elements'* (ibid: 125).

The key point about these complexes is that they are formed on the basis of what Peirce would call 'dyadic', or 'indexical', relationships. They are linked by association and have not yet reached the stage where abstraction (or Peircean 'thirds') are involved. It is also relevant, in this respect, that Vygotsky emphasises the *factual* nature of the criteria used at this stage.

Another important feature of Vygotsky's model should be highlighted, at this stage, through its absence. There appears to be no equivalent of the Peircean 'icon' at this stage in Vygotsky's description of concept formation. There is nothing that equates to an initiating 'form'. There is, however, an equivalent of the Peircean icon within Vygotsky's model - but it intervenes, *in the form of speech*, at the next stage of the process.

The fifth, and last, form of 'complex' that Vygotsky mentions is the *'pseudoconcept'*. It is the final 'complex' type before the concept itself is formed. The 'pseudoconcept', Vygotsky argues, looks, from the outside, just like a concept:

> We call this type of complex the *pseudoconcept* because the generalisation formed in the child's mind, although phenotypically resembling the adult concept, is psychologically very different from the concept proper; in its essence it is still a complex.
>
> (ibid: 127)

What makes the 'pseudoconcept' appear to be like a concept is the fact that it has been borrowed from adults or peers. The child is using a word at this point that someone else has given to them. It is here that speech, therefore, plays a critical role in the dialectical process. The child is moving beyond a simplistic system of associative classifications. Vygotsky outlines what makes the 'pseudoconcept' different from other 'complexes':

> Adults, through their verbal communication with the child, are able to predetermine the path of the development of generalisations and its final point – a fully formed concept. But the adult cannot pass on to the child his mode of thinking. He merely supplies the ready-made meanings of the words, around which the child builds complexes. Such complexes are nothing but pseudoconcepts.
>
> (ibid: 129)

With the emergence of the 'pseudoconcept', the development of the concept begins to have characteristics that now correspond to Peirce's icon. It is of note, in this context, that Vygotsky talks, above, of the adult 'word' being able to *'predetermine the path of the development'*. Another of the characteristics of the 'pseudoconcept' is that abstraction also begins at this point. A single, or a few, aspects of the 'complex' are now chosen by the child to stand for all of the properties of the incipient concept. This exactly the process we encountered in Peirce, when the 'object of thought' is first formed from the representamen:

> Complex thinking begins the unification of scattered impressions; by organising discrete elements of experience into groups, it creates a basis for later generalisations.
> But the advanced concept presupposes more than unification. To form such a concept, it is necessary *to abstract, to single out* elements, and to view the abstracted elements apart from the totality of the concrete experience in which

> they are embedded. In genuine concept formation, it is equally important to unite and to separate: synthesis and analysis presuppose each other as inhalation presupposes exhalation.
>
> (Vygotsky: 2012: 144)

And this corresponds with Hegel's insistence that:

> Abstraction is the imposition of this Identity of form, the transformation of something inherently concrete into this form of elementary simplicity. And this may be done in two ways. Either we may neglect a part of the multiple features which are found in the concrete thing (by what is called analysis) and select only one of them; or neglecting their variety, we may concentrate the multiple features into one.
>
> (Hegel: 1892/2014: 138)

However, this activity of abstraction (an *'imposition of this Identity of form'*) is fraught with potential difficulties – for it is not always the case that the correct 'choices' are made by the child when deciding which features should be adopted. This means that the 'pseudoconcept' is still relatively unstable and may contain *contradiction*s (as we saw in the Hegelian 'Essence'):

> So, our analysis led us to the conclusion that an internal contradiction is present in the pseudoconcept, the most widespread concrete form of thinking in complexes in children, which is imprinted on its very name and which, on the one hand, is the greatest problem and obstacle we face in our attempts to investigate it from the scientific point of view, and on the other, underlines its enormous functional and genetic significance as the most important determining factor in the process of development of thinking in children.
>
> (Vygotsky: 1994: 229)

This explains why Vygotsky views 'pseudoconcepts' as a step towards 'potential concepts':

> But as long as complex thinking predominates, the abstracted trait is unstable, has no privileged position, and easily yields its temporary dominance over other traits. In potential concepts proper, a trait once abstracted is not easily lost again among other traits. The concrete totality of traits has been destroyed through its abstraction, and the possibility of unifying the traits on a different basis opens up. Only the mastery of abstraction, combined with advanced complex thinking enables the child to progress to the formation of genuine concepts.
>
> (Vygotsky: 2012: 148)

However, what is most critical, in the case of the pseudoconcept, is that the child has now been influenced by an adult or peer. And this is because the words, received from outer speech, have become involved in concept formation. As such, the 'pseudoconcept' represents a crucial bridge between the 'complex' and the concept. It effectively marks the point at which the 'word meaning', like the Peircean 'object of thought', is first being formed.

Vygotsky is recognised, by all commentators, as insisting on the role of the social dimension in concept formation. As noted earlier, some interpret this as suggesting that meanings are socially constructed. But we can now see that an alternative role for the social dimension is suggested by him. The speech of others provides the child (when confronted with a 'complex') with a suggested *'path'* along which a concept may be formed. As Vygotsky states:

> Speech lies at the very beginning of the child's development and becomes its most decisive factor.
>
> (Vygotsky and Luria: 1994: 116)

The precise role of the social dimension can now be clearly identified. It plays the role of *'positing'* the pathway for the new concept. In Hegel and Peirce, the mind does this by itself - via an Essence, or an icon. In Vygotsky's dialectics, in contrast, it is the social dimension that provides a pathway that enables the child to hypothesise a new identity. It is clear, therefore, that whilst the social input provides a vital ingredient in concept formation, it does not provide concepts, *in toto,* which need to be 'interiorized'. As we noted, it was the potential problem of 'interiorization' that Bruner questioned – and we have now found a solution to it.

The Vygotskian 'word' thus provides the equivalent of a *'form'* around which the developing concept coalesces. Commentators are, therefore, mistaken in assuming that the 'word' provides evidence for a form of Vygotskian 'Social Constructionism'. In fact, it is evidence of a much older tradition in his thought - his Hegelian inheritance.

It could be argued that this interpretation amounts to 'hair-splitting'. If the key element that is required for the concept to be formed comes from the social dimension, doesn't this entail that concepts are 'social', after all? But the fact that an element of the concept derives from the 'word' of others does not mean that the resultant concept is socially created. However, we still find commentators, such as Bakhurst, concluding that:

> It is an enduring theme of Vygotsky's writings that the higher mental functions are social in origin. Their development cannot be portrayed as the outcome of biological maturation, but essentially involves the child's appropriation of culture.
>
> (Bakhurst: 2011: 153)

It is precisely the idea of *'the child's appropriation of culture'* that is mistaken here. Just because the social dimension provides a resource of potential 'pathways' for concept development, it does not follow that the child *'appropriates culture'*. The child will often produce concepts that are *slightly different* from those of others. There is little suggestion that the child is 'learning' culture, or that they are adopting 'ready-made' solutions that pre-exist. All that Vygotsky is suggesting is that culture provides a

repository of potential conceptual pathways. Invocations of social 'activity', 'negotiation', or 'participation' are not required in his model.

Vygotsky goes on to argue, in an Hegelian manner, that concept development must involve a dialectically determined qualitative change:

> About its quality, we can say, in the words of Hegel, that something is what it is because of its quality, and losing its quality, it ceases being what it is, for the development of behaviour from animal to man resulted in the appearance of a new quality. This is our main idea. This development is not exhausted by a simple increased complexity of those relations between stimuli and responses which were already presented to us in animal psychology. Neither does it proceed along the path of quantitative increase and branching of these relations. At its centre is a dialectical leap that leads to a qualitative change in the relation between the stimulus and the response.
>
> (Vygotsky: 1997b: 39)

This *'dialectical leap'* references the Hegelian notion of 'sublation', and the resulting change of identity that this involves. We have already encountered this important step with Peirce's 'interpretant'. And it is this *change in identity,* achieved through sublation, that marks the moment when a true concept is formed. When it has been formed, it stands for something that is more than just a representation of what has been directly perceived by the senses. It is through such dialectical thinking that the concept emerges and becomes the equivalent of Hegel's 'Notion', or the Peircean 'third'. Vygotsky overtly references 'sublation' when he states:

> But in this highest form of behaviour the habits which participate in an intellectual operation and form part of the structure have already become a 'superseded category'
>
> (Vygotsky: 1997a: 188)

The fully-fledged Vygotskian concept, when it has emerged, also has a number of important characteristics. In 'abstraction', the concept forms around specific elements that have been singled out by the mind and this has the effect of raising the importance, of some, and lowering the importance of others. This, as we saw, parallels the action of the Peircean mind in abstracting the 'object of thought' from the representamen. It can also be contrasted with the 'complex' - where all attributes are treated equally. This means that the child has now moved *beyond* 'natural perception', and is creating something new:

> Still, the global character of the child's perception has been breached. An object's attributes have been divided into two parts unequally attended to – a beginning of positive and negative abstraction. An object no longer enters a complex *in toto*, with all of its attributes – some are denied admission; if the object is impoverished thereby, the attributes that caused its inclusion in the complex acquire a sharper relief in the child's thinking.
>
> (Vygotsky: 2012: 145)

However, we should be careful to identify exactly what sort of 'abstraction' Vygotsky is emphasising here. Vygotsky is not talking about the Lockean form of abstraction where the individual identifies similarities between qualities and then forms increasingly general terms. Instead, for Vygotsky, the concept is formed through the interaction of the two planes that we highlighted earlier. In the translation of *'Thought and Language'* in *'The Collected Works of Vygotsky'*, he describes abstraction as follows;

> On the contrary, the child uses the most general concepts from the very beginning. He reaches the middle level concept not though abstraction, not by moving from below to above, but through definitions, by moving from higher to lower. The child's representations move from the undifferentiated, from genus to species and variety.
>
> (Vygotsky: 1987: 162)

This account of abstraction is missing from the Kozulin translation of *'Thought and Language'* (Vygotsky: 2012) and it is an important omission because Vygotsky makes it clear here that he is adopting the same progressive determination of identities that is espoused by Peirce. In the same translation, Vygotsky goes on to state:

> Rather than involving a simple isolation of similar features from a series of concrete objects, the process of concept formation came to be understood as *a complex process involving the movement of thinking through the pyramid of concepts,* a process involving constant movement from the general to the particular and from the particular to the general.
>
> (ibid)

Within these 'pyramids of concepts', the child slowly identifies what is contained (and also not contained) within a particular concept and, additionally, how an individual concept fits within a wider system of other concepts. The child, in identifying what is contained within a concept, also establishes which are more general, and which form subsets of others.

One other feature of the concept, which Vygotsky highlights, is its *'functional'* or *'instrumental'* role. As Vygotsky puts it, the newly formed concept becomes *'the main instrument of thought'* (ibid: 148). As such, it begins to operate in similar ways to the Peircean symbol. Vygotsky argues that:

> On the contrary, the very difference between the complex and the concept lies in the different functional uses of the word. The word is a sign, and as such it may be used in different ways depending on what kind of intellectual operation it is involved in.
>
> (ibid: 149)

This reflects Vygotsky's previous argument that signs are 'tools'. But, in this instance, no physical manifestation of the tool is involved – the concept, itself, has become 'instrumental' because it permits us to understand the world more effectively. This parallels the Peircean treatment of the symbol

in that the Vygotskian *'instrument of thought'* makes our thinking more *'efficient'* (Peirce: SS 31).

With the Peircean sign, we saw that symbols always contain indexical components. The question must be asked: does Vygotsky have an equivalent of the 'indexical' sign in his account of the concept – even though he does not use the term?

In Vygotsky, it is clear that the indexical sign does not exist as such, but it can be found in Vygotsky's *psychological,* rather than his *semiotic* language. In this respect, Vygotsky is actually following Hegel more faithfully than Peirce. Hegel, lacking Peirce's concept of 'secondness', focusses on memory (Hegel: 1830/1971: 219-223) as the mechanism enabling the human mind to link 'indexical' properties to concepts. Similarly, in *'Mind in Society',* Vygotsky argues:

> The possibility of combining elements of the past and present visual fields (for instance tool and goal) in one field of attention leads in turn to a basic reconstruction of another vital function, *memory*. Through verbal formulations of past situations and activities, the child frees himself from the limitations of direct recall; he succeeds in synthesizing the past and the present to suit his purposes. The changes that occur in memory are similar to those that occur in the child's perceptual field where centres of gravity are shifted and figure and ground relationship are altered. The child's memory not only makes fragments of the past more available, but also results in a *new method of uniting the elements of past experience with the present*. Created with the help of speech, the time field for action extends both forward and backward. Future activity that can be included in an ongoing activity is represented by signs.
>
> (Vygotsky: 1978: 36)

In the emerging concept, therefore, memorized experiences are included in the 'word meaning', and these relationships with the world stretch forwards, and backwards, in time. They form the 'contents' of the concept, and also connect each concept with other concepts. It is this feature of the concept that both gives it the functional role that we noted earlier and also determines how it is embedded in a system of other concepts. As Vygotsky states:

> A real concept is an image of an objective thing in all its complexity. Only when we recognise the thing in all its connections and relations, only when this diversity is synthesised in a word, in an integral image through a multitude of determinations, do we develop a concept.
>
> (Vygotsky: 1998: 53)

The fact that the concept represents an object *'in all its complexity'* is important. It stands in contrast to the view of 'secondary dualism' that concepts are formed arbitrarily and are detached from reality:

> In contrast to contemplation, to direct knowledge of an object, a concept is filled with definitions of an object; it is the result of rational processing of our experience,

> and it is a mediated knowledge of the object. To think of some object with the help of a concept means to include the given object in a complex system of mediating connections and relations developed in determinations of the concept.
>
> (Vygotsky: 1998: 53)

Another important aspect of the Vygotskian concept is the fact that a child's newly formed concept *will always be different*, in some respect or other, from the adult 'word' that plays a role in its formation. It is clear that there will always be a certain 'gap' between a new concept of the child, and the speech of adults. This 'gap' is transcended by the Hegelian 'leap' that is involved in the final, sublated, stage of concept formation, but significant consequences do arise from it.

For it will always be the case that the individual *spontaneous experiences* that the child utilises in concept formation will be different*,* in some way or other, from those that the adult has experienced in their own lives. Vygotsky states, for example, when talking about 'paths':

> The speech of the people surrounding the child, with its established, constant meanings, predetermines the path which the development of the child's generalisations can take. It limits the child's individual actions and directs them down specific, strictly defined channels…. By engaging the child in verbal communication, an adult can influence the further progress of this generalisation process, as well as the end and outcome of that journey which will be the result of the child's generalisations. But adults cannot pass on their method of thinking to children. A child assimilates ready-made meanings of words from adults, but he does not have to select actual themes for the complexes himself.
>
> (Vygotsky: 1994: 228)

This means that a child's concept will always develop in ways that are slightly *different* from the previous adult concept. Received speech provides *'strictly defined channels',* but it cannot *'pass down'* ready constructed meanings:

> *This means that sign-using activity in children is neither simply invented nor passed down by adults*; rather it arises from something that is originally not a sign operation and becomes one only after a series of *qualitative* transformations.
>
> (Vygotsky: 1978: 46)

The process of concept formation does not, therefore, involve the child simply 'copying' an adult concept, as Bruner might suggest. Vygotsky is keen to emphasise that speech only provides an indicative 'pathway' for the child's concept to develop. And this means that concept formation within a particular culture is intrinsically dynamic. Concepts are not synchronic; they evolve as circumstances, and each child's resources of 'spontaneous concepts' change. A child will not inherit exactly the same concept - even though they may use the same 'word'. This is important when we come to Vygotsky's discussion of *'imitation'* in the Zone of Proximal Development. He frequently uses this term, but it is clear that Vygotsky does not believe

that concepts are mechanically 'copied' from one mind to another. And this is more evidence that Vygotsky sees the social realm as simply providing 'pathways' around which a concept can form – rather than a social medium in which they are formed, and then 'interiorized'.

In this section we have followed the *'natural history'* of the Vygotskian concept from the initial 'indeterminacy' of a child's perceptions to the level where an evolving concept is formed. We have seen that there are parallels, and also some key differences, between Vygotsky and Peirce. The most notable of these is that Vygotsky lacks an equivalent of the icon at *the initial stage* of a concept's development. However, we have also identified that the Vygotskian 'word' plays a similar role to the Peircean icon at a later stage. When the 'pseudoconcept' is formed the 'word' does provide a 'form' (or 'pathway') around which a developing complex may coalesce. It is also, at this point, that abstraction begins to takes place and hierarchies are formed. The 'word', it turns out, is an indication, therefore, of Vygotsky's Hegelian inheritance – not evidence of his incipient Social Constructionism.

8.4) The Zone of Proximal Development

Vygotsky's notion of a Zone of Proximal Development (ZPD) has attracted much attention in the secondary literature. However, interpretations of it have been very wide ranging and it has been applied to child psychology in a considerable number of ways. In an educational context, the main focus of commentators has been placed, not surprisingly, on its potential usage in the classroom – both as a means of thinking about child attainment, and as a way for thinking about the learning process. In this section, however, the ZPD will be considered in a new way; we will explore the extent to which the ZPD exhibits potential parallels with Peircean thought.

8.4.1) Interpretations of the ZPD

Many commentators view the Zone of Proximal Development as a metaphorical 'space', or 'gap', which exists between the child's learning ability, in a 'solus' context, and their enhanced ability with the help of another person (usually a teacher, but this can be another adult, or *'more capable peer'*). This position seems to be supported by Vygotsky himself; he defines the ZPD as:

> This difference between twelve and eight, or between nine and eight, is what we call *the zone of proximal development. It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers*.
>
> (Vygotsky: 1978: 86)

On this basis, the ZPD seems to offer an opportunity to explore how a child's potential can be brought to the surface. It has resulted in the concept of *'scaffolding'* (Wood, Bruner, and Ross: 1976), and it has spawned numerous projects looking at how the ZPD may enhance the learning process (an example would be Moll's use of the ZPD in teaching bilingualism: Moll: 2014: 49). Equally, there has been a tendency to see Vygotsky's mention of *'distance'* as suggesting that this concept can even be used to *measure* development - as if there were two objective attainment levels.

But the most important aspect of the ZPD, in most interpretations, has been the emphasis that has been placed, once again, on the *social* aspects of the concept. In some cases, the Zone of Proximal Development has been interpreted almost as a *zone* in a 'physical' sense and, therefore, strictly related to the activities that are conducted, or the environment that is established, within the classroom. The ZPD:

> Has to do with the manner in which we arrange the environment such that a child can reach higher or more abstract ground from which to reflect, ground on which he is enabled to be more conscious.
>
> (Moll: 2014: 24)

And Bruner argues that:

> The tutor, in effect, performs the critical function of 'scaffolding' the learning task to make it possible for the child, in Vygotsky's word, to internalize external knowledge and convert it into a tool for conscious control.
>
> (Bruner: 1985: 25)

Newman and Holzman, likewise, suggest:

> We stated that the ZPD is not a technique or an experiment, but a reorganizing of environmental scenes to create new meaning and a learning that leads development.
>
> (Newman and Holzman: 1993: 147)

And the latter even propose innovations such as a *'ZPD factory'* (ibid: 148) in order to stimulate the learning process. Other writers have also taken Vygotsky's emphasis on the 'social' quite literally - and suggested the need for learning 'partners':

> According to Vygotsky, higher mental functions have their origins in human social life as children interact with more experienced members of their community. This

> process involves a child as an active participant working with a more competent partner to solve a problem. To facilitate children's participation and learning, more experienced partners target their assistance to a child's *zone of proximal development or potential development*….
>
> (Gauvin: 2001: 35)

This has led commentators, such as Daniels, however, to correctly point out that Vygotsky does not regard interpersonal activity as being required in the ZPD (Daniels: 2016: 64). Daniels argues, quite rightly, that the ZPD can operate in the absence of adults, or of peers. However, many then counter that, even if the actual proximity of the teacher or peer is not important at the time, then it has been present at some stage in the past (e.g. in the classroom). In these scenarios, the child is still thought to develop concepts 'in' the ZPD, when working alone, but they are using 'help' previously received.

In these interpretations, the social aspects of the ZPD are, of course, placed centre stage and interpretations of Vygotsky follow familiar patterns that we have already encountered. Daniels, for example, despite his observations above, still talks of the importance of social interaction:

> The adult creates a social setting in which reading takes place as a collaborative act. The setting is designed to facilitate the gradual development of individual unsupported reading.
>
> (ibid: 34)

Indeed, some commentators see the ZPD almost as a 'zone of communication'. As Miller wryly observes, this transforms the ZPD into *'a kind of magical learning-teaching capsule'* (Miller: 2011: 122). And, once the ZPD has been subsumed within this over-arching communication model, then other problems arise. It becomes inevitable that the ZPD starts to look dualist in its structure. And this leads to the questions that we encountered before - which relate to how concepts might traverse this divide. It is worth revisiting this issue because it highlights some underlying misconceptions concerning the ZPD.

When discussing how new concepts emerge in the child's mind, most commentators highlight Vygotsky's mention of *'imitation'* and suggest this must be the mechanism that allows the child to create concepts in the ZPD. This view seems, on occasions, to be supported by Vygotsky himself:

> In the child's development, on the contrary, imitation and instruction play a major role. They bring out the specifically human qualities of the mind and lead the child to new developmental levels. In learning to speak, as in learning school subjects, imitation is indispensable. What the child can do in cooperation today he can do alone tomorrow.
>
> (Vygotsky: 2012: 199)

But there is a problem if we take this passage at face value. Elsewhere, Vygotsky himself points out that 'imitation' is not the same as 'copying'. Miller notes that:

> He [Vygotsky] identifies imitation as the underlying process, but points out that a particular kind of imitation is involved that is not based on a blind mechanical kind of copying.
>
> (Miller: 2011: 120)

The question is this: what kind of 'imitation' occurs in the ZPD? Miller himself maintains that Vygotsky does not resolve this question satisfactorily. Miller suggests, at one point, that *'meaningful imitation'* is *'distinguished by sudden or what has been termed insight learning and does not require repetition' (ibid 121).* But it is clear that such a solution (e.g. *'insight learning'*) simply begs the question. Miller concludes, criticising Vygotsky, that:

> But how the human instructional kind of imitation differs from the mechanical copying kind of imitation and what it consists of or what additional processes are involved in its operation, as distinct from the outcomes produced, are matters that are not directly addressed. This is not a mere oversight, but represents a significant theoretical gap at the heart of his account of instruction and development.
>
> (ibid: 153)

But, as we have already seen, such analysis ignores Vygotsky's adherence to dialecticism and its Hegelian notion of 'positing'. The latter offers a potential way of answering these criticisms of Vygotsky. If we construe the social dimension as being an external force which simply 'posits' suggestions for potential concept formation, then the problem of 'imitation' is resolved. Despite his criticisms of other commentators, Miller still overlooks the fact that the child, when forming its 'pseudoconcepts', is essentially making *hypotheses* - using words posited by the speech of others. Concept formation does *not,* therefore, involve the 'copying' of concepts. Instead, it involves adopting pathways suggested by the 'word' of others.

Such Hegelian influence clearly renders concept formation a much more intricate affair than a straightforward process of 'imitation'. The child never 'copies' the adult or peer, but always creates something that is individual to themselves. Newman and Holzman come very close to this view when they state that:

> Imitation in the ZPD is the activity of making meaning, where the predetermining tools of the adult language, and the resulting predetermined tools of the mind are used by the child – the toolmaker – to create something that is *not determined by them* (my italics).
>
> (Newman and Holzman: 1993: 87)

This revised interpretation may also explain why Vygotsky calls the ZPD *'proximal'* (as opposed to 'direct'). Arguably, Vygotsky may not be describing an interpersonal 'closeness' when using this term. Instead, he may be describing the 'proximal' characteristics of the developing concepts *themselves* when compared with those of the initiating adult, or peer.

In summary, we have seen that concepts are formed in the mind of the child as the 'posited' speech of others, and the child's own spontaneous concepts, interweave with each other on a dialectical basis. This is the very activity that takes place in the Zone of Proximal Development; it is a metaphorical 'space' where synthetic 'amalgams' are created. The ZPD should be construed, therefore, as an active *interface* which exists *within* the child's mind. It should not be interpreted in overtly social terms that inevitably create problems about 'copying' and 'interiorisation'.

But this revision can go still further – for the ZPD possesses other parallels with Peircean thought.

8.4.2) The ZPD: Fusing the Iconic and the Indexical

If it is accepted that the ZPD is where a child's spontaneous concepts interface with the 'posited' input from outer speech, then other key characteristics emerge. In this sub-section, it will be argued that Vygotsky's ZPD exhibits features that we have already encountered in Peirce's account of the interplay between iconicity and indexicality. These parallels exist because both thinkers are trying to explain how new identities are formed, and then develop, within the mind.

There are a number of comments that Vygotsky makes about the ZPD which suggest that it has applications *beyond* the a formal learning environment. Interestingly, for example, Vygotsky considers the ZPD in relation to *'play'*:

> This strict subordination to rules is quite impossible in life, but in play it does become possible: thus, play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behaviour; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form and is itself a major source of development.
>
> (Vygotsky: 1978: 102)

This aspect of the ZPD deserves attention because it reveals much more about Vygotsky's interpretation. Why should 'play' create a Zone of Proximal Development; and what has the ZPD to do with a *'subordination to rules'*?

In *'Mind in Society'*, Vygotsky distinguishes between a world of illusion and a world of reality. Illusion, he suggests, is invented by the child when he, or she, *'begins to experience unrealizable tendencies'* (Vygotsky: 1978: 93). He states that:

> To resolve this tension, the pre-school child enters an imaginary, illusory world in which the unrealisable desires can be realised, and this world is what we call play. Imagination is a new psychological process for the child; it is not present in the consciousness of the very young child, is totally absent in animals, and represents a specifically human form of conscious activity.
>
> (ibid: 93)

This use of play by the child is also described by Vygotsky in terms of 'rules':

> One could go even further and propose that there is no such thing as play without rules. The imaginary situation of any form of play already contains rules of behaviour, although it may not be a game with formulated rules laid down in advance. The child imagines himself to be the mother and the doll to be the child, so he must obey the rules of maternal behaviour. Sully early noted that, remarkably, young children could make the play situation and reality coincide. He described a case where two sisters, aged five and seven, said to each other, 'Let's play sisters'. They were playing at reality.
>
> (ibid: 94)

In *'playing at reality'*, Vygotsky claims that a child *'operates with meanings detached from their usual objects and actions'* (ibid: 98). Sticks can, for example, become 'horses'. In these scenarios the normal relationships between objects and meanings are inverted – *meanings now define the role of objects*:

> What was said about detaching meaning from objects applies equally well to the child's own actions. A child who stamps on the ground and imagines herself riding a horse has thereby inverted the action/meaning ratio to meaning/action.
>
> (ibid: 100)

This is why play is *'rule bound'* – the meanings of words now define how an object *ought* to 'behave' in a game. For Vygotsky, this activity is how a child discovers what is included (and also not included) in a particular concept. It is where 'form' and 'content' work out their dialectical relationships with each other. This results in the seemingly paradoxical claim that:

> A child's greatest self-control occurs in play.
>
> (ibid: 99)

And Vygotsky concludes that:

> This strict subordination to rules is quite impossible in life, but in play it does become possible: thus, play creates a zone of proximal development of the child.
>
> (ibid: 102)

So a ZPD exists when a child plays within a set of 'rules' determined by the evolving meanings of their concepts. When they are 'being a horse' or 'being a mother' they are submitting themselves to the 'rules' of this game – and submitting themselves to meanings. In doing so they are coming to terms with what specific *identities* mean and what their entailments might also be. It is important that a child can carry out this activity alone and there is no formal teaching involved. Vygotsky observes that the notions of 'horse' and 'mother' have come, ultimately, from the speech of adults, or peers, but the child can still play alone in the ZPD.

This inversion of meaning and words is something that we have previously encountered. We noted that, for Peirce, meaning determines words and not the other way round (see section 6.5). Here we have Vygotsky exploring the same idea – meanings are actually determining the actions of the child as they explore what is contained, and what is not contained, within a particular concept.

This has important consequences for the ZPD. In Peirce, the indexical entailments of concepts are developed after the icon has been 'posited' and they evolve through the action of secondness. Vygotsky differs from Peirce in not possessing either of these concepts. The 'word' of adults, or peers, negate any need for icons at an initiating stage, and the indexical components of a concept seem to be provided by memory. But Vygotsky still needs to show *how* the child brings all of these elements together in manner that creates new identities. In Vygotsky's model, this task is accomplished in the ZPD. As the child learns (or plays), they are working out what particular identities mean – and this involves establishing sets of indexical entailments under the headings of specific identities (or 'pathways').

In the ZPD, the child is, therefore, creating a new concept that *synthetically* brings together their experience ('spontaneous concepts') and the 'word' of others. This activity seems to cross the dualistic divide and it is why Vygotsky states, in paradoxical terms, that the child is *'playing at reality'*. With an emerging word meaning, the child is attempting to fuse together empirical and mental aspects. In Peirce, this is accomplished by the icon as it accrues indexical components. In Vygotsky it is achieved when word meaning is created, as an *'amalgam'*, within the ZPD.

For Vygotsky, the ZPD, therefore, is where a child's developing 'complexes' are sublated into new identities. However, because the child has already formed these 'complexes' from associative groupings, the question is not how signs are initiated *ex nihilo* (the role of the Peircean icon), but rather how existing 'complexes' are *finally* transformed into the concepts of the 'higher psychological processes'. This takes place at the stage of the

unstable ‘pseudoconcept’. Whilst the icon, therefore, is construed by Peirce as an *initiating* semiotic mechanism that allows new entities to be created by the mind, the ZPD has a different role – that of enabling concepts to be formed towards the *end* of the developmental process. Vygotsky references Tolstoy to support the view and argues that the concept is only formed by the ‘word’ when the emergent (and underlying) *‘concept is ready’*:

> The truth of this theory, according to Tolstoy’s own words, lies in the fact that almost always it is not the word itself which is unintelligible, but that the pupil lacks the concept which would be capable of expressing this word. The word is almost always available when the concept is ready.
>
> (Vygotsky: 1994: 357)

The different characteristics of the ZPD and the icon are thus determined by the different starting points of the two thinkers. Peirce adopts the idea of a structuring ‘form’ at the *beginning* of the process of concept formation. In contrast, Vygotsky sees the ZPD as being where complexes are finally sublated, in a dialectical fusion, into concepts.

Incidentally, it is of some interest here that Vygotsky goes out of his way to reject the idea that the child’s play is *‘symbolic’* (and thus detached from reality). He points out that, if this were the case, play would become *‘akin to algebra’* (ibid: 94). In making this point, Vygotsky effectively pre-empts Wertsch’s claim regarding his adherence to *‘decontextualised’* rationality (Wertsch: 1996). The whole purpose of play, from Vygotsky’s point of view is to permit the dialectical fusion of the mental and the empirical - and this could not be achieved if play were symbolic.

There are, however, additional similarities between the Peircean icon and the ZPD. In our discussion of the Peircean icon, we noted that it involves the work of the imagination. In Vygotsky’s account, something equivalent, and equally creative, takes place in the ZPD. Because the ‘pathway’ of the concept comes from the speech of others, the child must explore what meanings are entailed in it. This means that the child wants to *play* (imaginatively) at ‘being’ a mother, or at ‘riding’ a horse. The child thus creatively explores what is contained within a given conceptual identity. The Vygotskian equivalent of the icon is not, itself, *formed* imaginatively (because it comes from the speech of others), but it is still through the action of the imagination (in play) that the child finds out what a given concept entails.

This revised account also confirms the view that the ZPD is relevant to a child’s learning processes when no other person is present. The urge, however, for commentators to believe that social mediation is required in the ZPD leads some to ignore the ‘play’ aspect of the ZPD, or, alternatively, to insist (unsurprisingly) that ‘play’ must, itself, have a social dimension. Moll, for example, states that:

> Vygotsky proposed, in fact, that the zone of proximal development in play is unique, because it involves the creation of imaginary situations, with their own particular social rules, through which children advance themselves to higher levels of psychological functioning. *Notice that the focus on the individual does not negate the social dynamics of development (my italics).*
>
> (Moll: 2014: 36-37)

Aware that play may not involve social interaction, Moll inserts the word 'social' into the definition of 'rules' (in the second line) and claims that Vygotsky's focus on the individual retains a 'social' character because development must possess '*social dynamics'*. But to insist that the ZPD itself is a social construct narrows the concept too far. And it reflects a deeper reluctance to recognise 'word meaning' as the true mediating element in Vygotsky's thought.

The fact that the ZPD involves creative 'exploration' is also encountered in Vygotsky's discussion of *'egocentric speech'*. This is another area where the ZPD appears in Vygotsky's work. As Kozulin points out in the foreword to '*Thought and Language'* (Vygotsky: 2012), the amount of egocentric speech that a child uses tends to increase in the ZPD, but it is lower *'when the task is too easy or too difficult for the child'* (ibid: xvii). It is clear, therefore, that egocentric speech is most important to a child's understanding just at the critical point where new concepts are being formed (in the ZPD). The child finds it helpful to vocalise these emerging concepts as they try to solve a problem that is *just within the range of* their ability:

> Our findings indicate that egocentric speech does not long remain a mere accompaniment to the child's activity. Besides being a means of expression and of release of tension, it soon becomes an instrument of thought in the proper sense – in seeking and planning the solution of a problem.
>
> (ibid: 32)

And, interestingly, Vygotsky insists that egocentric speech entails *'realistic thinking'*:

> This is the factual evidence that the child's egocentric speech does not reflect egocentric thinking, but rather carries out an opposite function, that of realistic thinking.
>
> (ibid: 35)

It is easy to conclude with this comment, and if we think dualistically, that Vygotsky is, in fact, separating egocentric speech from the work of the imagination. This is because he describes egocentric speech as *'realistic thinking'*. But we must not conclude that the imagination is absent from egocentric speech; rather the child is simply using their imagination to build *synthetic* concepts in the ZPD.

Further references to the imagination in the ZPD are also found in Vygotsky's work on the role of creativity in the adolescent (Vygotsky: 1998: 151-167). Here we find *'fantasy'* discussed in ways similar to 'play' with younger children. Vygotsky points out that other commentators make the mistake of assuming that imagination and thinking are separated from each other (again by dualistic desires to separate creativity from logic) whilst, for Vygotsky (as with Peirce), the role of the imagination is central to the creation of new concepts and the *'liberation from the concrete situation'*:

> This can be understood as follows: thinking that is purely concrete, completely devoid of concepts, is also without fantasy. The formation of concepts brings with it, first of all, liberation from the concrete situation and the possibility of creativity reprocessing and changing its elements.
>
> (ibid: 163)

In summary, it is possible to make a number of revisions to our understanding of the Vygotskian ZPD within a framework which is more Hegelian, and more Peircean, in character. If we abandon interpretations of Vygotsky which are predominantly social in orientation, we find that the ZPD can be construed as a metaphorical 'space' where concepts are created in a synthetic *'amalgam'* - utilising the 'posited' input from outer speech. As such, the ZPD is fundamental to a child's concept formation because it is where the child fuses 'word meanings' along 'pathways' suggested by the speech of others.

In this interpretation, although Vygotsky does not overtly possess the concept of the icon, this key Peircean term is reflected in key aspects of the ZPD. Vygotsky believes the imagination plays a key role in concept development and he views the ZPD as offering the child an opportunity to explore potential new meanings. Moreover, whilst the social realm always provides the vital input in concept formation, it is in the ZPD that the child explores the critical relationships between putative identities and their indexical entailments.

9) Peirce, Vygotsky, and the Learning Process

By any measure, a successful account of concept formation has a strong claim to be the focus in any theory of learning. How a child forms their concepts, and develops their 'tools' for understanding of the world, should be the cornerstone of any educational theory – a theory of concept formation will always be intimately connected with how the child develops his or her knowledge. As Bakhurst notes, referring to McDowell and his *'space of reasons'*:

> We need a sophisticated appreciation of the child's initial state and a nuanced conception of the influences upon her as she becomes an inhabitant of the space of reasons. At this point, we may turn for inspiration to Vygotsky, a thinker with whom the term 'socio-cultural' has long been associated, and whose work contains a blueprint of the kind of framework for which we are looking.
>
> (Bakhurst: 2011: 152)

Vygotsky's ability to provide such an account of concept formation is the reason for his current, and justified, status in relation to the learning process. It has been the purpose of this thesis, however, to show that Peirce can also make such a claim – and that Peircean semiotics can provide an equally 'nuanced' account of how our concepts are formed.

Vygotsky's thought clearly offers an overarching framework for concept formation. As our discussions have shown, however, his thinking has often been employed to provide support for arguments that meaning is socially created. Such positions have been, quite correctly, motivated by the desire to counter the received view that learning is a matter of 'transmitting' knowledge (Stables: 2010: 21), or that children are 'passive' in the learning process (Cunningham: 1987: 202). In this thesis, it has been suggested, however, that whilst Vygotsky does give a role to the social dimension in concept formation, it unlikely that he would agree to a more fully-fledged social account of meaning creation. He is too much of an Hegelian to do this. From his point of view, the social dimension simply provides the child with 'hypotheses' (in the form of words) that facilitate the formation of mediated concepts. Meaning is thus created within the mind of the child as a dialectical process that forms 'word meanings'. One of the purposes of this thesis has been, therefore, to draw interpretations of Vygotsky back from overt Social Constructionism.

In recent decades there have been concerted efforts to bring semiotics into the mainstream of educational thinking. Social Semiotics has shown how signs can be used, as 'resources', in the classroom to deliver more effective learning environments and teaching methods. But, as a discipline, it has

been constrained by the fact that it focusses on the processes of meaning (re-)construction, and communication, rather than on the activity of meaning creation *ab initio*. As such, it does not attempt to establish an account of how children form valid empirical knowledge and it labours under the implicit assumption that any such knowledge is, in any case, distorted because of its social foundations.

Elsewhere, Edusemiotics has also introduced a number of new perspectives on educational theory and these have reflected a more Peircean approach to sign action. It emphasises, as this thesis has, an anti-dualistic orientation in educational thinking (Stables: 2010: 21-37; Stables and Semetsky: 2015: 31). It has construed learning as a *process*, the pupil as an *active* learner (Stables: 2008b: 149; Stables: 2010: 26), and learning as *'semiotic engagement'* (Stables and Semetsky: 2015: 36). This line of argument has also emphasised the role of abduction in the development of a child's thinking (ibid: 19-22). Edusemiotics has also sought to place the student in a semiotic world that has no boundaries (because the world is relational). This has undermined the view that academic subjects can be 'compartmentalized' into discrete subject categories (Noth: 2010: 4). As a result, semiotics challenges the divisions between the 'sciences' and the 'arts'. Deely and Semetsky, for example, have argued that signs *'must be recognised as a pervasive fact of both nature and culture'* (Deely and Semetsky: 2016: 208).

Noth has also highlighted how Peirce's concept of 'secondness' shows that the experience of 'surprise' is key to learning, whilst Stables views education, on the same footing, as an intrinsically *'disruptive'* activity (Stables: 2010). Olteanu has also written on the role of 'secondness' in Peircean semiotics (Olteanu, Kambouri and Stables: 2016: 636) and, elsewhere, he has outlined a potential role for the icon in knowledge formation. Despite all of these developments, however, Stables has still suggested that there may be difficulties *'in taking Peirce as the basis of a fully semiotic theory of education'* (Stables: 2014: 598).

What semiotics, seemingly, has not been able to provide is a credible account of concept formation, and one that parallels Vygotsky. It is this underlying potential in Peircean semiotics which this thesis has sought to explicate. And, as we have seen, this potential can be discovered, significantly, in the precisely the same Hegelian framework that Vygotsky utilised.

The reasons why contemporary semiotics, as a discipline, has found it difficult to establish a credible account of concept formation have been touched upon at several points in this thesis. The first obstacle is the highly influential view that meaning is created by the mind, and by culture, and that this process occurs on an arbitrary basis. This assumption will, *prima*

facie, always separate meaning from reality. Secondly, and strongly associated with this, has been the deep implicit acceptance of what has been described here as 'secondary dualism'. This way of framing the activity of the mind results in a template of meaning construction that construes it as, firstly, perceiving and then, secondly, interpreting its sense data. This model results, inevitably, in a dislocation taking place between our experience of reality and our understanding of it. And, thirdly, this same model is associated with a common belief that signs are, quintessentially, a form of experience that demands 'interpretation'. This view is widespread in much of contemporary semiotics (Ransdell: 1976: 98), and it renders any account of valid empirical concept formation along semiotic lines virtually impossible. Signs, if they are construed as the products of 'interpretation', cannot possibly form the basis of true empirical knowledge.

Once Peirce is understood in his Hegelian colours, however, it becomes possible to discern a clear account of concept formation on the basis of signs. As we have seen, Peirce rejects all three of the assumptions, summarised above, and he models his semiotics, instead, on the *'objective logic'* of Hegel. This provides a triadic account of concept formation - creating mediating entities that enable us to understand the world. In his model, Peirce rejects the dialectical logic of Hegel, but he still retains a strong adherence to its underlying logical spirit. The gradual evolution of concepts, from iconic 'hypotheses', to symbols, is achieved as the effects of 'secondness' limit, and determine, the meaning of signs. The indexical links that are established under these icons also mean that they become incorporated within a system of other concepts which, together, establish the wider body of human knowledge.

As Chiasson highlights (Chiasson: 2001: 205), Peirce seldom overtly discusses education; but on one occasion, Peirce ventures that:

> When new paths have to be struck out, a spinal cord is not enough; a brain is needed, and that brain an organ of mind, and that mind perfected by a liberal education. And a liberal education – so far as its relation to the understanding goes – means *logic*.
>
> (EP1: 212)

As surprising as this statement might seem, Peirce is simply highlighting that, if our concepts are created through the semiotic processes described above, then it follows that they will be formed on a logical basis. Peirce sees semiotics as being intimately connected with logic, and he states:

> All thought being performed by means of signs, Logic may be regarded as the science of the general laws of signs.
>
> (EP2: 260)

And he goes on, in this same passage, to state that the first branch of his 'Logic' is:

> *Speculative Grammar*, or the general theory of the nature and meanings of signs, whether they be icons, indices or symbols.
>
> (ibid)

This emphasis on logic, and Peirce's conviction that the mind understands its experiences in a way that involves synthetic mediation, leads to his conclusion that our concepts represent a form of *'concrete reasonableness'*. This also has profound implications, as we saw, for his accounts of meaning and truth; the meanings of our concepts are determined by the actions of the world upon us. It follows from this that meanings are derived from the fusion of iconic identities with their indexical components. A specific meaning, encapsulated in the Pragmatic Maxim, is thus defined as the sum of the relationships that a particular identity has with the world. In Peirce's hands, this account of meaning creation also parallels his treatment of truth. He is thus able to bring together these two philosophical concepts in a way that always proves impossible for nominalism.

The philosophical insight that facilitates this Peircean fusion of meaning and truth is the recognition that a concept (as an 'object of thought') represents a form of mediated knowledge embedded within a web of other concepts. As such, concepts are not mental entities that simply *have* meaning attached to them; instead, they *exist*, synthetically, *as meanings* (or as '*objects* of thought'). The traditional philosophical problem of explaining how our meanings become 'attached' to 'things' (in the outside world) is dissolved, because we recognise that such a demand is, in fact, dualistically inspired. Peircean concepts, envisaged in this way, therefore, mirror the characteristics of Leibnizian monads. They do not *have* relationships with the world (across a putative Cartesian divide). Instead, they *exist*, as synthetic, mediated, 'objects of thought', which are also the sum of their relationships with the world.

This Peircean concept of truth has been described in this thesis as *'a posteriori analytic'*. The evolving 'object of thought' in a sign is determined by our previous experience of the world. This results in a theory of meaning based on a template of *identities and their indexical inclusions* - rather than one that advocates meaning based on the idea of reference, or, indeed, the conventional semiotic view that terms are placed within a system of other terms. From this it follows that when we use particular concepts, the propositions that we form with them already possess the latent structures of 'analytic' truths. Simultaneously, however, they also retain a vital sense of contingency – because our meanings (formed in this semiotic manner) are always open to revision (through the action of secondness). Such a claim represents a considerable challenge to the 'received' view that knowledge is 'constructed' by the interpretative mind, and that it is formed in a manner that must render it 'relative' to some objective reality that we cannot observe.

Some may argue that Peirce's evocation of 'logic' will have a stultifying effect on the imagination, and creativity, of a child in an educational environment. But we have also seen that the imagination is at the very heart of Peirce's model of concept development. It is the imagination itself that forms the initial icon upon which all concept development is founded. Equally, we have noted, with Vygotsky, that the imagination is vital to the activity of concept formation, both in a child's play, and in the ZPD. Creativity only appears opposed to 'logic' in accounts of knowledge that are dualist in nature. As Vygotsky highlights, *'a child's greatest self-control occurs in play'* (Vygotsky: 1978: 99).

What are the benefits of this analysis of Peirce for educationalists and for any philosophy of the learning process? There several aspects to this.

Firstly, it becomes clear that, in this Peircean account, education is not a matter of *transmitting* knowledge. This is already a view held within Edusemiotics; Pesce, for example, attacks this conventional view of the learning process as follows:

> Knowledge is viewed as a set of verbal statements that are to be transmitted (in writing or orally), from one mind to another, according to a telegraphic metaphor. In other words, a student is learning as soon as he or she is offered information. Semiotic theories of learning call into question.... these types of 'fundamental assumptions'.
>
> (Pesce: 2018: 159)

In the place of this 'transmission' model – which is formed on an implicit assumption of dualism, we uncover a model of the learning process that involves the learner being encouraged to develop his or her concepts along the pathways outlined in this thesis. These begin with the initial formation of icons, and they conclude with the creation of, and the ability to use, systems of symbols that possess extensive indexical properties.

Secondly, if educationalists assume, along conventional dualistic lines, that there is an 'objective' world, then it is very easy to slip into one of two interrelated problems. On the one hand, there are implications for the perceived role of the teacher. They become, for example, not only the 'transmitters' of knowledge, but also guardians of objective truth. As Stables highlights, this results in the tendency:

> ...to regard the process of teaching as one of conveying objective truth, via language, into the subjective world of the learner: a view of teaching matter as objective and fixed, of learners as subjective and unreliable, of teachers as deliverers, and of language as a vehicle.
>
> (Stables: 2018: 34)

However, as Derry highlights, the effects of dualism can also work in the other direction – and just as damagingly. In this particular scenario educationalists can give too much emphasis to subjectivity in education. She argues:

> ..for the importance of going beyond purely psychological and individualist constructivism in order to view maths at least in part as enculturation into an intellectual community.
>
> (Derry: 2013: 57)

The arguments of this thesis have made it clear that both of these errors are ultimately founded in 'secondary dualism'. On the one hand, we have a misplaced conviction in the certainty of our sensory knowledge and, on the other, the assumption that all knowledge is subjective and relative to it. Neither, I would argue, is the basis of an adequate philosophy of education. Instead, the synthetic approaches of Peirce and Vygotsky offer a way of looking at knowledge acquisition which avoid both of these problems.

In contrast, in the approach outlined in this thesis, we have rejected the dualist view that knowledge is either 'subjective', or 'objective' and we have, instead, proposed a model that construes knowledge as progressing, by degrees, from the 'vague' to the more 'determinate'. As such, particular views of the world are not 'right', 'wrong', 'objective' or 'subjective' – they are simply *partial* in nature. To use the language of Leibniz, particular opinions in the classroom may be very poor *'nominal definitions'*, or good *'real definitions'*. The purpose of education is to take the child from the former to the latter in as many areas as possible. In doing so the learner will evolve more developed concepts that will enable them to achieve synthetic knowledge of their experience. The purpose of Peirce's, and Vygotsky's, arguments is to show that 'reality' is, in an important sense, constructed, but not that it is wholly 'subjective' as a result. This claim has significant implications for much of contemporary educational theory.

Thirdly, if we conclude, alongside Peirce, that our concepts are logically formed, then there are a number of important benefits for our understanding of the learning process itself. Paradoxically, in the accounts of concept formation that are framed by the idea of 'secondary dualism' there is scarcely any focus on the *actual activity* of concept creation. It is assumed that concepts are simply 'made' (and fairly spontaneously at that) on the basis of individual 'interpretation'. From our foregoing discussions, however, it is clear that the activity of concept formation is much more complicated than the 'secondary dualist' would suggest.

As we have discussed, the process of concept formation involves the combinatory actions of icons, indices, and the formation of symbols. But the fact that Peirce has highlighted in detail, in his classification of signs, how

the concept develops means that educationalists can identify how (and indeed why) particular concepts are being formed in a child's mind. The fact that these various stages of concept formation are outlined by Peirce provides an opportunity for educationalists to understand the learning process in more detail. And because these stages are more specific, and more accessible, than Hegelian dialectics, it is possible to identify the key stages that are central to this activity.

When we considered the approach of Social Semiotics, we saw that it takes an identity and then considers how a user of a sign may decide to *construct* that specific identity. A user may want to construct a particular meaning of, say, the concept of 'the family' using specific imagery (or 'resources'). It may be constructed, for example, in a manner that is rooted in European culture and the imagery used would derived from that cultural resource. As such, the outcome would be very different from the notion of the 'family' that might be constructed in Africa, or in Asia. But because the notion of 'family' is already a *given identity* in such Social Semiotic analysis, then it follows that any construction of the 'family', so formed. will be treated by it as culturally relative and, perhaps, even ideological in nature.

The Peircean account of the sign, would, however, step back from the assumption that we have a 'given' concept of the 'family' and would, instead, assume that each of these notions of 'family' is, in fact, a unique 'object of thought' which has been determined in its own way. Peirce would reject the notion that different cultures have the very same concept, and that these must, as a result, be relative to each other. Instead, he would argue that different cultures have, in fact, different 'objects of thought' when they are using the term 'family' and that conversation (as with our two travellers in the carriage) would establish what is, and what is not, contained in each concept.

What emerges from such an analysis is highly relevant in educational terms. It suggests that we should question the assumed relativity of knowledge – a commonly accepted notion in contemporary education – and, instead, encourage the child to probe much deeper, and more analytically, into the meanings of his, or her, concepts. Peirce would not be concerned with how we 'construct' a particular entity; rather he would seek to establish 'what sort of thing' the many different kinds of 'family' are at a deeper level. This would, in turn, resolve into identifying what is contained, or not contained, within a range of different 'objects of thought' which might all be using the same term (or name) 'family' to describe them. This approach in education serves to minimise the call to relativity in education and it also highlights the benefits of deeper analysis and discussion in the classroom. Every concept is a 'vague' awaiting further determination.

Such an analysis also provides a useful template for understanding the way in which learners create new concepts. Using our example of the concept of the 'family', we can explore a number of issues:

- Given that all signs (and concepts) begin as icons, what exists in the notion of the 'family' at an iconic level?
- If the icon, itself, is formed on the basis of similarity, *what kinds of similarity* have been identified by the learner when first constructing the concept of 'the family' and how have these informed his, or her, idea of a 'family'?
- This, in turn, encourages us to understand how a child makes *distinctions*. What elements has the learner identified as constituting 'similarity', at the iconic level, and which elements are construed as constituting 'difference' within this underlying framework of similarity?
- This would allow educationalists to identify what kind of family is distinguished by a learner and how the latter see their own family as being similar to (or different from) other families. Instead of resulting in a relativistic account of the concept, this analysis would uncover different types of family (as 'objects of thought') with different indexical properties and associations. Importantly, as noted earlier, many of these would not have names ascribed to them. It is our decision to use the term 'family' to describe these heterogeneous 'objects of thought' that seems to render the concept susceptible to cultural relativism.

These kinds of approaches could be used to identify how a particular concept has developed in the mind of a learner and to identify the reasons for this. The Peircean account of how the sign is formed provides the basis for analysing the steps through which a concept is developed.

Finally, it is also possible to take the learning of this thesis and approach concept formation from another angle. This would involve developing an account of how Peircean semiotics could be used, in the classroom, as a tool to actively encourage the development of new concepts. This is often achieved by making new distinctions within the learner's emerging 'objects of thought'. It is likely that a learner who is able to discern more subtle distinctions in 'reality' will be better adapted to the demands of the world and more able to deal with the challenges of life.

Nöth highlights how Peirce describes the need for the learner to be able to make discriminations:

> To educate means, among other things, to develop the ability of making perceptual judgments. In the domain of Firstness, the young person *"has to learn to discriminate certain special things"* (MS: 693a 4-5)
>
> (Nöth: 2018: 88-89)

This ability is one that teachers should encourage in the classroom – it is at the heart of the learner's development of an effective system of concepts.

On this basis of these arguments, the learning process of the child could also be enhanced if educationalists encourage the child to:

- Creatively form new icons – as hypothetical identities that a learner may believe exist in their environment. And this includes hypotheses based on abduction.
- Develop richer indexical links for these potential icons – these should include connections which an emerging sign may have with the empirical world, but also those indices that are *not* connected with it. Using the terminology of Leibniz, the learner needs to ascertain what makes an emerging concept *'distinct'* – and this means the identification of both what it 'contains', and what it does not 'contain'.
- Develop a rich vocabulary of words which capture (as symbols) potential new identities, and which enable distinctions to be made between concepts. Vygotsky correctly argues that words help the development of new concepts. The underlying 'complexes' still need to be present – but access to a wide range of vocabulary in an educational environment will enable more, and more subtle, concepts to be formed.

Such techniques could prove very effective for educationalists, and for teachers in the classroom. For what Peirce's account of the sign provides is a template for both the initiation, and development, of concepts. Rather than assuming that education is a matter of learning facts, or even personal skills, the educational process becomes reframed as one in which the child is encouraged to develop icons, new 'objects of thought', and, ultimately, better 'tools' (or 'instruments') for dealing with the world. The educational experience should, in these circumstances, encourage the learner, using their imagination, to hypothesise new 'objects of thought'. Although this would certainly involve a shift away from the teaching 'facts', they would still retain an important position in the educational process – and for two reasons. Firstly, facts are an intrinsic part of what constitutes a sign – because signs possess indexical components. Secondly, as we have seen with Peirce, it is facts that make us rethink the character, and extent, of our concepts. The learning process, as we have seen outlined by both Peirce and Vygotsky, involves the *synthesis* of the intellectual and the empirical, and *both* elements are required for successful concept formation.

The revisionary analysis of the icon, undertaken in this thesis, has been one of its central themes. It has the notable effect of placing the idea of *identity* at the heart of the learning process. It is through the 'positing' of a hypothetical identity that the icon is formed and it has been argued that, in

the Vygotskian ZPD, the entailments of particular identities are established by the child when they are at play. We have also seen that the notion of identity is critical to resolving the problems created by dualism – it is through the hypothesising of an icon (or 'placeholder') that we are able to establish mediating identities which then accrue indexical components.

Of course, the notion of 'identity' forming any part of the learning process is wholly anathema to nominalism - which assumes that we create identities and that the world has no say in this matter. It is a contention of this thesis, however, that the 'positing' of new identities forms a fundamental part of the learning process. A learner should be encouraged to adopt a creative approach to concept formation and to form new icons, and identities. This activity involves two approaches – looking for the resemblances between things, and also recognising that some identities may need revision. The learner should, as a result, be encouraged to make *distinctions* and to consider the possibility of splitting, or qualifying, existing concepts. This entails an active invocation of Peircean 'determination' in the learning environment

Determination of our perceptual 'vagues' also occurs when reality itself (through secondness) 'surprises' us, or when it makes us aware of the limitations of our existing concepts. The ability of reality to do this should be harnessed, and learning approaches adopted, which allow the child to discover such effects. Environments and practices should be encouraged that permit secondness to perform its critical activities. This involves the role of experimental activities and play. It also means that children should be exposed to the views of others – secondness, as we saw, plays a critical role when we are exposed to the concepts, and symbols, of others. This is how we discover that our own concepts may be lacking in some way – enabling us to limit, qualify, or split them, and also to include new predicates within them.

Overall, the more numerous and more subtle the 'objects of thought' that a learner possesses, the richer their experience will be of reality and the more capable they will be of participating in society. The emergence of more numerous, and more differentiated, concepts will allow them to more effectively understand experiences and to establish relationships that may exist between them.

The concept of 'construction' is also one that we have encountered throughout this thesis. As we have seen, both Peirce and Vygotsky view knowledge as being 'constructed', but they are not Social Constructionists. Concepts are constructed by the mind, but they give only a *partial role* to the social dimension.

In the case of Peirce, the activity of concept formation itself takes place at an individual level and the social dimension only comes into play once an individual's initial concepts are formed. At this point, the actions of the social dimension mean that our concepts are further determined, and new distinctions made. These result in new (and more complex) concepts being developed, but the social dimension is simply refining what has already been formed. For example, the concept of 'giving' may evolve in an individual's mind, but different types of 'giving' may demand input from the social dimension as an individual becomes more sensitive to specific social distinctions. Where one draws the line between the individual and the social input is a matter of debate, but what Peirce is very clear about is that meaning can be created at an individual level.

In the case of Vygotsky, the social dimension has a more critical role to play in concept formation – as a resource of the potential 'forms', or 'pathways', that the child can utilise to create concepts. Some may argue that this amounts to a form of Social Constructionism, but the social dimension still has, in fact, only a partial role to play in this process. Vygotsky is always clear that our 'spontaneous concepts' continue to exist alongside our 'higher' concepts. As Bakhurst remarks, the view that *all* of our concepts are determined by the social is not one that Vygotsky holds:

> Although he argues that the elementary functions are fundamentally transformed with the emergence of the higher, nothing prevents Vygotsky from holding that aspects of elementary mental functioning have an enduring influence.
> (Bakhurst: 2011: 154)

It can be concluded, however, that the greater role of the social dimension has the effect of diminishing the emphasis that Vygotsky places on the *logical* aspects of concept formation. If an input into the emerging concept is the 'word' of others, then it is less likely that concepts will be determined on a purely logical basis.

The greater emphasis on the role of 'logic', in Hegel and Peirce, also explains some of their other conclusions. They both take the view, in a nineteenth century manner, that human knowledge will tend to evolve. Hegel conceives this process as resulting in the 'Idea', or the 'Absolute', and Peirce also believes that human knowledge (and truth) are *'teleological'* in nature (Short: 2007: 330-333). This position stems from their view that concepts are formed on a logical basis. It means that human knowledge will tend to *converge* on itself.

Against this view it can suggested that such convergence largely relies, for Peirce, on the existence of human conversation. As we have seen, the symbols used by individuals should still be construed as 'vagues' – they do not necessarily convey the same 'objects of thought' as their users intend.

As such, only the maintenance of effective conversations in society will ensure that a convergence in usage does, in fact, occur – without it divergence could easily ensue, instead, as symbols might attract new, and individualistic, meanings.

In contrast to Peirce, Vygotsky construes concept formation as being more dependent on the social dimension. Although some ('everyday') concepts can be formed without social input, more sophisticated concepts (e.g. 'scientific concepts') do rely on social input – often in a formal classroom setting. This means that the outcomes of concept formation are more likely to be dependent on the social environment. Some of these will be more beneficial for concept formation than others; and this is evident in the emphasis that Vygotsky places on the ZPD. Additionally, the existence of different social environments may also result in *divergence* taking place in concept formation. As soon as a social element is allowed into an account of concept formation, then some element of relativism is likely to emerge.

Is Peirce, or Vygotsky, right in this respect? Peirce can, in repost, argue that any variation in the social environment will always be picked up in the way that the mind forms its concepts. More concepts will be formed that reflect these diverging social environments - even without the social input that Vygotsky proposes. For Peirce, therefore, this scenario will mean either that we develop more 'objects of thought', or that we achieve a greater number of perspectives on a particular 'object of thought'. This will promote more variety in our symbols (because more differentiation will take place), and this might lead to greater conceptual sensitivity in the long run.

One of the fundamental differences between Peirce and Vygotsky lies, however, in the way in which they construe the overall *context* of concept formation. As we saw, Peirce begins with the assumption that we encounter *continuity* in the form of the Phaneron, and that we subsequently 'pick out' identities from this. It follows from this that an underlying *unity of experience is already assumed* in Peirce's synechistic model of experience. The subsequent unities that emerge (as our concepts form links with each other) are, therefore, essentially new ways of *re-constructing* a unity that already exists. Hegel's claim that everything that we experience is initially perceived as indeterminate 'Being' also reflects this same premise. It follows that everything in Peirce's and Hegel's system is connected at a deeper level and that the mind is identifying potential, and actual, relationships that exist within a *closed* system.

In contrast, Vygotsky's starting point is slightly different. Although he largely agrees with Peirce and Hegel that our initial perceptions are 'confused', he does not go so far as to insist that reality, itself, forms a 'synechistic' whole which requires 'determination'. Indeed, his account of concept formation begins, in fact, with the child making groups of disparate objects on an

‘associative’ basis. As the child forms concepts, it is only in the *‘higher psychological processes’* that we encounter more interrelated systems. Unity is created, for Vygotsky, as a result, in these later stages and it is not assumed to exist from the very beginning of the process.

Hegel and Peirce are, therefore, working within largely *closed systems* – defined as ‘Being’, or the ‘Phaneron’. This encourages them to conclude that human knowledge is likely, in the long run, to converge. And this is also why they place more emphasis on the notions of ‘determination’ and ‘logic’ – they assume an implicit unity and seek to *determine* the relational identities of different concepts within this. Vygotsky, in contrast, is working within a more *open* system that allows the social dimension to innovate new and more divergent concepts.

The other difference between Hegel, Peirce and Vygotsky is that reality itself plays a far greater role in concept formation for Hegel and Peirce. Vygotsky does not seem to possess a concept ‘secondness’ in his system, and this also serves to differentiate his position. Because of this, the social dimension plays a much greater role in his account of concept formation. This may be another reason why his account of concept formation appears more ‘open’ – reality itself drives the convergent effect in the philosophy of Hegel and Peirce.

Contrary to this view, however, one could also hypothesise that, for Vygotsky, the social realm, *itself*, provides an equivalent of ‘secondness’ in Peirce. To support such an interpretation, Vygotsky does not entirely reject the role of logic in his thought and he contrasts his *‘dialectical logic’* with *‘formal logic’* (Vygotsky: 1998: 53). And it is also clear that he views the speech of others in dialectical, and Hegelian, terms. However, the inputs received from the social dimension are, for Vygotsky, nothing like as forceful as ‘secondness’ is for Peirce. The social offers *potential solutions* in concept formation – it does not force itself upon us. As such the Vygotskian account, whilst retaining a Hegelian character, is much less prescriptive in its approach.

Interestingly, however, Vygotsky does view his own position as different from Piaget on the basis that he, himself, allows external impacts on a child’s thinking. Vygotsky argues, for example, that *‘Piaget sees thinking as entirely divorced from reality and activity’* (Vygotsky: 1987: 88). So Vygotsky himself may, in fact, see the role of the social dimension in more prescriptive terms, and in a manner that partially mirrors Peirce’s ‘secondness’.

The question of whether we are working within an open, or closed, system also has implications for how the learning process itself is construed. If the system is felt to be ‘open’ then it is likely that the learning process will be

viewed as a creative activity; if the system is deemed to be 'closed' then the educational process tends to be framed as an 'unfolding', or as 'discovery'. This parallels Phillips's distinction between knowledge as being *'made or discovered'* (Phillips: 1995: 7). The concept of 'unfolding' is encountered in various accounts of educational development and it also finds its roots in Leibniz (indeed, Deleuze's book on Leibniz is entitled *'The Fold'* (Deleuze: 1993)). Semetsky and Bogue also discuss educational development as an *'unfolding'* (Bogue and Semetsky: 2010: 118) and they reference Deleuze:

> What Deleuze details in his accounts of learning and teaching is that dimension of education that inspires all true students and teachers, that is, the dimension of discovery and creation within the ever-unfolding domain of the new. It is also the dimension of freedom, in which thought escapes its preconceptions and explores new possibilities for life.
>
> (ibid: 128)

The idea of 'unfolding' is also reflected in McDowell's concept of 'second nature' (McDowell: 1994: 84) and this, in turn, parallels Vygotsky's notion of the *'higher psychological processes'*. McDowell argues that our 'second nature' enables us to think in terms of 'reasons', rather than 'causes', and this mirrors the distinction that we made earlier between 'objects of thought' and 'things'. McDowell's concept is, itself, a development of the concept of *Bildung*. As Bakhurst explains, this concept, originating in German Idealism, is central to McDowell's vision of education:

> In the present context, the crucial aspect of McDowell's position is that human beings are not born into the space of reasons but are initiated into it by education, or *Bildung*, as he puts it, adopting the evocative German term. The child is born a mere animal, as it were, but acquires a 'second nature' as she develops conceptual capacities that put her in touch with reality in experience. She thereby becomes a conscious rational being – a person.
>
> (Bakhurst: 2011: 7)

The idea of *'Bildung'* maintains that the unfolding of the empirical world also parallels the development of human consciousness (*footnote twenty three*). Associated with this is the claim that, as we develop our understanding, we become more free; the signs that we create allow us to escape the deterministic restrictions of 'stimulus and response'. This is the position that we encountered in Vygotsky - and Peirce agrees that the growth of knowledge and freedom are linked to each other (Olteanu: 2015: 205-225).

As argued in this thesis, fundamental to our ability to develop this 'space of reasons' is our capacity to form synthetic mediations *from* our experience. The creation of the *'tools'* of our understanding should be, as a result, a central aim of the learning process. As Dewey suggests, any 'philosophy of education' must be based on a philosophy of experience, and that:

> The philosophy in question is, to paraphrase the saying of Lincoln about democracy, one of education of, by and for experience. No one of these words, *of*,

> *by*, or *for*, names anything which is self-evident. Each of them is a challenge to discover and put into operation a principle of order and organization which follows from understanding what educative experience signifies.
>
> (Dewey: 1938/2015: 29)

It is hoped that this thesis has outlined the potential ways in which semiotics can live up to Dewey's challenge. It does so because semiotics, at least in Peircean hands, provides a detailed account of synthetic concept formation. The way in which we learn *of* our experience, *by* our experience, and in a manner which is also *for* our experience, is determined by the *'natural history of the sign'* that both Peirce and Vygotsky, in their own, but remarkably similar ways, expound.

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Chapter Footnotes

1) The idea that the conceptual *comprises* a mixture of the empirical and the mental has been revived recently by two philosophers who openly acknowledge their debt to Hegel. McDowell, for example, suggests we think about perception in a new way – as *combining* sensibility and the conceptual:

> *I have been urging that, in judgments of experience, conceptual capacities are not exercised on non-conceptual deliverance of sensibility. Conceptual capacities are already operative in the deliverance of sensibility themselves*.
>
> (McDowell: 1994: 39)

2) McDowell also argues that '*representational content cannot be dualistically set over against the conceptual'* (ibid: 3) and that, in perception, '*conceptual capacities have already been brought into play, in content's being available to one, before one has any choice in the matter'* (ibid: 10). This parallels the Peircean concept of perceptual judgements. Brandom, however, adopts a different approach. Advocating a position that he calls *'inferentialism'*, he claims that a concept must involve inferences about the world. This means that it cannot be a concept *unless* it involves *'the giving and asking of reasons'*:

> *The master idea that animates and orients this enterprise is that what distinguishes specifically discursive practices from the doings of non-concept-using creatures is their inferential articulation. To talk about concepts is to talk about roles in reasoning…It is a rationalist pragmatism, in giving pride of place to practices of giving and asking for reasons, understanding them as conferring conceptual content on performances, expressions, and states suitably caught up in those practices…. Saying or thinking that things are thus-and-so is undertaking a distinctive kind of inferentially articulated commitment.*
>
> (Brandom: 2000: 10-11)

Brandom, however, departs from Peirce in his insistence that this *'giving and asking of reasons'* is a linguistic, and social, affair:

> *The thesis to be elaborated here is that the representational dimension of discourse reflects the fact that conceptual content is not only inferentially articulated but also socially articulated. The game of giving and asking for reasons is an essentially social practice.*
>
> (ibid: 163)

Likewise, Brandom talks of *'linguistic rationalism'* (ibid: 189). What Brandom is effectively doing is taking the Hegelian understanding of what it is to *be* a concept, but then framing it within a social and linguistic context. It is noticeable, for instance, that although Brandom mentions his Hegelian debt he does not mention his dialecticism. Brandom is, as a result, only adopting part of Hegel's thinking and is not concerned with how anything equating to an Hegelian 'Essence', or a Peircean 'object of thought' is formed.

3) As an aside, there does seem to be a certain weakness in Wittgenstein's argument. He rejects the idea that reference can act as a basis for creating meaning and concludes, as a result, that meaning must reside in the social domain. But he seems not to consider any other possibilities. By setting the bar so high for meaning to be created by non-social means, he thus creates the philosophical space for a social account of meaning. For example, in his discussion of an imaginary dictionary, he claims that any justification for a particular definition could only *'consist in appealing to an independent authority'* (Wittgenstein: 2009: 265). This suggests an underlying assumption that reference is the only way in which meaning could be validly created on an empirical basis. As such, Wittgenstein reaches the conclusion that an imaginary dictionary would be useless ('*looking up a table in the imagination is no more looking up a table than the image of the result of an imagined experiment is the result of an experiment'* (ibid)). However, because Wittgenstein claims that empirical meaning can *only* be justified through a valid act of reference, then he reaches the conclusion that meaning is socially created. He seems to have given himself no other alternative. One of these would be, however, the approach advocated by Hegel and Peirce – that meaning is created through synthetic 'mediations' (e.g. 'objects of thought') - but this is not an option that Wittgenstein appears willing to entertain.

Chapter Two: Hegel's Influence on Peirce and Vygotsky

4) Spinoza's and Leibniz's interpretations of *'clear and distinct'* ideas are usually overlooked in the semiotic literature. In the early modern period, they form a sophisticated means of understanding how our concepts develop. In the secondary literature, if *'clear and distinct'* ideas are mentioned at all (e.g. Semetsky: 2015: 16), they tend to be interpreted along Cartesian lines. And even Brandom does this (Brandom: 2000: 80). Descartes' interpretation, however, is very different from the views of Leibniz and Spinoza. Descartes wants to show how the 'cogito' permits true knowledge and it is, as a result, invoked as a guarantee of the validity of *'clear and distinct'* ideas. In this formulation *'clear and distinct'* ideas begin to look very much like a form of 'intuitionism', or the 'Myth of the Given' when, in fact, in the hands of Spinoza and Leibniz, they represent almost the reverse of this. *'Clear and distinct'* ideas should be interpreted, by their lights, as the very mechanisms that allow us to develop concepts - as explained in the main text.

Chapter Three: Perception and Indeterminacy

5) Humean scepticism is also rejected by Merleau-Ponty who argues that nominalism's account of 'sensation' leads to errors: *'The notion of sensation precludes every philosophy other than nominalism, that is, the reduction of sense to either the error of confused resemblance or the non-sense of association through contiguity'.*(Merleau-Ponty: 2012: 16)

6) Confusingly, Peirce sometimes categorizes Hegel (and even Leibniz) as *'nominalists'* (EP2: 157). Given that these philosophers are among the most 'metaphysical' in Western philosophy, this may come as some surprise to the reader. Peirce justifies this claim, however, on the basis that they both appear to lack his category of 'secondness'. Later in his career (CP5: 392) Peirce seems to repudiate his earlier claim that Leibniz was a nominalist (Belluci: 2013).

7) It is of note that Peirce even borrows an Hegelian term here. On occasions, Hegel talks of a *'prius'* (e.g. Hegel: (1830/1971: 183). This also places the 'first' at the beginning of a *logical* process in Hegel's dialectical approach.

8) There is a potential parallel between Peirce's concept of secondness and Merleau-Ponty's account of the body. The latter describes the body in the following terms: '*The body is the vehicle of being in the world and, for a living being, having a body means being united with a definite milieu, merging with certain projects, and being perpetually engaged with therein'.* (Merleau-Ponty: 2012: 84). As such, our own body is *'no longer an object of the world, but rather our means of communication with it'* (ibid: 95). It is how we encounter the world.

Chapter Five: The Structure of the Peircean Sign

9) Deledalle (1992: 294) records Peirce's use of the term 'representamen' as follows: it is used by Peirce until 1873, then dropped in his writings from 1873 until 1895, and then re-adopted from 1895 until 1903 - when it is abandoned once again. This inconsistent usage clearly does not help our understanding Peirce, but Deledalle's discussion of the term in this paper does not mention the central characteristic of the representamen as a 'vague'.

10) The use of the terms 'objective' and 'subjective' have almost entirely the opposite meaning in medieval philosophy compared with modern usage. The Oxford English Dictionary, for example, states that *'The scholastic philosophy made the distinction between what belongs to things subjectively, or as they are 'in themselves', and what belongs to them objectively, as they are presented to the consciousness. In later times the custom of considering the perceiving or thinking consciousness as pre-eminently 'the subject' brought about a different use of these words, which now prevails in philosophical language. According to this, what is considered as belonging to the perceiving or thinking self is called subjective and what is considered as independent of the perceiving or thinking self is called, in contrast, objective.* (Oxford English Dictionary: 1989: Vol X: 643)

11) Maimon's *'Principle of Determinability'* distinguishes real from accidental subject/predicate relationships: '*Real thinking is governed the Law or Principle of Determinability, according to which the subject of a judgment can be thought 'on its own' (as something capable of further determination) whereas the predicate can be thought only with reference to the subject, which thereby 'determines' the predicate. This principle is thus a transcendental principle for the 'a priori' determination of the objects of 'real thinking'.* (Breazeale: 2013).

12) In Apel, signs are very much on the periphery of his treatment of Peirce. Instead, he sees Peircean knowledge being largely established on the basis of the *'hypothetical inference of things in the outside world'* (Apel: 1981: 22). Apel places a great deal of emphasis on abduction, deduction, and induction and generally views 'secondness' as affirming, or refuting, abductive hypotheses. He argues, for example, that *'abduction is therefore the first stage of all inquiry'* (ibid: 109). He also sees a key role for the *'community of inquirers'* and the *'ultimate opinion'* (ibid: 28). He sees such knowledge as being established in a way that is *'mediated'* (ibid: 22). He also interprets Peirce phenomenology as being much the same as Husserl's and as a result gives 'intuition' a place in Peircean thought that is not supported by Peirce's writings. He describes, for example, Peirce's 'Phaneroscopy' as follows: '*Its way of knowing is intuitive; that is, it is pure, qualitative vision which describes what is immediately before our eyes, free of all interpretative presuppositions'.* (ibid: 111). This, of course, takes no account of Peirce's account of perception.

13) Stjernfelt picks up on the way in which knowledge grows, but instead of viewing this through the growth of the 'object' he sees it as something that the *icon* performs:

> *…any icon fails to portray its object with final precision; this possibility is only asymptotically open for the community of researchers. This, of course, is Peirce's answer by means of continuity to Kant's Ding-an-Sich, it may be reached, but only in an indefinite future. This implies that given any present icon, it is always in principle possible to find an even better icon which will yield more evidence that the former.*
>
> (Stjernfelt: 2007: 88)

This is another reflection of Stjernfelt's interpretation of Peirce (discussed in sub-section 6.3.5) that views the icon as being central to Peircean semiotics. It is significant, in this regard, that Stjernfelt spends very little time, in his *'Diagrammatology',* discussing the actual structure of the Peircean sign itself. He barely mentions the representamen, the object, and the interpretant, or the possible relationship between them.

Chapter Six: Icons, Indices, Symbols and Concept Formation

14) The ten possible sign combinations that Peirce identifies are outlined below. They involve the elements of the sign that we have described. At CP2: 236-7, Peirce explains how they work in terms of *'possibility', 'existence', and 'law'*. In the second column, I have italicised the way in which the sign, itself, is experienced:

Sign Combination	Peircean Categories Combined	Explained?
Rhematic, Iconic Qualisign	*Possibility*/Possibility/Possibility	A term signifying the possibility of a quality
Rhematic, Iconic Sinsign	*Possibility*/Possibility/Existent	A term signifying the likeness of an embodied quality
Rhematic, Indexical Sinsign	*Possibility*/Existent/Existent	A term signifying the property of an embodied quality
Rhematic, Iconic Legisign	*Possibility*/Possibility/Law	A term signifying the likeness of a law
Rhematic, Indexical Legisign	*Possibility*/Existent/Law	A term signifying a law of a property
Rhematic Symbolic Legisign	*Possibility*/Law/Law	A term signifying a symbol in a system
If the Second is an Existent, then also:		
Dicent Indexical Sinsign	*Existent*/Existent/Existent	A proposition asserting the property of something
Dicent Indexical Legisign	*Existent*/Existent/Law	A proposition asserting the law-like property of something
If the First is an Existent, then also:		
Dicent Symbolic Legisign	*Existent*/Law/Law	A proposition asserting law-like facts
Argument Symbolic Legisign	*Law*/Law/Law	An argument explained in a system of symbolic laws

15) Peirce identifies three branches of semiotics. The first of these is *'speculative grammar'*, as discussed, which considers the *'general formal conditions of signs'* (Liszka: 1996: 18). The other two are; *'critical logic'* which is *'concerned with the necessary conditions by which signs can tell us something truthful about the object they represent'* (ibid: 10) and *'speculative rhetoric'* which is *'the study of the formal conditions under which signs can be communicated, developed, understood, and accepted'* (ibid: 11). Communication, therefore, is the subject of the third branch of semiotics. It is of some significance that the triad of the three branches of semiotics also parallels Peirce's triad of the icon, index and symbol. As discussed in this chapter, the icon has '*formal'* qualities and is *'speculative'* in nature. Indices tell us something about the *'object they represent'*, whilst symbols enable signs to be *'communicated'* to others (rhetoric). Short misunderstands this structure and argues that Logic *'divides into three parts, of which semeiotic in our sense of the term is the first, logic more narrowly construed as the theory of inference is the second, and methodology is the third.'* (Short: 2007: 63). This means that Short fails to grasp the way in which Peirce views the sign developing within his Logic.

16) Abduction is often viewed by commentators as a simple matter of Peirce highlighting the importance of 'hypothesis' in human inquiry. Hypotheses provide potential answers to observed phenomena – and, in particular, cause and effect. Liszka, for example, describes a range of potential examples of abduction. These include Copernicus's hypothesis about a heliocentric solar system, continental drift theory and the diagnosing of patients (Liszka: 1996: 64-68). Olteanu, likewise, talks of abduction as being *'the logical operation of advancing hypotheses by qualified guessing'* (Olteanu: 2015: 190). Peirce certainly talks about abduction in all of these ways, but it is also essential to view abduction as part of his wider philosophy, and also in relation to his notion of the icon.

We have already seen that the idea of 'hypothesis' enters Peircean thought at a number of levels. Perceptual judgments, themselves, are *'hypotheses',* and they form the very beginnings of empirical knowledge (CP5: 182; Murphey:1993: 375). With icons, also, Peirce is proposing that they are formed on the basis of *putative* similarity. This suggests that abduction works at the level of *identities*. Critically, for Peirce, identity allows us to make inferences. This is something that is not possible in nominalism because identities are our deemed to be our own creations. One of Peirce's examples of abduction is the 'white beans' in the bag:

> *Rule: All the beans from this bag are white*
> *Result: These beans are white*
> *Case: These beans are from this bag*
>
> (EP1: 188)

The beans in the second line *share a predicate* ('being white') with the beans that have been taken from the bag. This gives them *a potential shared identity* that places them in the same *class* as the other beans. On this basis, Peirce argues that we can hypothesise that the beans are *'from this bag'*. This conclusion is possible because we notice the resemblance between the two sets of beans and *infer* a connection *on the basis of their identity*. Peirce, working within a framework of knowledge that is founded on iconic identity, cannot know that the beans are from the bag, but the fact that they are 'white' suggests that they *share* this aspect of their identity - and that this might be meaningful. Elsewhere, Peirce argues:

> *Hypothesis is where we find some very curious circumstance, which would be explained by the supposition that it was a case of a certain general rule, and thereupon adopt that supposition. Or, where we find that in certain respects two objects have a strong resemblance, and we infer that they resemble one another strongly in other respects.*
>
> (EP1: 189)

As such, abduction is more than the simple conjecturing of hypotheses in terms of cause and effect. Davis distinguishes abduction from induction arguing that:

> *'Induction yields a rule or a habit while abduction yields a mental unity with an accompanying sense of relief…'*
>
> (Davis: 1972: 23)

It is precisely this - abduction's ability to create new a *'mental unity'* that marks out its importance to Peirce. It is a form of mental inference founded on Peirce's treatment of the icon and identity.

17) Deely also suggests that in Poinsot's '*Tractatus de Signis',* the icon is present in the guise of the *'idolum'*. He states that '*The closest English word to Poinsot's use of idolum is the term 'icon' as semiotically defined by C.S. Peirce'* (Deely/Poinsot: 2013: 241).

18) The notion of 'form' is an important one to Peirce and it is critical to his view of the icon. However, Peirce seems curiously reluctant to move from the notion of 'form' to that of 'formal cause'. Peirce is known for advocating the Aristotelian concept of 'final cause' in his teleological account of human knowledge (Short: 2007: 91-144), but the idea of 'formal cause' is seldom touched upon by Peirce himself. Indeed, at EP2: 120, he only identifies two types of causation – 'efficient' and 'final' cause. This seems to be a potentially important omission. Joseph Ransdell is one of the few commentators who also views this as puzzling and he attempts to involve the notion of formal cause into Peircean thought in a posthumous article in the TCSPS (Ransdell: 2013: 541-552). The idea of formal cause, however, is anathema to nominalists. It asserts that things behave as they do because of what they are (i.e. they behave according to their identity). This idea seems implicit, however, in Peirce's theory of knowledge because it suggests that objects, in fact, behave according to the identities formed by their indexical properties which are captured in symbols. When objects, therefore, behave according to their 'habits' they seem to be operating according to their identities - which have, in turn, been established on the basis of past experience. Indeed, Peirce also describes 'substances' as *'bundles of habits'* (CP1: 414). Peirce may have decided that invoking 'formal cause', as a mechanism in the world, was too radical a step to take. He took the alternative path of talking about things having 'habits', but this, in itself, amounts to an acceptance of a form of formal cause. Incidentally, the Aristotelian approach on this issue reflects much of Peirce's thinking. Aristotle argues that '*knowledge of some particular thing is constituted by knowledge of what-it-was-to-be-that-thing'* (Aristotle: 1998: 187). As such, he agrees with Peirce that knowledge is based on a fundamental understanding of *identities*.

19) The idea that the icon *'structures the knowing power'* is one that we will return to later. If the icon creates the initial starting point of an 'object of thought', it defines the trajectory of its further development. This is an argument that we will encounter, again, when we discuss the role of the 'word' in creating *'pathways'* along which concepts develop for Vygotsky.

Chapter Seven: The Peircean 'Concept' and his Pragmatism

20) The notion of 'placeholders' is one that Short (2007: 268) also highlights. He argues that Peirce's account of 'Hypostatic Abstraction' allows him to introduce a new object into an analysis. Hypostatic abstraction takes a predicate and turns it into an object (of thought) (e.g. 'honey is sweet' (predicate) is turned into 'honey has sweetness' (and sweetness becomes the 'object of thought'). Peirce's favourite example is in Moliere's play where the doctor says that opium has a 'dormitive virtue'. In this case, the cause of sleepiness is not, itself, identified, but it is still recognised as existing as 'placeholder'. Peirce states that *'the operation of hypostatic abstraction is not quite utterly futile. For it does say that there is some peculiarity in the opium to which sleep must be due'* (CP5: 534). It is thus possible to view hypostatic abstraction as another way in which Peirce accounts for the creation of new 'objects of thought' in a manner that parallels iconicity. Short, however, does not make this connection, and still sees icons in conventional terms ('*We may therefore speak of likenesses, examples, and samples as icons'* (Short: 2007: 218).

Chapter Eight: Vygotsky: the 'Higher Psychological Processes'

21) Interestingly, Marx is also of the same opinion when he compares himself with Hegel. He contrasts what he sees as the 'idealism' of Hegel with his more materialist focus. In the preface to the second German edition of *Das Capital* (Marx and Engels: 1996: 19) he writes '*My dialectic is not only different from the Hegelian, but is its direct opposite. To Hegel, the life-process of the human brain, i.e., the process of thinking, which under the name of 'the Idea', he even transforms into an independent subject, is the demiurgos of the real world, and the real world is only the external, phenomenal form of 'the Idea'. With me, on the contrary, the ideal is nothing else than the material world reflected by the human mind, and translated into forms of thought'*.

22) The various translations of Vygotsky are discussed by Daniels, where he highlights that the words, in Russian, that are translated as 'personality' and 'instruction' have quite different meanings in the original language of Vygotsky (Daniels: 2016: 9-13). As highlighted, there may also be a case for re-assessing the translations of *'word meaning'* in his texts.

Chapter Nine: Peirce, Vygotsky, and the Learning Process

23) The nature of consciousness is not an issue that I have tried to address in this thesis. However, it is clear from the foregoing discussion, that we should reject the nominalist view that the human consciousness a 'container' into which sense data enter through perception. Neither should human consciousness be viewed as the 'sum of the contents' of our mind - as it sometimes appears to be in the hands of Social Constructionists. Instead, I would argue that human consciousness amounts to our ability to *determine our experiences* and to classify them as being one thing, and not another. This position construes the consciousness as a dynamic entity. Yasnitsky and Van der Veer also see this as being very largely Vygotsky's understanding of consciousness: *'Consciousness for Vygotsky, is best understood as a dynamic phenomenon, an action rather than a state or an entity'* (Yasnitsky and Van der Veer: 2016: 235). This account of consciousness is one that is also close to that of Leibniz. He sees the human soul as an active, striving, monad that determines its own position in the web of other monads in the Universe. This account also has parallels with Bourdieu's view of *'habitus'* as a *'structuring structure'* (Bourdieu: 1977: 72).