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SCIENCE IN MERLEAU-PONTY'S PHENOMENOLOGY: FROM THE EARLY WORK TO THE LATER PHILOSOPHY[1]

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Introduction

Phenomenology and science, it is often claimed, are uncomfortable bedfellows. On the one hand, both share an interest in the mind (amongst other things). Certain strands of contemporary cognitive science explicitly take inspiration from phenomenology. To give just one example, Andy Clark (a leading exponent of embodied approaches to cognitive science) begins *Being There* (Clark 1997) by noting that,

> This book didn't come from nowhere. The image of the mind as inextricably interwoven with the body, world, and action, already visible in Martin Heidegger's *Being and Time* (1978), found clear expression in Merleau-Ponty's *Structure of Behaviour* (1963) (Clark 1997: xvii).

He goes on to cite Dreyfus's critique of classical artificial intelligence, *What Computers Can't Do* (1979) as a further source of inspiration – a work steeped in phenomenological ideas about the mind. Similarly, many phenomenologists (notably, Merleau-Ponty – but more of this in a minute) draw on science. On the other hand, there are (at least) two significant objections to the possibility that science may use phenomenology's insights, and vice versa. First, phenomenology's method of describing experience from a first-person perspective is often (wrongly) identified with introspection, which, it is claimed, hardly counts as a method at all, and is certainly incapable of yielding anything of interest to science. An oft-quoted remark from Dennett gives vehement expression to this thought: 'First-person science of consciousness is a discipline with no methods, no data, no results, no future, no promise. It will remain a fantasy' (Dennett 2001). Second, phenomenology and science are committed to fundamentally different stances regarding subjectivity. Science, it is claimed, is committed to realism – the view that the existence and character of the universe is independent from any subjects' experiences of, or thoughts about, it. Science is also widely seen as committed to naturalism, the view that everything – including subjectivity – can be explained using the concepts of natural science, and such an account is the best that can be given. But phenomenology holds a *transcendental* view of subjectivity, which precludes a complete treatment of it in naturalistic terms. Subjectivity (partially) constitutes the world studied by science, and so cannot be a mere part of it, fully governed by – and so fully explicable in terms of – its laws, even though scientific accounts of consciousness may have some limited uses.[2]

Merleau-Ponty's work seemingly exemplifies the tension between phenomenology and science. He endorses a transcendental view of perception, and indeed, of subjectivity more generally. He writes, 'perception is not an event of nature' (Merleau-Ponty 1963: 145). Again, 'there can be no question of describing [perception] as one of the facts that happens in the world' (Merleau-Ponty 2012: 215). Moreover, 'I cannot think of myself as a part of the world, like the simple

[1] I would like to thank Dan Zahavi, Rasmus Thybo Jensen, and Donald Landes for many helpful comments on an earlier draft of this piece.

[2] There are many discussions of the relation between science and phenomenology. A recent collection of essays is Carel and Meacham (2013).

object of biology, psychology, and sociology; I cannot enclose myself within the universe of science' (Merleau-Ponty 2012: xxii). His transcendental view of consciousness goes hand-in-hand with a critique of science. 'Scientific perspectives according to which I am a moment of the world are always naïve and hypocritical' (Merleau-Ponty 2012: xxii). In a passage from *Eye and Mind* (Merleau-Ponty 1964a), Merleau-Ponty criticizes scientific investigations that 'represent themselves to be autonomous', which 'treat the scientist's knowledge as if it were absolute' as leading to 'all sorts of vagabond endeavours' (Merleau-Ponty 1964a: 160). Yet, he makes copious use of scientific data. For instance, a great deal of *The Structure of Behaviour* (Merleau-Ponty 1963) consists in close analysis of various psychological experiments. Similarly, some of the central arguments in his *Phenomenology of Perception* (Merleau-Ponty 2012) depend on Gestalt psychology's findings. In that text, Merleau-Ponty also makes copious use of scientific case-studies – most notably, Schneider, the injured World War I veteran, whose curious disabilities were studied at length by Kurt Goldstein and Adhémar Gelb (1920). But he also relies on data from other experiments, such as George Stratton's (1896) inverted vision experiments, to give just one example. In fact, Merleau-Ponty employs the findings of science throughout his oeuvre.

In this paper, I will consider Merleau-Ponty's conception of the relation between science and his phenomenology. I will sketch one line of thought from his work according to which, science and phenomenology are fundamentally the same sort of investigation. They may employ different concepts to characterize their data and results. They may also investigate different things – a scientist may investigate the effects of climate change on our weather systems; a phenomenologist may inquire into the structure of time consciousness. Yet, even though these investigations are directed at different things, viewed at a certain level of generality, *what* it is they are discovering and *how* they are doing so, is the same. Moreover, Merleau-Ponty holds that the different concepts they employ and the different objects they investigate are not *essential* differences between science and phenomenology. Let us say, therefore, that for Merleau-Ponty, science and phenomenology are 'continuous'. I will not attempt to fully defend his view here. But I hope to show that it is a provocative and interesting line of thought, which is *prima facie* at least, able to speak to the two worries cited above: that phenomenology and science employ fundamentally different methods, and have fundamentally different commitments.

Transcendental Science

The remarks quoted above illustrate the generally agreed upon fact that Merleau-Ponty's position is transcendental. He writes, '[t]he world is inseparable from the subject, but from a subject who is nothing but a project of the world; and the subject is separable from the world, but from a world that it itself projects' (Merleau-Ponty 2012: 454). He claims here that the subject and world are mutually constituting and so depend on each other. The claim that Merleau-Ponty sees science and phenomenology as continuous may thus sound surprising, since a transcendental view of subjectivity is at odds with science's alleged commitment to realism and naturalism. Merleau-Ponty also offers a sustained critique of science.

The first step in understanding his position is to see that he rejects the claim that science is *necessarily* committed to realism and naturalism. There could be a

science that recognises the transcendental status of consciousness and the anti-realism and non-naturalism this entails. Moreover, he thinks there are actual examples of such a science. One case is that of *Gestalt* psychology.

The *Gestalt* psychologists recognised that perceptual experience is always meaningful – we are never presented with a disordered mass of sense data. *Gestalten* are the forms that characterise our perceptions. Importantly, *Gestalten* are unified wholes, composed of their parts in such a way that they are irreducible to them. To see what is at stake here, consider the following example:

> If I am walking on a beach towards a boat that has run aground, and if the funnel or the mast merges with the forest that borders the dune, then there will be a moment in which these details suddenly reunite with the boat and become welded to it… I merely felt that the appearance of the object was about to change… The spectacle was suddenly reorganized, satisfying my vague expectation' (Merleau-Ponty 2012: 17—18).

The experience described here is what is often called a '*Gestalt* switch' Merleau-Ponty is first presented with what appear to be trees (his experience is characterised by a trees-*Gestalt*). It then suddenly changes so that it takes on a boat-*Gestalt* (he is presented with what appears to be a boat). Whilst the perceptual meaning of the experience changes, the components of the scene do not alter – there is a sense in which he sees the same arrangement of vertical items throughout, although their incorporation into different *Gestalten* also means that there is another sense in which they cannot be compared. The same elements can therefore be unified as, or support, different *Gestalten*. Merleau-Ponty takes this to show that *Gestalten* cannot be simply reduced to their parts. Yet at the same time, the scene's *Gestalt* form as either trees or boats is not something extra to its components. Take away the vertical structures, and there is no tree, mast, or funnel. Thus *Gestalten* are composed of their parts in such a way that they are nothing over and above them, but they cannot be reduced to them.

In *The Structure of Behaviour* (Merleau-Ponty 1963), Merleau-Ponty argues that the Gestalt psychologists did not realise the implications of what they had discovered. First, *Gestalten* have a peculiar ontological status, being neither fully objective, nor created by consciousness from nothing, as the following remark from a later work makes clear:

> '[it] is the notion of an order of meaning which does not result from the application of spiritual activity to an external matter. It is, rather, a spontaneous organization beyond the distinction between activity and passivity… In *Gestalt* psychology everything bears a meaning. There is no psychic phenomenon which is not oriented towards a certain significance… But this sense… is an earthy and aboriginal sense, which constitutes itself by an organization of the so-called elements' (1964b: 77).

Gestalten are, for Merleau-Ponty, uniquely *perceptual* phenomena. They do not exist independently of consciousness, but are brought into being when the subject makes contact with the world in perception. They are the forms the world assumes in perceptual experience. Their nature as wholes that are nothing more than the sum of their parts, yet composed of them in such a way that they cannot be reduced to them points to this fact. *Gestalten* must be realised in some sensuous matter. The form does not exist without the matter in which it is realised because it just *is* the form this matter assumes when perceived. In this way they are nothing over and

above the sum of their parts. *Gestalten* are not, however, reducible to the matter in which they are realised because they do not exist independently of perceiving consciousness. Yet the perceiver does not 'add' *Gestalten* to sensuous matter from nowhere. Instead, it *discovers* a meaningful form in it. Consciousness does not create but finds form in the matter, in a way that is neither wholly active nor wholly passive.

The *Gestalt* psychologists used the notion of *Gestalt* form primarily to characterise perceptual experience. The second thing they failed to realise, according to Merleau-Ponty, is that the concept has much wider application. He argues that all orders of being – the 'physical' (inorganic existence), the 'vital' world of living beings, and the 'human' – must be understood using the idea: 'what Köhler shows with a few examples ought to be extended to all physical laws' (Merleau-Ponty 1963: 138). Since all orders of existence are characterised by *Gestalten*, and since *Gestalt* forms cannot exist independently of consciousness, it follows that the world is dependent on consciousness. But, as we have seen, the consciousness that apprehends *Gestalt* form is not a subject that lies wholly outside the world and constitutes it from nothing, but an 'earthy' consciousness that depends on a world in which it discerns rather than imposes meaningful structure. A thorough-going *Gestalt* psychology thus leads to a transcendental understanding of the world and consciousness:

'form is not a physical reality, but an object of perception; without it physical science would have no meaning, moreover, since it is constructed with respect to it and in order to coordinate it… [F]orm cannot be defined in terms of reality but in terms of knowledge, not as a thing of the perceived world but as a perceived whole' (Merleau-Ponty 1963: 143).

Merleau-Ponty's arguments in *The Structure of Behaviour* (Merleau-Ponty 1963) are usually understood as directed at the idea that *Gestalt* psychology leads to, or is a nascent phenomenology. But it is possible to read this claim in the opposite direction, as it were: insofar as *Gestalt* psychology is a science that implies phenomenology, it is – or has the potential to be – a transcendental science.

Gestalt psychology is not the only example of a transcendental science. In the radio lectures that were broadcast in 1948 and subsequently published in English as *The World of Perception* (Merleau-Ponty 2004), Merleau-Ponty says:

The scientist of today, unlike his predecessor working within the classical paradigm, no longer cherishes the illusion that he is penetrating to the heart of things, to the object as it is in itself. The physics of relativity confirms that absolute and final objectivity is a mere dream by showing how *each particular observation is strictly linked to the location of observer and cannot be abstracted from this particular situation; it also rejects the notion of an absolute observer*. We can no longer flatter ourselves with the idea that, in science, the exercises of a pure and unsituated intellect can allow us to gain access to an object free of all human traces (2004: 44—45, my italics).

Here, Merleau-Ponty speaks approvingly of the science of relativity, which takes what is observed to depend for its character on a human perceiver (although he makes clear in the lecture course *La Nature* (2003: 111—112) that this is not the

individual subject that Einstein envisaged, but an intersubjective community).[3] Similarly, Merleau-Ponty takes Quantum Mechanics to demand the same transcendental ontology - it is 'a physics that is no longer objectivist' (Merleau-Ponty 1968: 25). This view is in line with the Cophenhagen Interpretation of Quantum Mechanics, which also – according to many authors, such as Hooker (1972), Honner (1982), and Chevalley (1991) – implies the same form of anti-realism, whereby the nature of what is observed depends on the observer. In both cases, consciousness (the observer) therefore has a transcendental role.

Merleau-Ponty also writes,

> I did not, of course, mean to imply that [philosophy] denies the value of science, either as a means of technological advancement, or insofar as it offers an object lesson in precision and truth. If we wish to learn how to prove something, to conduct a thorough investigation or to be critical of ourselves and our preconceptions, it remains appropriate, now as then, that we turn to science… The question which modern philosophy asks in relation to science is not intended either to contest its right to exist or to close off any particular avenue to its inquiries. Rather, the question is whether science does, or ever could, present us with a picture of the world which is complete, self-sufficient and somehow closed in upon itself, such that there could no longer be any meaningful questions outside this picture… *it is science itself – particularly in its more recent developments – which forces us to ask this question and which encourages us to answer in the negative* (2004: 42—43, my italics).

Here, Merleau-Ponty suggests that contemporary science recognises its own limits – a scientific account of the world and consciousness cannot be complete – because it recognises the transcendental nature of subjectivity.

Merleau-Ponty's Critique of Science

It follows that Merleau-Ponty's critique cannot be directed at science in general, but must be directed at science that is committed to realism and naturalism. This is so, but it is important to note that such science is not the only target of Merleau-Ponty's criticisms. His critique is directed at science that works within the framework of what he calls 'Objective Thought', which is the name he gives to what, at the time of his writing, he took to be our usual way of thinking about consciousness, the world, and their relation. There is some debate over how to understand what Merleau-Ponty means by 'Objective Thought'. But I take it to be a characterisation of the world as causally determined, and composed of its basic elements in such a way that a reductive analysis of it is possible. It encompasses two positions that both accept the basic picture of the world, but differ in their view of its ontological status, and correspondingly, the place of consciousness in the grand scheme of things. The idealist strand – 'Intellectualism' – takes consciousness to constitute the world, and so lie outside it. Merleau-Ponty identifies Kant's and the earlier Husserl's transcendental idealism as central examples of this position.[4] The

[3] *La Nature* (Merleau-Ponty 2003) contains Merleau-Ponty's most extended discussion of Quantum Mechanics. See particularly, Part 2 of the First Course 'Modern Science and Nature'. Rosen (2013) offers an interpretation of Merleau-Ponty's conception of a phenomenological physics, which develops ideas from this work.

[4] It should be noted at this point, however, that Merleau-Ponty also draws heavily on both Husserl and Kant. He takes himself to be continuing Husserls's phenomenological project (see, e.g., the preface to his *Phenomenology of Perception* (Merleau-Ponty 2013), and his essay 'The philosopher

realist strand – 'Empiricism' – takes consciousness to be just one of many things within the world, made of the same stuff and bound by its laws. Particular theories that adopt this framework can have leanings towards Empiricism or Intellectualism without being full-blown versions of these positions (Romdenh-Romluc 2011). Merleau-Ponty holds that there are both Empiricist and Intellectualist scientific theories. These are the targets of his critique. Some of his arguments are directed at atomism (the claim that everything in the world is reducible to its most basic components). Some are directed at realism (the claim that the existence and character of the universe is independent from any subject's experiences of, or thoughts about, it). Some are directed at naturalism (the claim that everything, including subjectivity, is amenable to explanations using the concepts of natural science, and an account in these terms is the best that can be given).

Failure to notice this complexity has led some commentators astray. Consider, e.g., Baldwin's (2013) reading of the following passage:

> In its general effort towards objectification, science inevitably comes to a conception of the human organism as a physical system in the presence of stimuli themselves defined by their physio-chemical properties, seeks to reconstitute actual perception on this basis and to close the cycle of scientific knowledge by discovering the laws according to which knowledge itself is produced, that is, by establishing an objective science of subjectivity. It is, however, also inevitable that this attempt should fail. If we think back to the objective investigations themselves, we discover first that the exterior conditions of the sensory field do not determine it part by part and only intervene by making an autochthonous organization possible – this is what Gestalt theory shows – and second, that structure in the organism depends on variables such as the biological *sense* of the situation, which are no longer physical variables, such that the whole escapes the well-known instruments of physico-mathematical analysis and opens onto another kind of intelligibility.
>
> If we now turn back, as is done here, towards perceptual experience, we observe that science succeeds in constructing only a semblance of subjectivity: it introduces sensations, as things, precisely where experience shows there to be already be meaningful wholes; it imposes categories upon the phenomenal universe that only make sense within the scientific universe (Merleau-Ponty 2012: 10—11).

Baldwin takes this passage to reveal that 'Merleau-Ponty assumes that an objective scientific account of perception requires a reductive explanation' and that '[a]long with this assumption of reductionism, there is a further assumption that a scientific approach has to rely on atomic "sensations" conceived as elements of perceptual states' (Baldwin 2013: 199). He takes it as sufficient to defeat these arguments that there can be non-reductive and non-atomistic scientific accounts of perception. In so doing, Baldwin clearly takes Merleau-Ponty's arguments to be directed at science in general. However, rather than *assuming* that all scientific accounts of perception *must* be reductive and atomistic, Merleau-Ponty is instead attacking just those accounts that *are in fact* so. This is indicated by Merleau-Ponty's appeal to *Gestalt* theory in making his case: *Gestalt* accounts of perception are scientific, whilst being neither reductive nor atomistic. It follows that Baldwin's reading of Merleau-Ponty on these points, and his subsequent criticism, is misplaced.

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and his shadow' (Merleau-Ponty 1964c)). Kant's Third Critique in (Kant 2000) is also something of a touchstone for Merleau-Ponty. See Matherne (2014; 2016) for discussion of this issue.

Scientific and Phenomenological Investigation

So how is it that science and phenomenology, according to Merleau-Ponty, are continuous? We can begin to see this by examining the strategy that Merleau-Ponty uses to reach his transcendental position in both *The Structure of Behaviour* (Merleau-Ponty 1963) and the *Phenomenology of Perception* (Merleau-Ponty 2012).

One reading of the latter draws on various remarks where Merleau-Ponty contrasts the primacy of perception with science as the second-order expression of the perceived world. One example is this passage, where Merleau-Ponty objects to a scientific view of the world for the following reason:

> 'Everything that I know about the world, even through science, I know from a perspective that is my own or from an experience of the world… The entire universe of science is constructed upon the lived world [i.e., the world as experienced]' (Merleau-Ponty 2012: lxxii).

Remarks like this have suggested to commentators such as Baldwin (2003) that Merleau-Ponty argues for his transcendental position on the grounds that, since our knowledge of the world must be based on experience, we can only know the world-as-perceived. As it makes no sense to speak of a completely inaccessible world, talk of the world-in-itself – one that exists independently from consciousness – is illegitimate. The only world we can acknowledge is the perceived world, which is dependent on the perceiver, entailing that consciousness must be thought of as transcendental. But this is a poor argument. The mere fact that our knowledge comes via experience does not show that we cannot gain knowledge of the world-in-itself. Experience could be a perfectly accurate guide to a mind-independent world. Neither is it wholly obvious that even if we could not gain knowledge of the world-in-itself via perception, we could not form a legitimate conception of a world that existed beyond our powers to access it. Gardner (2015) also takes such remarks to indicate an argument along these lines. But unlike Baldwin, he comes to the conclusion that the argument is so poor that we should not attribute it to Merleau-Ponty. Instead, Gardner suggests that Merleau-Ponty assumes his transcendental position from the outset, taking it to have been established – at least in broad outline – by Kant.

I think an alternative reading is available. Contra Gardner, Merleau-Ponty *does* offer arguments in favour of his transcendental position; contra Baldwin, this is *not* the weak argument extracted from the text above. Merleau-Ponty's argument, as we should expect from a phenomenologist, consists in examining phenomena. He considers our experience and then offers his various phenomenological analyses as the best way to capture it (I will say more about what it is to 'capture' experience in the next section). Certain phenomena, he argues, resist an analysis in realist terms; our analysis of them must be *anti*-realist, which implies some form of transcendental position. (These arguments partly constitute his critique of scientific theories that are committed to realism.) Merleau-Ponty then argues that these phenomena are best captured by his particular transcendental picture.

Consider, e.g., his discussion of perceptual constancy from the *Phenomenology of Perception* (Merleau-Ponty 2012): the phenomenon whereby a thing's properties appear different in different contexts, yet are also presented as constant across these contexts. A leaf in shadow looks – in a sense – a darker green to the leaf seen in bright sunlight, yet we also perceive the leaf as being the same

green. Analogous points apply to all other properties we perceive. Merleau-Ponty also observes that we have an intuitive sense of when we are not in the best context for viewing an object – we are drawn to get a better look at things. I move closer to the light when trying to match the colour of thread and fabric. This has become known as seeking 'maximum grip' (Merleau-Ponty 2012: 316). This observation allows Merleau-Ponty to analyse perceptual constancy as follows. My experience of a property always presents me with a-property-in-a-context, and I always have a sense of whether or not that context is the best one for viewing it. Together, these give me an awareness of how that property looks in the best viewing context, i.e., they provide me with an experience of the *real* property. This explains perceptual constancy as I both experience the property as it varies with context, *and* the real property that stays constant throughout these variations. However, the real property is not presented in my experience in the same way as the property-in-a-context. The former is presented as a norm – that to which I am drawn to get a better look. My experience presents the leaf-in-shadow, and I have the sense that this deviates from the best context for viewing colour. In this way, I am both presented with the dark green of the shaded leaf, and the lighter green that is its real colour. But I am not presented with these two colours in the same way – they do not appear in my experience as something like paint samples that I can compare. Instead, the real colour is presented as a norm from which the colour-in-shadow deviates. Merleau-Ponty takes this account to have implications for what the real colour is.[5] The real colour is that which draws me (or a perceiver like me) to perceive it in a particular way. But this means that the real colour is one pole of a force, the other pole is that which is drawn, i.e., consciousness. This suggests that the world and consciousness are opposite poles of a system of forces. Since a force cannot exist without its poles, the world and consciousness are mutually dependent parts of one whole.[6] Perceptual constancy is just one of many phenomena that he takes to require an anti-realist analysis.

Merleau-Ponty adopts the same strategy in *The Structure of Behaviour* (Merleau-Ponty 1963). He discusses and endorses the *Gestalt* psychologists' experiments that led them to the discovery that perceptual experience is characterised by *Gestalt* form. He then considers various phenomena – which include the results of various psychological experiments conducted on dogs, chimpanzees, and insects, as well as humans, together with observations about the nature of physical laws – and argues that the best description of those phenomena is one that understands them as characterized by meaningful structures, i.e., *Gestalten*. As we have already seen, the nature of *Gestalt* forms as neither independent of consciousness nor created by it out of nothing leads directly to his transcendental claim that the world and consciousness are mutually dependent.

Once we see that his critique of realist science, and his argument in favour of his transcendental position (at least partially) rest on an examination and analysis of phenomena, an important way in which he thinks science and phenomenology are continuous comes into view.

[5] I'd like to thank Will Hornett for helping me to see this point.

[6] This interpretation of the perceptual constancy material is one given by Kelly (2005). He also suggested the reading of Merleau-Ponty's ontological position to me in discussion.

The fundamental starting-point for phenomenology is experience. For Merleau-Ponty, this does not mean some inner Cartesian content of consciousness. It means the lived world, or the world-as-experienced. This is also the fundamental starting-point for science. Scientists begin with *observations*. They then explain what they have *experienced* by forming hypotheses, which yield predictions for future *observation*. Where *experience* conflicts with these predictions, the hypothesis is either modified or rejected in favour of one that can capture more of the *observed* data. Merleau-Ponty reminds us of this when he writes, 'Everything that I know about the world, even through science, I know from a perspective that is my own or from an experience of the world' (Merleau-Ponty 2012: lxxii). Of course, many scientists take it for granted that the world they study is mind-independent, and that any phenomena they may encounter can be explained by scientific laws. But as I have shown, Merleau-Ponty does not see these commitments as pre-requisites for doing science. They instead form a hypothesis that is up for grabs. We should ask whether these claims are adequately supported by the available evidence. Merleau-Ponty's strategy is to show us that they are not. Instead, our observations support a transcendental view of the subject and world as mutually constituting. Thus his investigation is broadly scientific: it begins with data in the form of observations about the world. On the basis of that data, he seeks to overturn one hypothesis (Objective Thought), and argue for another (his phenomenological framework).

One may wonder at this point where the Transcendental-Phenomenological Reduction – the centrepiece of phenomenology's method – fits into Merleau-Ponty's strategy.[7] At its heart, the Transcendental-Phenomenological Reduction consists in suspending some attitude towards the world, in order to examine experience afresh. For the earlier Husserl, the attitude to be suspended was 'the natural attitude' – an unthinking faith in the existence of the world we perceive. In the later Husserl, however, the view to be suspended is a conception of the world inspired by Galilean science where the only real things are those that can be scientifically measured. For Merleau-Ponty, at least one conception of the Transcendental-Phenomenological Reduction we find in his work consists in suspending Objective Thought, in order to collect the data required to conduct phenomenological investigation. We find an allusion to this in his discussion of the Constancy Hypothesis – an explanation of perceptual experience from within the framework of Objective Thought – 'in order to catch sight of the phenomena and to judge the Constancy Hypothesis, the latter must first be "suspended"' (2012: 499, n17).[8]

I have so far described commonalities, as Merleau-Ponty sees them, between the general shape of scientific inquiry and his phenomenological investigations. However, I have not yet said anything about how exactly the

[7] See Heinämaa (1999) and Smith (2005) for two interpretations of Merleau-Ponty's Transcendental-Phenomenological Reduction.

[8] The Constancy Hypothesis holds that each perceivable property of an object stimulates the corresponding sense organ, to produce a sensation corresponding to that property. There is thus a one-to-one correlation between stimulus and sensation. The same stimulus always causes the same effect. Perceptual experience is composed of these sensations. Merleau-Ponty attributes the idea that suspending the Constancy Hypothesis amounts to a transcendental reduction to Gurwitsch (1966 :194).

scientist and the phenomenologist use the data of experience to develop their respective accounts. One might suspect that when examined more closely, there is less continuity between scientific inquiry and phenomenological investigation than I have suggested so far. Especially given what, on the face of it, appear to be quite different goals. It is commonly claimed view that phenomenology seeks to *describe* phenomena, rather than explain or analyse them. Indeed, this is not merely a popular conception of phenomenology; it is at the heart of its method. Merleau-Ponty himself writes, 'Phenomenology involves describing, and not explaining or analysing' (2012: lxxi). Similarly, '[i]t is the attempt to provide a direct description of our experience such as it is, and without any consideration of its psychological genesis or of the causal explanations that the scientist, historian, or sociologist might offer of that experience' (2012: lxx). Science, in contrast – as the remark above makes clear – aims at *explanation* or *analysis*. If this is right, then science and phenomenology are in fact very different sorts of investigation.

As we might expect, we should not take these remarks quite at face value. In the next section, I will present two of Merleau-Ponty's arguments that conclude there is a deeper sense in which science and phenomenology are continuous.

The Discovery of Essences

In 'Phenomenology and the sciences of man' (Merleau-Ponty 1964b), Merleau-Ponty uses Husserlian ideas to argue that both science and phenomenology aim to uncover the *essences* of experience, which the inquirer accomplishes via a kind of insight. (This is what it is to 'capture' experience.) Importantly – as noted above – 'experience' for Merleau-Ponty means the world-as-experienced, or the lived world, so the essences that characterise experience are the essential structures of the world as we perceive it. I will begin by explaining what essences are and how we uncover them, before presenting two arguments Merleau-Ponty employs to show that this is the aim of both phenomenology and science.

Merleau-Ponty, following Husserl, has a specific notion of an essence. Importantly, an essence is not an ideal, universal, abstract entity of the sort championed by Plato. Instead, essences are the meaningful forms taken by the experienced world, and are inseparable from it. Husserl holds that the relation between experience and the essences that characterize it is one of 'founding'. Essences cannot exist without the experiences that are their foundation, but they are neither deducible from, nor reducible to, those experiences (Husserl 2001).[9] Merleau-Ponty employs the notion of the *Gestalt* to develop the notion – 'Husserl was really seeking, largely unknown to himself, a notion like that of the *Gestaltists* – the notion of an order of meaning which does not result from the application of spiritual activity to an external matter' (1964b: 77). As we have already seen, *Gestalten* are composed of their parts in such a way that they are nothing over and above them but cannot be reduced to them. Merleau-Ponty extends these ideas to the discovery of essences more generally.

Consider one phenomenon studied by the human sciences: a cultural trend such as sexual harassment. It has not always been recognized as such. The following describes an episode that took place in the US, during the mid-seventies.

[9] Husserl makes this claim throughout this work. A useful discussion of his conception of how essences are related to the experiences on which they are founded is Zhok (2012).

[Carmita Wood] had worked for eight years in Cornell's department of nuclear physics, advancing from lab assistant to a desk job handling administrative chores… a distinguished professor seemed unable to keep his hands off her… [T]he eminent man would jiggle his crotch when he stood near her desk… he'd deliberately brush against her breasts while reaching for some papers. One night as the lab workers were leaving their annual Christmas party, he cornered her in the elevator and planted some unwanted kisses on her mouth… Carmita Wood went out of her way to use the stairs in the lab building in order to avoid a repeat encounter, but the stress of the furtive molestations and her efforts to keep the scientist at a distance while maintaining cordial relations with his wife, whom she liked, brought on a host of physical symptoms… She requested a transfer to another department, and when it didn't come through, she quit… [S]he applied for unemployment insurance. When the claims investigator asked why she had left her job after eight years, Wood was at a loss to describe the hateful episodes. She was ashamed and embarrassed… Her claim for unemployment benefits was denied' (Brownmiller 1990: 280—1).

Up until this point, people classed behaviour like the professor's as mere flirting. But around the time that Wood gave up her job, women had begun to talk to each other about their lives, and had started to identify the pattern manifest in experiences such as Wood's. The term 'sexual harassment' was coined to describe it.

In Merleau-Ponty's parlance, recognition of the behaviour *as* sexual harassment is to grasp its essence. Just as the boat-Gestalt is a 'meaning' that unifies different elements of the perceptual scene so that they appear as parts of a single boat – the vertical structures of the masts; the wooden planks that make up the deck; the wheel; the sails; and so on, so too sexual harassment is a 'meaning' that unifies *prima facie* disparate instances of behaviour as all being manifestations of the same cultural trend. *Gestalten* are composed of their elements in such a way that they are nothing over and above them, yet they cannot be reduced to them. We saw how Merleau-Ponty takes this to be so for something like the boat-Gestalt. It also holds for a cultural trend like sexual harassment. The sexual harassment of women like Carmita Wood is entirely constituted by episodes such as those described in the passage above. Take them away, and no sexual harassment remains. Yet the cultural form cannot be reduced to those episodes. We can see this in the fact that Carmita Wood was initially unable to articulate what was problematic about the professor's behaviour. She lived through the episodes as 'hateful', but she was unable to express to herself and to others what exactly was hateful about them. Of course, this was partly because she lacked the appropriate language with which to describe them. But the lack of adequate terminology went hand-in-hand with the fact that she, and the culture at large, had not yet discerned the pattern those incidents manifested. She and the wider culture had not yet grasped the essence of the cultural phenomenon. Thus, for Merleau-Ponty, a cultural trend like sexual harassment is not simply an accumulation of certain episodes of behaviour. It is a pattern that consciousness discerns in them. He writes,

A phenomenology, therefore, has a double purpose. It will gather together all the concrete experiences of man which are found in history – not only those of knowledge but also those of life and civilization. But at the same time it must discover in this unrolling of facts a spontaneous order, a meaning, an intrinsic truth, an orientation of such a kind that the different events do not appear as a mere succession (Merleau-Ponty 1964b: 52).

Merleau-Ponty's use of the notion of the *Gestalt* to illuminate Husserl's idea of an essence also points to another important feature of it. The *Gestalt* form of a momentary perceptual experience is grasped all at once. One cannot grasp a *Gestalt* merely through reason – one either sees it or one does not. On some occasions, something like reasoning may play a role – a friend points and traces the vertical structures with her finger to show me that they are part of the boat, rather than the trunks of trees. But reasoning can only ever be a prop to help me see. More generally, one cannot identify an essence by merely following a series of steps in anything like the way that one reaches the conclusion of a piece of deductive reasoning. This is not say that uncovering an essence *never* involves reasoning. We can, for example, imagine the women who took part in those early consciousness-raising sessions reasoning about what their bosses' inappropriate behaviour meant. But identifying an essence always requires the use of insight. The reasoning – like my friend tracing the masts with her finger – is merely an aid to insight. As Merleau-Ponty says, 'I grasp something through this experience… an intelligible structure that imposes itself on me whenever I think of the intentional object in question' (1964b: 54).

Importantly, this 'imposition' of a meaning on the thinker is not *causal*. Instead, the phenomenon *motivates* the observer to see it in a certain way.[10]

Merleau-Ponty's first argument for the claim that both science and phenomenology are concerned with the discovery of essences focuses particularly on disciplines such as psychology and sociology, which study the human mind and behaviour. He presents this argument as a characterization of Husserlian ideas from the *Crisis* (Husserl 1970). We might initially think that although sciences such as psychology and sociology share a subject matter with phenomenology – human existence – they are very different forms of inquiry. Whilst phenomenology aims to uncover the essences of experience, laying out its meaningful structure, psychology and other similar sciences seek *causal* explanations of human phenomena. Merleau-Ponty labels this view 'psychologism'. He argues that it undermines itself. The phenomena for which the human sciences seek a causal explanation include beliefs. The problem is that, as many writers have argued, causes are not justifying reasons.[11] Suppose, e.g., that a stage hypnotist induces me to believe that I am a parrot. My belief is *caused* by the hypnotist's manipulation of my mind. But this in no way *justifies* my belief – it gives me no *reason* to hold I am a parrot. Thus Merleau-Ponty argues that accounts of belief that characterize them as the product of causes disconnect them from truth. The theories about the mind offered by scientists are themselves human phenomena: their explanations are reached through reasoning leading to the formation of beliefs. It follows that scientific explanations themselves admit of causal explanation. But this means that rather than tracking the truth of the matter, they are simply the product of causal goings-on, which we have no reason to think might be true. In this way, the scientist's causal accounts of human phenomena undermine themselves.

The opposing position is what Merleau-Ponty, following Husserl, calls 'logicism'. It takes its cue from the fact that when we're thinking about matters of

[10] There is no space to explicate this in any detail here. See Wrathall (2005) for a discussion of this idea.

[11] Not everyone accepts this view. Davidson (1963), e.g., argues that reasons *are* causes.

logic, our reasoning seems to possess a certainty that it lacks when we consider empirical things. One explanation of this apparent fact is that logic concerns a realm of ideal meanings, with which we have the power to make contact. This capacity means that when we deal with matters of logic, our thought transcends its situation and accesses universal truths. Logicism endorses this explanation and then attempts to ground scientific thinking about human existence in logic. If successful, this would establish that the scientist's theories are universally true. But Merleau-Ponty rejects this position on the grounds that we have to acknowledge that *all* scientific thought 'is not without roots' (Merleau-Ponty 1964b: 48), being the product of its time.[12] To give just one, well-used example: Kant (1999) famously claimed that space *necessarily* takes the form described by Euclidean geometry. This was supposed to be a universal truth, grounded in the necessary structure of consciousness that gives shape to the external world. As many theorists – e.g., Helmholtz (1977), and Carnap (1966) – have pointed out, the subsequent discovery of non-Euclidean geometries show that this is false.[13] Thus, we seem to be pushed back towards psychologism. To overcome this problem, we require a way to understand how thought is conditioned by the thinker's situation without construing the relation as causal.

Merleau-Ponty argues that the conception of science as aiming to discover essences provides a way to do this. An essence is a meaning inherent in a particular set of experiences. It has *some* claim to universality insofar as it is the essence of a particular phenomenon, so future experiences of that item (further instances of that phenomenon) will unfold in accordance with that form. Yet, the essence is also tied to the particular experiences on which it is founded. As more experience accumulates, the meaning we find in the experiences can undergo something akin to a *Gestalt*-switch. Consider a demonstration against a government's economic policies. At the time that it happens, its meaning may just be that of an isolated protest, one of a handful that happen regularly each year, to little or no effect. But in the light of subsequent events, as unrest spreads across the country, the single protest may come to appear as the start of a national movement that brought about financial reform. In a case like this, we cannot say that the first reading of the event's essence is *wrong*. When the first protest happens, the future events have not yet occurred. The demonstration might yet be an isolated incident. It may not spark further unrest eventually leading to reform. Its essence only changes in the light of those future events. In this way, the discovery of an essence is conditioned by the thinker's situation – the thinker discerns an essence examining a particular body of experience: those that have occurred so far.

It is also part and parcel of this account that people's insight into essences can sometimes be clouded, so that they fail to discern an essence correctly. A thinker's situation may mean that she is only aware of *some* of the experiences on which an essence is founded. She may only have a partial glimpse of the phenomenon, and so read its essence wrongly. Consider the example of sexual

[12] It should be noted at this point that Merleau-Ponty does not deny the universal validity of logic. He attempts to ground this, not in a Platonic realm of absolute truth, but in the limits of what makes sense to us. There is no space to explicate his argument here.

[13] Various people have tried to defend Kant on this point (just one example is Strawson (1966)); it is unclear whether any of these defences is successful.

harassment. The professor's behaviour described in the above passage was at one time deemed 'flirting', but now we see it as 'sexual harassment'. On Merleau-Ponty's picture, both of these conceptions should be thought of as intended to capture the essence of certain sets of experiences. Crucially, the second is founded on more relevant experiences than the first because it is founded on the experience of victims like Carmita Wood, whereas the first only focuses on the experience of perpetrators. Just as Merleau-Ponty's first perception of the boat masts as part of the forest was illusory, so too, the former reading of the essence was incorrect. To see the professor's behaviour as mere flirting is not just to see it *differently*, but to see it *wrongly*. The situation of earlier thinkers meant that their reading of the essence was based on too few of the relevant experiences. Cultural habits and ideas meant that certain experiences – those of the victims – were hidden from view. Thus they only had a partial glimpse of the phenomenon, which later thinkers have been able to correct.

These points also apply to the scientist's theories. These likewise seek to discern the essences of whichever phenomenon is at stake. Since the scientist's theories are founded on the set of experiences made available at a particular moment in time, they are intimately tied to those experiences. As more experience accumulates, the meaning of that experience may switch. Furthermore, the scientist's insight into essences may sometimes be clouded so that she reads an essence incorrectly. In these two ways, the scientist's theories are conditioned by her situation in the same way as the human phenomena she examines, but this influence is not causal.

Merleau-Ponty's second argument is that not only *should* scientists studying human existence aim to discover the essences of experience via a sort of insight, this is *in fact* what *all* scientists – including those studying human existence and those studying the natural world – are already doing. His argument begins with a reflection on the relation between experience and the essences that characterise it. Recall that essences are *founded* on experience, which means they cannot exist without this foundation, but they are neither deducible from, nor reducible to, experience. For Merleau-Ponty, this means an essence is not straightforwardly a component that is common to all experiences that manifest it. If it were, it would be reducible to those experiences. Of course, insofar as the essence characterizes all the perceptions that manifest it, there is a sense in which the essence features in all of them. But the essence is a meaning that unifies them, rather than something like a perceivable property they all share. The experiences themselves – considered in terms of their perceivable properties – may be completely different. Think again about Merleau-Ponty's perception of the boat. The experience is characterized by a boat-Gestalt, which is a type of essence. This form unifies certain elements of the scene. As such, those elements are perceived as parts of the boat: the masts, the deck, the hull, the sails, etc. But they are all very different – the masts are vertical wooden structures; the sail is made from canvas; the hull is a different colour from the deck; etc. The parts of the boat do not belong together in virtue of any simple similarities between them. Instead, they are unified insofar as they manifest the same boat-Gestalt.

Merleau-Ponty then argues that this is so for the entities posited by science. The laws of nature are 'ceteris paribus' laws – they hold 'all things being equal'. There are different ways to understand what it is for all things to be equal. But the

salient point for our purposes is that for each law, there is no experience that unfolds in accordance with just that law. No single law of nature describes the behaviour of anything we actually perceive. Thus the experiences that are all taken to manifest a single law are all very different. Just as the boat-*Gestalt* is a meaning that unifies disparate elements of a perceptual scene, so too a law of nature is an essence or meaning that unifies disparate experiences. Merleau-Ponty gives the example of Galileo's discovery that all freely falling bodies descend at the same rate, despite any differences in their mass. In fact, we never observe a freely falling body, because the *actual* fall of anything is also affected by such things as friction, resistance, and so on. Thus the actual speed at which things fall – what we can observe – will vary, depending on things such as the surface area of the thing concerned. A parachute, e.g., descends more slowly than a brick. It follows that Galileo's law of falling bodies does not posit an observable element that a number of cases have in common (a constant speed of descent). Instead, it is, for Merleau-Ponty, a meaning that unifies diverse cases.

The nature of scientific laws has implications for the method by which they are discovered: induction. Merleau-Ponty argues that further support for his conception of science as discovering essences comes from examining how scientists actually proceed. Induction is usually understood as a process of identifying common element(s) in a series of observed cases. If an element is found in a sufficiently large number of similar cases, it can be considered essential to cases of that sort. One can then infer that unobserved cases of the same type will also contain that element. On this conception, the more cases one observes to contain a particular element, the more robust one's conclusions will be, as the more reason one will have to think that the element will *always* be found in cases of that type. However, if one is seeking insight into a meaning that unifies cases of a particular sort, one will proceed differently. One *might* start with a number of observed cases, but one need not. An essence can be grasped in the observation of a single case. Of course, if one is trying to identify which element(s) are common to cases of a particular sort, one *could* start from a single case. But if so, then one is merely *guessing* which element(s) it has in common with other similar examples. In contrast, one may have genuine insight into an essence from a single case, although one's insight will be verified if one's reading of the essence sheds light on other examples. Consider Galileo. Since there are no free falling bodies on our planet, Galileo could not discover his law by observing many free falling bodies and extracting a common element. Instead, he began with a flash of insight, which led him to posit the idea of a free falling body. He then used it to understand the empirical facts through adding conditions such as friction and resistance. Merleau-Ponty holds that there are many other such examples in the history of science, which again supports his view that all science really aims to discover essences via insight – just like phenomenology.

<u>Why phenomenology?</u>

Merleau-Ponty's work has inspired many scientifically-minded thinkers, and he drew heavily on the results of science. The legitimacy of this cross-fertilization has been questioned. First, phenomenology's method of describing experience from a first-person perspective is claimed to be mere introspection and as such, incapable of providing anything of interest to proper science. Second, it is claimed that

science is committed to realism and naturalism (the theses that the world is independent from subjectivity, and that everything in it can be, and is best, explained in naturalistic terms – including subjectivity), but phenomenology provides a transcendental account of consciousness as constituting the world studied by science. I have argued here that Merleau-Ponty sees science and phenomenology as continuous. His account answers these two objections. Phenomenology, as he conceives it, is an investigation that proceeds from observed data, i.e., *experience*, which requires an accurate *description* of what is observed. The same holds for science. Moreover, both the scientist and the phenomenologist aim to uncover the essences of experience, i.e., the essential structures of the experienced world, via a sort of insight. Essences are the meaningful forms that characterise the objects of experience. They cannot exist without the experiences that are their foundation, but they are neither reducible to, nor deducible from, these experiences. It follows that it is a misunderstanding to think that Merleau-Ponty's phenomenology, in contrast to science, proceeds by way of introspection. He realises that phenomenology's traditional starting-point of experience as it is undergone from a first-person perspective means that we should begin with the *content* of perception – rather than, e.g., its underlying mechanism – but that this means the phenomenologist should start with essentially the same sort of data as the scientist: observations of the world and accounts from others of their experiences, including those who perceive the world in extraordinary ways due to illness, injury, the influence of drugs, and so on. In connection with the second objection, whilst it is true that particular scientists/theories are committed to realism and naturalism, Merleau-Ponty holds that these are in no way necessary to science. There could be a science that acknowledges the transcendental status of subjectivity.

This may lead one to wonder: what differences, if any, remain between Merleau-Ponty's phenomenology and science? If they are, indeed, essentially the same sort of investigation, then why did he insist that his work was of *philosophical* importance, and not merely psychology? Space here prevents me from answering this question in anything like sufficient detail. But it seems the answer will be something along these lines: a science that revealed the transcendental status of subjectivity would be of central philosophical interest, since it would deal directly with one of the enduring issues in philosophy – the ontological nature of the world and our relation to it. In this way, phenomenology is of philosophical importance. It differs from science as it is actually practised, as – barring a few exceptions – science has yet to repudiate the realism and naturalism that Merleau-Ponty rejects. Phenomenology, thus penetrates more deeply to the heart of things, in revealing the true nature of subjectivity and its relation to the world, but this is not knowledge that is, in principle, closed to science. As Merleau-Ponty says of phenomenology and psychology, '[they] are not kinds of knowledge, but two different degrees of clarification of the same knowledge' (1964d: 24).[14]

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[14] Rouse (2005) discusses Merleau-Ponty's conception of science.

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