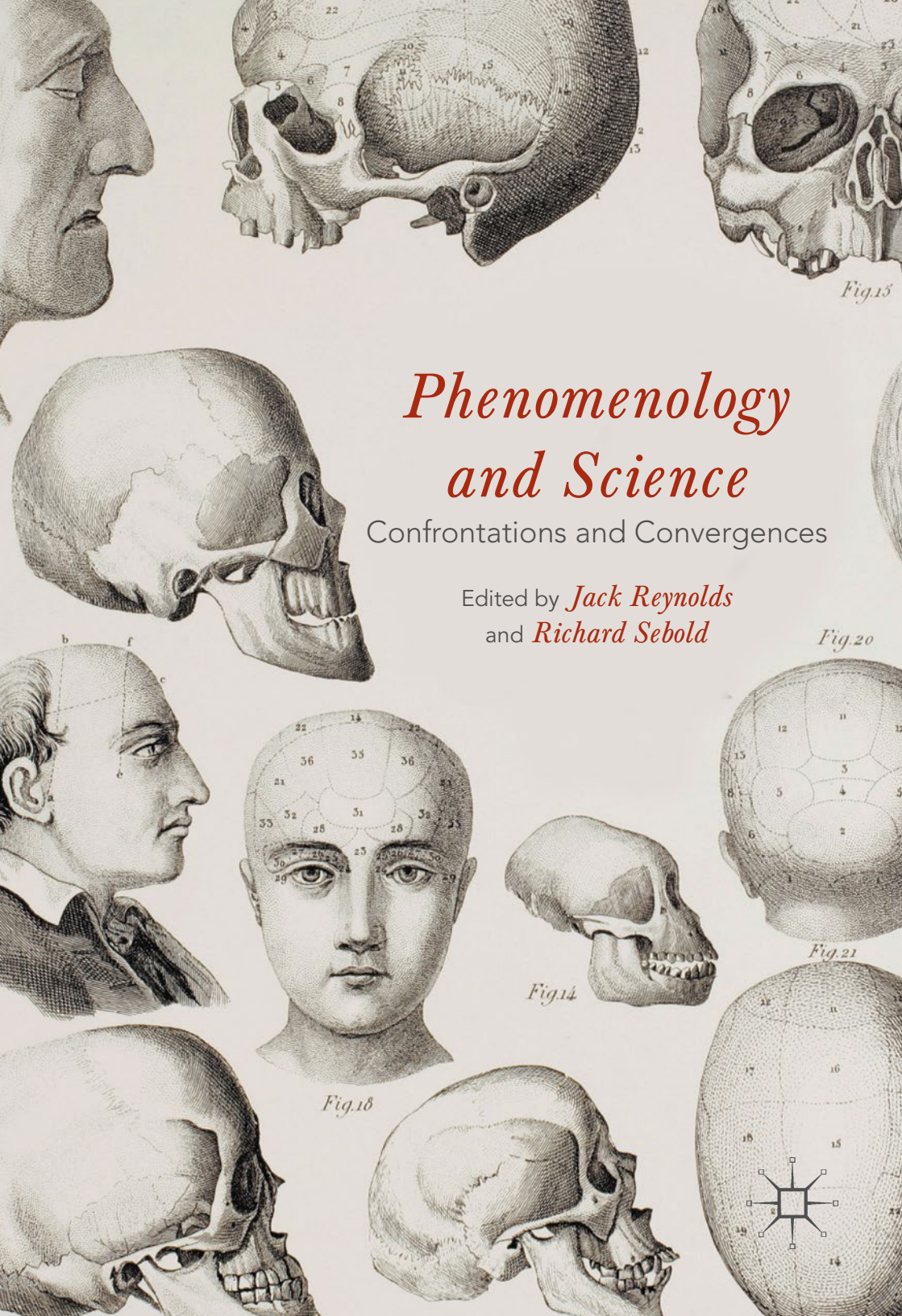

Phenomenology and Science

Confrontations and Convergences

Edited by *Jack Reynolds* and *Richard Sebold*

Phenomenology and Science

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Editors

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Confrontations and Convergences

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Preface

Many of the canonical phenomenologists have had a critical if not adversarial relationship to the empirical sciences, at least at certain points in their careers. Heidegger, for example, famously tells us that science does not think, and that it knows nothing of the "nothing". While this kind of view has certainly not been unanimously embraced by phenomenologists, and while Heidegger himself can be read otherwise (at least in regard to his early work), there has been much more agreement that phenomenology is methodologically distinct from scientific practice and, as such, is antithetical to any account in which philosophy is envisaged as strictly continuous with science. Philosophical naturalism, for example, has been seen as the original sin for phenomenology, which in some influential versions instead portends to offer an independent and autonomous means of defining the subject matter and explananda that any scientific enquiry investigates. Husserl, of course, inaugurated phenomenology in this way, initially to ground and justify the sciences more rigorously than in the circular manner evinced by philosophical naturalism and psychologism. Since the publication of his *Logical Investigations* (1900–01), there has been a variety of metamorphoses and reinventions of phenomenology, indeed to such an extent that Paul Ricoeur calls it a tradition of heresies. While these post-Husserlian heresies have in general tended to lessen the commitment to non-naturalism, they have not simply abandoned it. They have sometimes used scientific findings in their theoretical works, both positively and more often negatively (to point out biases or prejudices; to show how the relevant sciences "point beyond themselves"), but they have also all retained some allegiance—at least in name—to classical transcendental

phenomenology and its attempt to ascertain the conditions that must obtain for the practice of empirical science to be possible. More generally, phenomenologists have explored the constitution of something like being-in-the-world in ways that grant lived experience, and the first-person perspective, a significant philosophical role. Even if Merleau-Ponty and others have proclaimed there to be a truth of naturalism, and thus transformed phenomenology in significant ways, nonetheless there is but *a* truth of naturalism; it is not *the* truth, the end of the matter for philosophy.

Perhaps in the last 30 or so years, however, the phenomenological scene has, at least implicitly, become more fractured on this question. Even if we rule out those understandings of the term "phenomenology" that are frequently used in the analytic tradition and are basically synonymous with qualia or "what it is like", much divergent work traffics in the name of phenomenology even while being avowedly indebted to its continental scenes of emergence (Germany and France, in particular). While it might be debated whether or not this plurality is a virtue or the sign of an inability to constitute a research programme that builds knowledge (as philosophers like Daniel Dennett and Thomas Metzinger complain), the contemporary phenomenological scene is one in which the question of phenomenology and its relationship to science is more contested than ever. Many understandings of phenomenology and its methods remain essentially committed to core Husserlian precepts. Others seek to move beyond even Merleau-Ponty's work (which makes significant use of empirical science, both early and late in his career) to naturalise phenomenology and, perhaps more controversially, to phenomenologise naturalism. To give a short and selective account of this latter trajectory, Hubert Dreyfus and John Haugeland's work in the 1970s and 1980s took some steps in these directions, both in emphasising normativity and in challenging some of the dominant models of mind and cognition by drawing on phenomenological insights *and* empirical findings. Likewise, in *The Embodied Mind* (1991), Francisco Varela, Evan Thompson, and Eleanor Rosch take Varela's and Mauratana's biological work concerning genes and the empirical conditions for temporal experience, and seek to give them a much broader philosophical remit. Varela soon also came to propose a research programme that he called "neuro-phenomenology" (1996), which aimed to better understand the relationship between third-person neuroscience and (largely) first-person phenomenology; indeed, he even claimed to have a solution to the hard problem of consciousness. Jean Pettitot, Francisco Varela, Bernard Pachoud, and Jean-Michel Roy influentially

called for a naturalising of phenomenology in their co-edited book of that name (1999) and various special issues of journals have come out on this theme in recent times. More generally, work in what has come to be called 4e cognition—embodied, embedded, extended, and enactive—has come to play a significant role in cognitive science, psychology, neuro-biology, and related fields. Work in this vein almost invariably draws significantly on phenomenological authors and works, and puts them to various empirical uses, whether in regard to robotics, social cognition, online and offline intelligence, and so on, much of which is addressed in the contributions in this book. So, while there is something to the "transcendental-empirico doublet" that has dominated consideration of the relationship between phenomenology and science throughout the twentieth century, there are also emerging trends within both phenomenology and empirical science that deny or complicate this stark opposition, and call for more systematic consideration of their inter-relation, sometimes siding with (often weak) forms of naturalism, sometimes not.

There are perhaps two main reasons for this shift, and they are not strictly the result of classical transcendental phenomenology having been refuted. Perhaps Husserl was right that we all see essences but interpret them away from an epistemological perspective. Perhaps he was also right in resolutely insisting on the distinction between philosophy and science and in the asymmetrical and grounding relationship that he thinks phenomenology nonetheless enjoys. But such views are not regularly defended, and that is at least partly because a lot of the recent interest in phenomenology has been shaped by investigations into how phenomenology relates to analytic philosophy of mind, cognitive science, and the question of naturalism within phenomenological philosophy has returned. Even if one takes naturalism to be a philosophical construal of science as some sort of unified entity, rather than something immanently grounded in the various different sciences themselves, work in all of these areas seems at minimum to embrace a liberal or pluralistic form of naturalism. Physicalism and naturalism may not be the only games in town, but they remain the orthodoxy. Additionally, speculative realists like Quentin Meillassoux and Ray Brassier have attempted to return phenomenologists to the scene of what they call a "correlationist" crime. They contend, in short, that phenomenology is constitutively unable to take seriously the claims of empirical science, at least not without adding a subjectivist caveat concerning the intelligibility of scientific claims "for us". Whatever the fate of this philosophical trajectory as a positive programme, the negative

critique of phenomenology has undoubtedly garnered much attention, and in Brassier's work (2007), it is at least partly directly derived from a reading of Wilfrid Sellars' naturalism and Paul Churchland's eliminativism about the mental. As such, the question of phenomenology and science, phenomenology and naturalism, is very much a live one today, albeit often in the background of much work that is being done in what we might call empirically minded phenomenology, which often seems to embrace something like Gilbert Ryle's motto: just do it. In "Ordinary Language", at least, Ryle infamously maintains that: "preoccupation with questions about methods tends to distract us from prosecuting the methods themselves. We run as a rule, worse, not better, if we think a lot about our feet. So let us … not speak of it all but just do it" (Ryle 2009, 331). Although Ryle acknowledges the inevitability of meta-philosophy, he asks us here to judge the meta-philosophy by what the philosophy produces, in a manner that is characteristic of some of the current work connecting phenomenology and empirical science. But this is not always so simple to do, and nor is it necessarily desirable, as Tim Williamson and others have argued in other contexts (2008).

Indeed, to bring this point home, some remarks are in order about where we, the editors, are coming from. While we often can agree on a philosophical point, we rarely agree on the appropriate broader conclusion or consequences that derive from this or that more restricted claim. It that sense, it is perhaps appropriate to say (with Gilles Deleuze) that one needs to be provoked to think, and our dialogues and disputations have motivated the idea behind this book, and our specific contributions within it. While there is an old problem in which respect for one's peers seems to require a shift in credulity and a resulting epistemic convergence, in general we have perhaps not moved a lot, although first-personal accounts of such matters are not necessarily trustworthy. But it is often only when faced with an equally adept opposition that one's own views can become better formed and reach a higher level of sophistication.

With this background in mind, our goal in collecting the contributions in this volume is to present the reader with different ways of approaching this renewed interest in the relationship between phenomenology and science. To facilitate this, the book begins with a historical discussion about the ways in which the early phenomenologists interacted with and were influenced by the proponents of Gestalt psychology, which illuminates to what extent the phenomenologists envisioned how their approach differed from, and was continuous with, a more empirically minded programme.

Following that, we have several contributions on the more abstract question of methodology, particularly the related questions of whether phenomenology can be naturalised, that is, amended to be consistent with scientific practice, and whether the perspective of science is somehow incomplete or limited, thereby necessitating a phenomenological alternative. We have also included some excellent chapters on the emerging trend that places phenomenological insights into fruitful dialogue with scientific findings, especially those from cognitive science. The idea behind this neo-phenomenological movement is to show the mutual illumination between phenomenology and science, at least in regard to topics that seem to require the resources of each, including imagination, cognition, temporality, affect, imagery, language, and perception. Modifying Kant's dictum to the present context, one could go so far as to say, "Science without phenomenology is blind; phenomenology without science is empty."

More, of course, could and will be said about the proper way of seeing the fit between phenomenology and science. With the current selection of essays, we hope to add to and push forward the absolutely necessary discussion about phenomenology's proper place in an intellectual landscape dominated by those disciplines that partake in the scientific method. At least one of us thinks that the success of science more or less serves as a death notice for the phenomenological method—we'll let the reader guess which one of us that is after reading our respective contributions—but the dissenting papers that follow present a compelling case for phenomenology's continuing vitality. That a range of opinions, from the positive to the negative, about phenomenology's relationship with science are presented below is a strength of this volume. But it also serves as a testament to the openness and liveliness of the ongoing debate about the future of phenomenology in a world that is dominated by science, both within academia and beyond.

Melbourne

Jack Reynolds
Ricky Sebold

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CHAPTER 1

‘At Arm’s Length’: The Interaction Between Phenomenology and Gestalt Psychology

Aaron Harrison

I

Gestalt psychology is well known in phenomenological circles for its considerable influence on Aron Gurwitsch and on Merleau-Ponty. There is also a growing recognition of its influence of Sartre. Major contributions have also been made by scholars of Austrian philosophy in showing how Gestalt psychology and phenomenology arose out of the same intellectual milieu. The common origin of phenomenology and Gestalt psychology undoubtedly goes some way to explaining the readiness with which Gurwitsch, Merleau-Ponty, and Sartre appropriated Gestalt ideas, as well as the eagerness with which Gestalt psychologists incorporated or responded to phenomenological ideas. This mutual interaction, however, was far from uncritical.

Differing conceptions of phenomenology will obviously result in at least subtly differing attitudes to Gestalt psychology. There is reason now to collect some of the diverse literature on the relationship between Gestalt psychology and individual phenomenologists, and attempt to offer some rough generalisations about the relationship as a whole. By examining several points of historical interaction between the two schools, I will show how Gestalt psychologists celebrate their affinity with phenomenology, while refusing to cede their naturalistic scruples, and how some of the major phenomenologists appropriate Gestalt insights, while self-consciously transforming the context and significance of those insights.

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In this way, phenomenology and Gestalt psychology keep each other at arm's length.[1]

In Part I, I will outline some general historical background and trace some specific incidents of interaction between phenomenology and Gestalt psychology. In Part II, I will examine this relationship in more detail. Part III will deal with the Gestalt psychologists' use of phenomenological methods, Part IV will introduce the phenomenological critique of Gestalt psychology, before Part V examines in rough outline how Gurwitsch, Merleau-Ponty, and Sartre appropriated Gestalt psychology while still acknowledging the phenomenological critique. Finally, Part VI will speculate as to the significance of this history.

Phenomenology, Psychology, and Phenomenological Psychology

In the background of this story about the relation between phenomenology and Gestalt psychology lies the complex historical relation between phenomenology and psychology in general. At the turn of the twentieth century, when phenomenology was conceived, psychology and philosophy were still negotiating their boundaries. Phenomenology, as a philosophical investigation into the essential structures of consciousness, bears perhaps a closer relation to psychology than many other philosophical projects. Its investigations are often investigations into roughly the same phenomena as psychology studies though from a different perspective, a philosophical or transcendental perspective as opposed to a scientific or natural perspective. This intimacy demands attention from new generations of phenomenologists as they renegotiate their relation to psychology as a humanistic discipline, as a scientific discipline, or as a philosophical discipline. Even Husserl acknowledged the possibility of a phenomenological psychology, a scientific psychology which utilises the methods of phenomenology, though without adopting a transcendental attitude (e.g. Husserl 1977). Phenomenological psychology proceeds by way of essential psychological structures to the explanation of particular facts. Such a discipline is valid, for Husserl, though requires transcendental phenomenology as its ultimate ground.

This history is crucial for understanding the contemporary project of naturalising phenomenology. For partisans, one could mine this history of conflict and cooperation for promising proposals on the best way to enact this project. However, while the general distinctions between phenomenology and psychology are important, this aspect of the history of the

relation of phenomenology and Gestalt psychology will have to remain largely in the background of our story. Instead of focusing on the differing attitudes to psychology among the major phenomenologists, I will focus instead on specific references to Gestalt psychology, how the phenomenologists appropriated Gestalt psychology, and the uses to which Gestalt psychology was put.

This focus is necessary, since it is far too easy to see phenomenologists' references to experimental psychology and conclude, as does Gallagher, that 'these theorists have already provided a positive response to the question of whether phenomenology can be naturalized' (Gallagher 2012, 111). It is true that these phenomenologists make use of empirical psychology, and it is even true that they recognise some convergence between empirical psychology and transcendental phenomenology, such that the boundaries between the disciplines are not always clear. However, at least with respect to Gestalt psychology, the empirical findings of the psychologists are not incorporated into phenomenology qua empirical science but rather require translation into the idiom of transcendental phenomenology in order to be exploited. While the precise terms of the exploitations differ among the phenomenologists considered, it is generally the case that Gestalt psychology is present in phenomenology *despite* rather than *because of* its naturalism. In fact, as we will see, Husserl, Gurwitsch, Sartre, and Merleau-Ponty seem generally to share an anti-naturalistic critique of Gestalt psychology despite the willingness of the latter three phenomenologists to exploit their empirical findings.

Gestalt Psychology and Phenomenology

In 1912, Max Wertheimer published a paper analysing the perception of motion. By showing his subjects white strips appearing at varying intervals, he was able to identify the optimal speed at which subjects would perceive not only two lines appearing in quick succession, but one line moving from one position to another. He also identified a stage at which subjects ceased even to perceive an object moving from one place to another, and saw instead just *motion*. He argued that what we perceive when we perceive motion is not individual sensations organised according to non-perceptual processes. We immediately perceive motion. Such motion is a Gestalt, an organised form which is neither an emergent property of, nor reducible to, more primary elements (Wertheimer 1965, 163–168; Ash 1995, 125–134).

This study is often taken to mark the birth of Gestalt psychology, though in fact Wertheimer released two other papers exploring Gestalt concepts prior to this (Wertheimer 1938, 265–273; Wertheimer 2014, 131–133). As the term is commonly used, Gestalt psychology is synonymous with the Berlin school, the school of psychology founded by Wertheimer and his colleagues, Wolfgang Köhler and Kurt Koffka, and associated with Carl Stumpf's psychological institute at the University of Berlin.

This common account of the birth of Gestalt psychology has come under occasional challenge. Barry Smith traces the beginning of Gestalt psychology to Christian von Ehrenfels, and his idea of 'Gestalt qualities' (Smith 1988). The consciousness of a melody, Ehrenfels says, cannot be reduced to the consciousness of each individual note. The consciousness of melody is the sum of the individual notes as well as a particular unifying property, called a Gestalt quality (Ehrenfels 1988). Wertheimer was at one time a student of von Ehrenfels and was influenced by his ideas on Gestalt qualities. If von Ehrenfels' work is taken as the start of Gestalt psychology, then it is clear that Wertheimer and the Berlin school are only a few of those to productively respond to his work, and they are far from his most faithful students. Gestalt psychology, therefore, should have a considerably wider reference than just the work of the Berlin school, incorporating at least the Würzburg and Graz schools as well. Even at the height of research into Gestalt psychology, Karl Bühler, another claimant to the label, bemoans the fact that the term 'Gestalt psychology' has 'passed into family ownership' (Ash 1995, 310).

This terminological problem certainly has the flavour of an interminable historical dispute, solved by convention rather than argument. It is compounded when we introduce variants, such as 'Gestalt theory', incorporating mathematics, logic, epistemology, anthropology, politics, and ethics, and acknowledge that not all those who contributed to Gestalt theory were working in the Gestalt tradition. My goal is not to solve this problem; I only mention it because the potential breadth of the term 'Gestalt psychology', the various psychologists and philosophers that it might include, illuminates the problematic relation between the Berlin school and the phenomenological tradition. Between Gestalt theory, broadly construed, and phenomenology, broadly construed, there is considerable overlap.

Christian von Ehrenfels inherits his philosophical and psychological framework from Brentano, who, as we know, was a profound influence on Husserl. Stumpf was also a student of Brentano, and as well as working closely with the Berlin school, he was a friend, sympathiser, and effective

critic of Husserl. Don Ihde calls Gestalt psychology 'a stepchild of early phenomenology' (Ihde 2012, 37), which captures quite well the relationship that Spiegelberg describes as one of 'action at a distance' (Spiegelberg 1972, 67). On this view, the Berlin school came to maturity with the ideas of Stumpf and Ehrenfels, and only later incorporated insights from Husserlian phenomenology, which they dutifully married to Stumpf's experimental method.

Against the idea that Husserl influenced the Berlin school 'only late and casually' (Spiegelberg 1972, 67), certain facts must be noted. Wertheimer and Koffka were both familiar with *Logical Investigations* prior to even the earliest Gestaltist papers of 1910 and 1912 (Ash 1995, 108; Spiegelberg 1972, 72–73). Koffka even made some concessions to Husserl in his early work.[2] Both Koffka and Köhler were sensitive to Husserl's arguments against naturalism and psychologism (Koffka 1936, 570–571; Köhler 1939, 45). None of these facts are decisive. Even the significance of the Berlin school's use of the term 'phenomenology' to describe their method can be overstated, considering the contested nature of that term in the early twentieth century (see Schumann 2013). The historian of psychology, Edwin Boring, notes that Husserlian phenomenology and 'phenomenology' as a very general term for the study of experience intermingle in the intellectual climate of late nineteenth- and early twentieth-century Europe such that it becomes easier to incorporate certain insights from Husserl's phenomenology into naturalistic psychology (Boring 1957, 367–368).

The phenomenologist Aron Gurwitsch offers the most detailed and sustained attempt to incorporate Gestalt psychology into phenomenology. As a student in Berlin in 1919–20, he developed a relationship with Stumpf, with whom he learned both philosophy and psychology (Embree, in Gurwitsch 2009a, 41–42). Although in proximity to the Psychological Institute of Berlin, he may not have come into contact with the Berlin school at this time. He recalls meeting Wertheimer for the first time in 1925 or 1926 (Gurwitsch, in Grathoff 1989, 107). Köhler would have only just returned to Berlin from Tenerife (Asch 1968, 111). And Koffka was then setting up a psychological laboratory in Giessen (Ash 1995, 211). It is therefore plausible that he did not have early contact with the main figures of the Berlin school. After studying briefly with Husserl in Freiberg, Gurwitsch went to Frankfurt, and worked with Adhemar Gelb and Kurt Goldstein (Embree, in Gurwitsch 2009a, 42–43). Gelb and Goldstein were sympathetic to many Berlin school ideas and certainly

contributed to the wider Gestalt tradition. This intellectual environment clearly had an impact, since Gurwitsch's dissertation from the Frankfurt years was devoted to the relations between phenomenology and Gestalt psychology.

'Phenomenology of Thematics and of the Pure Ego: studies on the relation between Gestalt theory and phenomenology' was published in *Psychologische Forschung*, the organ of the Gestalt psychologists (Gurwitsch 2009b, 193–318). It was reportedly well received by Wertheimer (Gurwitsch, in Grathoff 1989, 108). Gurwitsch attempts to address 'certain phenomenological problems with the help of Gestalt-theoretical theses, to supplement Husserl's analyses by insights arrived at in Gestalt theory, as well as to correct some of his tenets, and in general to advance phenomenology along these lines beyond the stage reached by Husserl's *Ideen*' (Gurwitsch 2009b, 195). The influence of Gestalt psychology can hardly be overstated, both in its impact on his thought and the earliness with which it took effect. Nevertheless, Gurwitsch remained a critical disciple of Husserl throughout his life, and used Gestalt psychological findings primarily to inform a 'noematic' phenomenology.

Gurwitsch lectured in France in the 1930s, at the same time as Sartre and Merleau-Ponty were developing an interest in Gestalt psychology. Embree speculates that Merleau-Ponty may have heard Köhler's lecture in 1929, though at the very least he was familiar with Gestalt psychology by the time he met Gurwitsch in 1933 (Merleau-Ponty 1980a, 7; Embree 1980, 90–91).[3] In this year, Merleau-Ponty applied to undertake a research project in perception, in which he would investigate the potential for synthesis between philosophical and experimental approaches to perception, in light of the challenge posed by Gestalt theory to traditional psychology (Merleau-Ponty 1980a, 7–8). Elaborating on this project the following year, Merleau-Ponty chastises the Gestalt psychologists for failing to develop the epistemological consequences of their project, eluding to Husserl's phenomenology as the means to do so (Merleau-Ponty 1980b, 11–13, 17). In *Structure of Behaviour*, for instance, Merleau-Ponty so radicalises the Gestaltist views that he argues the concept of form should not be merely a guiding principle in the investigation of physical, biological, and psychology facts, but the fundamental ontological principle in which these three domains participate (Merleau-Ponty 1967, 132–136).

The Gestalt influence undeniably persists in *Phenomenology of Perception*, which is replete with references, discussions, and criticisms of Wertheimer, Köhler, Koffka, Lewin, Gelb, Goldstein, Katz, and others (Merleau-Ponty

2002). Even in *The Visible and The Invisible*, Merleau-Ponty's last work, he is still concerned with Gestalt concepts (Merleau-Ponty 1968, 20–21, 192).

Less well known is the effect that Gestalt psychology had on Sartre (Morris 2008, 2010; Mirvish 1984, 1987, 2001; cf. Embree, 1979, 19). Much of Sartre's early efforts were devoted to phenomenological psychology and to the problems which emerge at the juncture of phenomenology and psychology. At roughly the same time as Merleau-Ponty's early investigations into the nature of perception, Sartre was engaged in a project on the philosophy and psychology of imagination. This became *The Imagination*, published in 1936 and *The Imaginary*, written at the same time but published in 1942 (Elkaïm-Sartre, in Sartre 2004, vii).[4] *The Imagination* lacks overt references to the Berlin school. It does devote substantial attention to the Würtzburg school, finding in them a misguided attempt at experimentally testing Husserlian phenomenology (Sartre 2012, 69). *The Imaginary* contains few but striking references to the Berlin school, showing a clear intention to utilise Gestalt psychology as that empirical approach most compatible with phenomenology (Sartre 2004, 120–121).

A similar intention is found in his *Sketch for a theory of the Emotions*, in which Sartre presents Gestalt psychology as the last stage before a properly phenomenological psychology of emotion. While previous theories of emotion make the arch-mistake of considering emotion as a reflective conscious state (when in fact it is a fundamental attitude to the world), Sartre singles out Gestalt theory, and in particular Tamara Dembo, as the only possible exception. Here he cites Köhler, Lewin, and Dembo, and makes use of a long quotation from Paul Guillaume (Sartre 1971, 41–43).

Locating Gestalt theory in Sartre's major phenomenological work *Being and Nothingness* is less straightforward, though still clear once we know what we are looking for. The best clue occurs in a letter to Simone de Beauvoir in January 1940:

> I'm coming back to dogmatism by way of phenomenology, I'm keeping all of Husserl, the being-in-the-world, and yet I'm reaching an absolute neorealism (in which I integrate the Gestalt theory). Well! You'll say, what a hodgepodge. Well, in fact, not at all: it is very sensibly organised around the idea of Nothingness or pure event at the core of being. (Sartre, in Beauviour 1993, 43)

Sartre makes good on this general assessment of his work. He uses Gestalt figure/ground terminology to explain how absence and distance—as

negatité—are concretely present in the world (Sartre 1978, 21). He uses nothingness to explain how *Gestalten* are formed as the negation of their background (Sartre 1978, 9, 108), and how one form becomes another (Sartre 1978, 20). Nothingness, Gestalt theory, and phenomenology are thereby intimately interrelated. In addition, Sartre makes extensive use of Kurt Lewin's concept 'hodological space' to account for how our environment is initially instrumentally structured according to our desires and possibilities (Sartre 1978, 279, 322–324).

Other phenomenologists warmed to or had contact with Gestalt psychology, even if they were not greatly or openly influenced by it. Alfred Schutz obviously had some familiarity with the Gestalt work on musical theory, but held them in less high regard than did his friend Gurwitsch (Schutz, in Grathoff 1989, 178, 140–141). In the USA, the simultaneous emigration of leading Gestalt psychologists and phenomenologists made for fruitful ground. Köhler, for instance, was on the board of review of *Philosophy and Phenomenological Research*, and encouraged Spiegelberg with discussions of phenomenology (Spiegelberg, in Kaelin and Schrag 1989, 171). Embree recounts learning phenomenology from Gurwitsch and Dorian Cairns and being encouraged to read and appropriate what insight he could find in the work of the Gestaltists (Embree, in Kaelin and Schrag 1989, 134).

There is also some evidence that Heidegger was familiar with the Gestaltists as well. Unsurprisingly, Heidegger knew Ehrenfels' work on Gestalt qualities, but he was also highly approving of the work of Wertheimer and Lewin, as well as that of Gelb and Goldstein. He said of Gelb, for instance, that 'he will one day write the new psychology' (Radloff 2007, 22–23). However, this evidence appears scant and what influence Gestalt ideas did have on Heidegger are probably peripheral influence of the wider Gestalt tradition.

Over the ensuing decades, the importance of Gestalt psychology as an influence on phenomenology, on Gurwitsch and Merleau-Ponty especially, has won them a place as a footnote in the history of phenomenology. More recently, in an introduction to phenomenology, Stephan Käufer and Anthony Chemero include an entire chapter on Gestalt psychology (Kaufer and Chemero 2015). Ultimately, however, it is unclear whether their inclusion is meant to indicate that this school itself embodies a moment in the history of phenomenology or whether they are only of interest for their influence on Merleau-Ponty and Sartre, and as ancestors of the phenomenological strand of cognitive science. In favour of

the former interpretation, Käufer and Chemero argue that ecological psychology, dynamic systems theory, and radical embodied cognitive science are not simply influenced by phenomenology, but *are* phenomenology. If naturalism and experimental methods are no barrier to phenomenology, then perhaps they do consider Gestalt psychology to be a school of phenomenology. This ambiguity is entirely appropriate, considering the way that phenomenologists have appropriated Gestalt psychology *as* phenomenology, while at the same time recognising the ultimate conflict between these disciplines.

II

Phenomenology in Gestalt Psychology

The most striking correspondence of Gestalt psychology with general phenomenology is the former's use of the term 'phenomenology' for their descriptive procedures. Unfortunately for our historical purposes, this term is not used consistently and is often defined only vaguely. In Koffka's *Principles of Gestalt Psychology*, for instance, phenomenology means 'as naive and full description of direct experience as possible' and cites as exemplary some rough distinctions between things and 'not-things', living things and dead things, artificial things and natural things, as well as problematic cases like fog, ghosts, light, terror, and cold (Koffka 1936, 70–73). He is clearly describing the world as it occurs to us (to him) in a kind of crude and unsophisticated manner. In that sense, his descriptions are naive in the extreme. They are not, however, as 'full' as possible. While phenomenology is clearly meant to establish the *explanandum* for psychology, it is not immediately clear whether phenomenology must be done once and for all before experimental psychology takes place, or whether one might experimentally discover facts about phenomenology, which will then establish more fully the phenomenon to be explained.

The tension between 'naïve' and 'full' is a variant on the problem of analysis, such that before beginning to investigate a phenomenon, we must know what it is we are meant to understand, but we can't do this without first investigating it. I don't suggest that the Gestalt psychologists present a solution to this problem, just that their phenomenological method exhibits this tension, that 'description', 'observation', and 'phenomenology' are used to refer to both the pre-scientific specification of

the phenomena to be investigated scientifically and the descriptive scientific investigation into those phenomena themselves.

In characterising the nature of Gestalt phenomenological procedure, we can note that, as with Husserlian phenomenology, the Gestaltists are constantly having to defend themselves against the charge that their psychology is just another iteration of introspectionism (Köhler 1992, 67–99; Koffka 1924). Introspectionism, they say, begins with an analytic attitude. It locates primitive elements, in most cases 'sensations', and attempts to account for complex phenomena by proposing higher order mental functions operating on these sensations. This is achieved in experimental settings by, for instance, isolating a point of light or a patch of colour from its context with the aid of a sheet or board with a small hole cut out, or, in more sophisticated experiments, with the aid of a tachistoscope. This analytic attitude restricts the available data to be described to the extent that, if it is the only perspective considered, it falsifies the phenomena under consideration (Koffka 1924, 153–154). The Gestaltists adopt a holistic attitude that is not so much opposed to the analytic attitude, as it does account for that attitude by identifying it as a change in the conditions of the situation described.[5] Insofar as the introspectionist changes the conditions of the situation, they are no longer describing the same phenomenon. The new phenomenon is neither more 'primitive' nor more true; it is just different.

In place of this analytic attitude, the Gestalt psychologists will describe how structures are experienced in context. Wertheimer expresses his derision, 'take two faces cheek to cheek. I see one (with, if one wishes, '57' brightnesses) and the other (with its '49'), but not in the division 66 plus 40 or 6 plus 100. Theories that would suggest that I see '106' there remain on paper; it is two faces that I see' (Wertheimer 1965, 202). That perception is organised in just such-and-such a way, into *Gestalten*, will be one of the Gestalt psychologists' most fruitful, and certainly most well known, areas of research. And unlike theories which suggest a disorganised plenum of experience subsequently organised by higher order mental processes, the Gestaltists will locate as much organisation in immediate experience as possible without resorting to non-perceptual states or processes. In this sense, Gestalt psychology is a 'critical reformulation of nativism' (Köhler 1972, 21).

The perceptual Gestalten are not mental entities of the same order as sensations. Rather they are features of the world *as it is experienced*. While psychology may employ 'subjective' methods (Köhler 1992, 20–25), its

primary subject matter is still behaviour. To the extent that the Gestaltists discover principles of perceptual organisation, it is in the service of a theory of human behaviour. To understand my behaviour, one must understand 'my desires and intentions, my success and disappointments, my joys and sorrows, loves and hatred, but also my doing *this* rather than *that*' (Koffka 1936, 40). This will involve grappling with 'phenomenal behaviour', how a subject experiences their own behaviour, as well as 'apparent behaviour', how the subject behaves according to the experience of psychologists themselves. Together, these accounts will reveal 'real behaviour' (Koffka 1936, 40–41).

Real behaviour must be both described and explained. Explaining behaviour will involve relating it to the physical world via the Gestalt variant of psycho-physical isomorphism. Prior to this psycho-physical explanation, Gestalt psychology demands rigorous description, which is itself not isolated from explanatory elements.

As far as the use of the term 'phenomenology', there is some ambiguity about whether it is coextensive with this descriptive goal. Köhler's use of the term is often distinctly philosophical. He says that 'problems of ultimate principle' will not be solved until 'we go back to the sources of our concepts, in other words, until we use the phenomenological method, the qualitative analysis of experience' (Köhler 1939, vii), and that 'Phenomenology is the field in which all our concepts find their final justification' (Köhler 1939, 102). He also more strictly restricts phenomenology to the phenomenal realm:

> It is most essential for phenomenological statements that they never be confused with hypotheses or even with knowledge about the functional genesis of phenomenal data. Where a thing has come from, to what its existence or that of its properties is due, is a valid question, but for the most part not a question for phenomenology. What properties the thing actually has – this is the question of phenomenology. (Köhler 1939, 69–70)

However, it is not clear that Köhler can sustain such a strict separation between functional explanation and phenomenal description. The kind of description that both Köhler and Koffka envisage, the description of meaningful behaviour as it appears in experience, involves describing behaviour in accordance with goals, motives, expectations, and so on. This is already explanatory in the sense that it is contextualising specific behaviours by their role as part of a wider set of behaviours. Where there is dispute, these

descriptions must be substantiated experimentally. The 'phenomenological statements' explicitly adopt the character of hypotheses which stand or fall on the weight of experimental evidence (Koffka 1924, 155–156). In other words, determining 'what properties a thing has' involves hypothesis and experiment. Furthermore, in cases where the subject is a non-human animal or a child, facts about how they experience their environment will only be derived under experimental conditions. In this way, '[f]unctional and descriptive facts belong closely together, and we can use the former to test the latter' (Koffka 1924, 160; cf. Koffka 1936, 72).

Husserl's critique

In intention, method, and experimental design, the Gestalt psychologists are trying to preserve meaning within a strictly naturalistic psychology. Moreover, they argue that the role of psychology is to execute just this project for the sake of the unity of scientific discourse. The psychologist's role is to integrate, not just the natural and human sciences, but scientific and humanistic or artistic discourse in general. It is therefore predictable that they would steer towards, if not run aground on, Husserl's critique of psychologism.

Against Husserl's extensive arguments in *Logical Investigations* that logic and meaning could never be given a psychological explanation, Koffka offers this brief defence of Gestalt 'psychologism':

> [Husserl's] argument rested on the assumption, implicit or explicit, in all 'psychologistic' theories, that psychological relations were mainly factual or external. A 'psychologism' based on this assumption has indeed been refuted by Husserl and other philosophers. But this refutation does not affect our psychologism – if our theory can rightly be given the name – since in our theory psychological and physiological, or rather psycho-physical, processes are organized according to intrinsic or internal relations. This point can only be alluded to. It means that in our theory psychology and logic, existence and subsistence, even, to some extent, reality and truth, no longer belong to entirely different realms or universes of discourse between which no intelligible relationship exists. (Koffka 1936, 570–571)

The concept of a Gestalt, an autochthonously organised whole with internally related parts, is meant to escape Husserl's critique not by reducing logical relations to causal or external relations but by locating those

logical relations in the world and therefore suitably extending the concept of natural world such that it contains more than 'mere' fact.

Köhler goes into more depth on the matter. In *The Place of Value in a World of Facts*, one of Köhler's more philosophical texts, he argues (against his reading of Husserl) that logic, or more generally 'intrinsic requiredness', is 'not altogether outside the world of facts' (Köhler 1939, 52–53). The first step is to recognise that not all facts behave in the same manner with respect to time and timelessness. While 'truth' itself appears as something without duration, it is also the case that even though 'perceiving' is an empirical event, it appears with a different temporal character from a material object. While there are phenomenological and material differences in instances of the different categories, perceptual events and the objects they apprehend do not belong to radically different worlds, and neither should requiredness (Köhler 1939, 53). Requiredness, Köhler says, is 'amphibian'. The truth of a mathematical statement, for instance, can participate ephemerally in timeless acts of rumination, as well as concretely in holding up a bridge. Requiredness is not just revealed as operating in the world, but its nature is *as a fact in the world*.

The concept of Gestalt is the key to locating value in the world of facts. In the phenomenal realm as in the physical realm, requiredness is exhibited when a whole is independently organised as the whole it is. The parts *need* to come together as the parts of that particular whole, since the whole significantly determines the nature of the parts. For instance, three pairs of dots, with some distance between them, demand to be viewed as three pairs of dots, rather than six separate dots. This phenomenon, and its physical and behaviour analogues, is the basic grounding of requiredness in all its forms.

Although Husserl does emphasise the distinctions between fact and essence, and resists explaining logic by any empirical discipline, it is still possible to push back against Köhler's reading of Husserl as a strident Platonist, and to wonder whether the Gestalt psychological and the phenomenological account have more in common than Köhler supposes (Spiegelberg 1981, 196).

In any case, where Husserl deals directly with Gestalt psychology, he is clearly unimpressed with their naturalistic effort:

> it obviously makes no difference whether we let the psychic 'data' be blown along in a collective whole 'atomistically', though in accordance with empirical laws, like heaps of sand, or regard them as parts of wholes which by

> necessity, whether empirical or a priori, can alone operate as such parts, and principally perhaps within the whole of consciousness fettered as that is to a rigid form of wholeness. In other words, atomistic and Gestalt-psychology alike participate in that intrinsic meaning of psychological 'naturalism' … which, having regard to the expression 'inner sense', may also be termed 'sensationalism'. (Husserl 2012, xiv)

This attack is in fact directed against all descriptive psychology after Locke, including Brentano and Meinong.[6] One cannot, Husserl argues, just replace one conception of sensation with another, while leaving the natural scientific edifice intact, and expect to be able to provide an adequate account of logic and meaning. Naturalism simply cannot accommodate intrinsic requiredness.

Phenomenological Appropriations of Gestalt Psychology

As we saw earlier, Gurwitsch, Merleau-Ponty, and Sartre make efforts to incorporate Gestalt results into their phenomenology. However, recognising that the two projects are methodologically and philosophically distinct creates a problem for *how* this appropriation is to occur. Gurwitsch, for instance, insists on only using Gestalt psychology's descriptive concepts:

> The results of any explanatory science, whether physics or psychology, must not be allowed to intervene in phenomenological analyses as an accepted premise upon which to proceed. The situation is, of course, different concerning the descriptive phase of Gestalt theory. In trying to integrate Gestalt theory into phenomenology, we consider only its descriptive phase. (Gurwitsch 2009b, 167)

Merleau-Ponty, too, thinks Gestalt psychology, 'unexceptionable only in the middle regions of reflection' (Merleau-Ponty 2002, 59). Here the term 'middle regions' stands for description. When Gestalt psychology begins to reflect ontologically or epistemologically, they descend quickly into naturalism.

Husserl, we saw, accuses Gestalt psychology of interpreting consciousness according to 'a rigid form of wholeness'. Something like this critique occurs in Sartre's *Sketch for a theory of Emotions*, and in both Merleau-Ponty's *Structure of Behaviour* (Merleau-Ponty 1967, 132) and *Phenomenology of Perception* (Merleau-Ponty 2002, 59), although Merleau-Ponty's criticisms

have a slightly different flavour. Instead of simple errors, Merleau-Ponty accuses the Gestalt psychologists of lack of self-understanding. The crux of the lack of self-understanding is the failure of Gestalt psychologists to properly follow through on the rejection of the constancy hypothesis (Merleau-Ponty 2002, 33). This form of critique is found throughout Gurwitsch's work as well (Gurwitsch 2009b, 112–118; 2010, 162–167).

The constancy hypothesis is a claim about the relation of stimulus and sensation. Its identification and rejection are part of the Gestalt psychologists' critical strategy targeting the 'old' psychology. In its precise formulation, the constancy hypothesis asserts that 'true sensory facts are local phenomena which depend upon local stimulation, but not at all upon stimulating conditions in their environment' (Köhler 1992, 94). The constancy hypothesis has to confront a torrent of experimental data suggesting that changes in the looks of things do not show a one-to-one correspondence to changes in retinal stimulation. However, this data can be met by supplementary structures such as unnoticed sensations which can vary without a subject picking up on them, or higher-order mental processes, which form the unrelated sense atoms into complex structures. This latter idea is called the interpretation hypothesis.

The Gestaltists trace this constellation of views to inherited philosophical prejudices. The constancy hypothesis grounds and entails the interpretation hypothesis and the interpretation hypothesis grounds and entails the constancy hypothesis. They suggest that instead of piling up ad hoc hypotheses, we should return to a holistic description of experience. This leads to the kind of phenomenology I presented in the previous sections. The rejection of the constancy hypothesis, therefore, is the relation of a whole theoretical perspective.

In order to show how the descriptive phase of Gestalt psychology is available to phenomenology, Gurwitsch and Merleau-Ponty attempt to show how the rejection of the constancy hypothesis is an incipient phenomenological reduction. According to Gurwitsch, the reduction involves bracketing out the everyday thesis of existence, ignoring origins or causes of objects, and leaving only the phenomena just as they appear. As appearing in a certain way, the phenomena are always meant or intended by a subject. To focus on the phenomenon just as it appears, as meant or intended in a certain way, is to focus on the 'perceptum qua perceptum', or the perceptual noema. The role of the phenomenological reduction is to unlock the domain of the perceptual noema. This is exactly what is achieved,

according to Gurwitsch and Merleau-Ponty, in the Gestalt psychologists' rejecting of atomism in favour of a holistic descriptive approach.

In fact, the decisive step is achieving a descriptive approach, conceived as a perspective on the phenomena distinct from a consideration of causes or origins. This approach is 'motivated and even necessitated' by the phenomenological reduction (Gurwitsch 2010, 225). Insofar as the rejection of the constancy hypothesis also motivates a descriptive approach, the two are analogous structures operating in the transcendental-epistemological sphere and the psychological sphere, respectively (Gurwitsch 2009b, 212–215). This is the sense in which Gestalt descriptions are available to phenomenological analysis: both are describing phenomena at a noematic level.

Consequences

Considering the substantial and formative use that Gurwitsch, Merleau-Ponty, and Sartre made of the Gestalt psychologists, and considering the latter's naturalistic commitments, it is no wonder that Gestalt psychology would be attractive to those researchers whose agenda is a naturalised phenomenology.

Significantly, the influence of Gestalt psychology on this group seems to be illustrative or historical. In the collection *Naturalizing Phenomenology*, explicit references to the Gestaltists are most often by way of historical precedent for some position, rather than as a live option. Roy et al. introduce Merleau-Ponty as a post-Husserlian phenomenologist who 'had a durable influence on a certain opening to the naturalisation enterprise' and this is in part because of his willingness to utilise the work of the Gestalt psychologists (Roy et al. 1999, 53). In this way, the historical references to Gestalt psychology, especially in relation to their influence on major phenomenologists, is meant to count in favour of the prospect of naturalising phenomenology.

While the prospects of a properly naturalised phenomenology cannot really be addressed in this paper, it is sufficient to note that treating the claims of phenomenologists as hypotheses requiring experimental substantiation is at least somewhat alien to the projects of the major phenomenologists, even those whose transcendental convictions were less pure than Husserl's. Similarly, the tendency to 'appropriate' or reinterpret Gestaltist experimental findings has the explicit goal of taking their contributions out of a naturalistic context. It may be argued that the evident reinterpretation

of experimental research could not have occurred were it not for the generally phenomenological foundation of Gestalt psychology, and if this reinterpretation is possible, so might be a re-reinterpretation or 'deinterpretation' back in the direction of naturalism. And indeed, as we have seen, Gestalt psychology did emerge from the same milieu as phenomenology, with many of the same goals in mind, and with a strong commitment to description of immediate experience.

If my reading of Gurwitsch and Merleau-Ponty is correct, and if the same can be said about Sartre's use of Gestalt psychology, then psychology and phenomenology converge at the noematic level, and are thereby simply different perspectives (scientific-explanatory/transcendental-epistemological) on the same data. This provides the sense in which Gestalt psychology in general is amenable to a phenomenological interpretation. A phenomenological interpretation of Gestalt psychology is a phenomenology which renders the noematic data made available by Gestalt psychology into a transcendental epistemology. Of course, just because Gurwitsch, Merleau-Ponty, and Sartre mostly share a reading of Gestalt psychology does not mean that they have identical views as to the nature of the transcendental.

In any case, we might still learn something from this lesson in history. If I am correct in my reading, this presents two possibilities as to the relation between phenomenology and psychology: in at least partially depending on experimental procedures, either (1) experimental psychology proves utterly indispensible for phenomenology, since there are certain facets of the noematic realm which are unattainable by non-experimental procedures; or (2) psychology is largely irrelevant to phenomenology, since any valid results it can obtain about the noematic realm are also attainable by phenomenology alone. Common to both interpretations is the idea that there is at least a partial convergence of results between phenomenology and experimental psychology.

Just in paying so much attention to experimental psychology, it is clear that Gurwitsch, Sartre, and Merleau-Ponty do not explicitly countenance (2), although it might still be a consequence of their position. If (2) is correct, then Gestalt psychology might still present in phenomenology as *inspiration*. The Gestaltists may play the same role in phenomenologies of perception, action, and emotion, as *Moby Dick* might play in a phenomenology of obsession and power.

There is more to suggest that (1) is the correct interpretation of these authors. Gurwitsch admits that Gestalt psychology is not just contingently experimental, but cannot substantiate its results without experimentation

(Gurwitsch 2009b, 212). And Merleau-Ponty famously relaxes Husserl's distinction between fact and essence, and doubts that 'thought can ever quite cease to be inductive' (Merleau-Ponty 2002, 73). Of course, if (1) is correct, then this raises significant epistemological problems, since phenomenological claims derived through Gestalt psychological methods have a hypothetical element, if they are not yet *experimentally* substantiated, then they are simply not yet on solid footing. Unfortunately, this seems to make phenomenology in a non-experimental mode redundant. In this sense, even a meeting between phenomenology and Gestalt psychology leaves the two disciplines at arm's length.

Notes

1. This phrase is borrowed from Lester Embree (1980, 89). He takes Merleau-Ponty's appropriative use of Gestalt psychology as an example of his taking inspiration from a science with one hand, and pushing it away with the other. I feel that this image expresses well the familiar and *familial* distance between phenomenology and Gestalt psychology.
2. The significance of this terminology is unclear, though it does pertain to what would become the Berlin school's central concept: '[Ehrenfels' concept of "Gestalt"] was the seminar topic for the winter of 1906–1907, and one of Koffka's subjects used the term in a response. However, Stumpf opposed this terminology. Koffka adopted the term "unitary form" (*Einheitsform*), a compromise between Husserl's "moment of unity" and Stumpf's "form". This he supposed to be "the psychical entity that corresponds to the functions of summations (Zusammenfassung) when objective relations exist among the summated parts"—a formulation perfectly consistent with Stumpf's views' (Ash 1995, 110).
3. Embree relates a personal encounter with Gurwitsch in which he says that Merleau-Ponty was familiar with his dissertation before their first meeting. If these recollections can be believed, then Carman (2008, 20, 235) is wrong that Merleau-Ponty learned of Gestalt psychology from meeting Gurwitsch and never gave him proper credit.
4. Elkaïm-Sartre also points out that he was engaged in a study of the psychology of the imagination as early as 1927 as a requirement of the *diplôme d'études supérieures* (195). Flynn notes that *the Imagination* was a reworked version of Sartre's diploma thesis, with a considerably expanded section on Husserl (Flynn 2014, 77).
5. Cf. Wertheimer's experiments explained above.
6. That this critique can be so generalised helpfully puts out of play the question as to the reference of 'Gestalt-psychology' in this passage. It is perhaps

more likely that he is targeting the Würtzburg school in particular (Feest 2012, 500), though the critique clearly applies to any psychologist who responds to or inherits Husserl naturalistically. Gurwitsch, however, clearly interprets Gestalt psychology as primarily referring to the Berlin school and perhaps secondarily to Gelb, Goldstein, and others (Gurwitsch 2009b, 119–128). Another relevant passage occurs in Crisis, where Husserl attacks *Ganzheitpsychologie* (holistic psychology), which the translator glosses as Gestalt psychology, though in fact has much wider currency, even beyond the Gestalt tradition (Husserl 1970, 297).

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CHAPTER 2

"Intrinsic Time" and the Minimal Self: Reflections on the Methodological and Metaphysical Significance of Temporal Experience

Jack Reynolds

Philosophy of time is notoriously perplexing terrain, even if we bracket for the moment the complexities of contemporary physics. As Thomas Metzinger puts it: "the phenomenal texture of time is a paradigmatic example of a feature governed by the 'principle of evasiveness.' It is a feature that instantly recedes or dissolves if introspective, cognitive, or even attentional processing is directed at it" (Metzinger 2004, 153). Thousands of years earlier, St Augustine also famously captured this when he said: "What then is time? I know well enough what it is, provided that nobody asks me: but if I am asked what it is and try to explain it, I am baffled" (Augustine 1992, book 11, ch. xiv). Augustine claims to understand time from within lived experience and what we might today call the first-person perspective, but he also admits he is baffled if asked to theorise about time metaphysically and offer an explanation (rather than a description) of this lived time for a third party and from an atemporal perspective, as the question "what *is*

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time?" seems to necessarily involve. I think we remain heirs to this neo-Augustinian dilemma, both in regard to the philosophical significance to be accorded to our lived experience of time, and in regard to the connected issue of the role of the first-person perspective in philosophical theorising more generally. At the very least, it is directly relevant to the question of the relationship between phenomenology and naturalism, and between phenomenology and empirical science, which are my concerns here.

We might maintain that this basic sense of time of which Augustine is initially sure is but a subjective and psychological illusion that is of no real ontological and metaphysical import, as Plato, Einstein (sometimes), and many contemporary scientific naturalists hold. If there is good reason to think empirical science can provide us with the appropriate account of the causal factors responsible for the feeling of time's passage, duration, etc., in a non-temporal way, and without remainder, then in what sense might we be justified in holding to the view that temporality is metaphysically significant? Moreover, perhaps our access to this aspect of time from within lived experience and the first-person perspective is epistemically unreliable and not the sort of methodology around which to build a philosophical programme, as the strong methodological naturalist would contend, and as do slightly weaker positions (like Daniel Dennett's) that seek to retain a role for the "intentional stance" but considered in a neo-behaviourist fashion.

Alternatively, we might side with classical phenomenology and maintain that such basic temporal experiences cannot be coherently doubted—at least insofar as they are constitutive of all experience that is associated with minimal selfhood, involving self-ownership and self-agency—and that such structures are what gives us perceptual access to external objects at all, and hence the objectivity of science and the "time of the universe." We might add that conscious experience needs to be minimally temporally structured to be comprehensible at all. On this particular Copernican turn, the demand for a metaphysical account of time that is atemporal or subject independent is often treated therapeutically as a sort of illness (e.g. betraying a commitment to a "metaphysics of presence"), or bracketed away as (dogmatically) presupposing too much and hence distorting an objective understanding of the (temporal) things themselves.

Elsewhere, I argue that this common way of conceiving the debate is ultimately misleading, insofar as it depends on a stark methodological distinction between philosophy and science that is difficult to sustain (Reynolds 2016). I think that phenomenology today must be a rather more hybridic enterprise, and there are, of course, various explanations of the "flow" or

"window" that is part of the specious present and our temporal experience, including Bayesian ones that conceive of it as stemming from our attempts to minimise prediction error and involving something like a sub-personal distrust of the present (e.g. Hohwy et al. 2015). Nothing I say here will rule out these sort of possibilities, which we will return to in conclusion, but I want to motivate the idea that the grander metaphysical and methodological eliminations of temporality, envisaged by some scientific naturalists, have, at the very least, a lot of work to do. Indeed, I aim to defend some central phenomenological insights regarding the connection between temporality and subjectivity, and show they remain vital not only for our self-conception, but, when combined with extra-phenomenological considerations, also suggest a prima facie case for metaphysical irreducibility, despite the many naturalistic programmes of reduction that draw on alleged counter-evidence derived from empirical science. But even if one remains sceptical about this stronger and more speculative claim, my weaker claim is that the phenomenological arguments enable an improved version of the irreducibility claims characteristic of liberal naturalism as concerns the first-person perspective (exemplified here by Lynne Baker's recent work), but without this thereby involving a transcendental critique of metaphysical accounts of time of the sort put forward by Husserl, Heidegger, and other phenomenologists, which at least sometimes seem to presuppose a strict human–animal divide (e.g. Heidegger's "world-poor" animals) and a non-naturalist metaphysics. Lived and intrinsic time appear to be a necessary condition of the first-person perspective and minimal selves, but this view need not be spookily invested in supernaturalism or buttressed to any special human capacity, reflective or otherwise, since some of the account generalises to animal life. As such, it can be minimally "naturalized" via biology, psychology, and other relevant sciences, but in a way that involves thinking *within* rather than outside of time.

Phenomenological Claims Regarding Temporality and the "Minimal Self"

It is sometimes disparagingly claimed that phenomenologists do not agree about anything much at all. It might also be thought that treatments of time are a central case in point. But I think there are three core theses that characterise the work of most phenomenologists that, if true, provide explanatory force to contemporary worries about scientific naturalism and its ability to eliminate or reduce the temporally saturated first-person perspective.

The first of these theses is that there is some "mineness" (*Jemeinigkeit*) in relation to experience, which is claimed to be a necessary condition of minimal selfhood. As Zahavi puts it, there is a minimal and pre-reflective self-awareness (even if indirect/'non-thetic') that accompanies all non-pathological experiences (cf. Zahavi 2005, 11), notwithstanding the apparent diaphanousness and transparency of experience discussed by G.E. Moore and others. This pre-reflective self-awareness is said to involve both non-thetic self-ownership (the apprehension that experiences are mine and are happening to me) and self-agency (the apprehension that actions have been initiated by me), and these dual factors institute a "here" and "now," a zero point for our embodied and worldly orientation. Empirical complications for this view will soon be considered, but we don't usually have to check the position of our limbs to stand up, or consciously identify them as our own. As such, there appears to be some minimal immunity against error regarding our ability to identify first-person experience as our own. As Steven Crowell puts it, that "self-identification is immediate, non-criterial, and non-inferential" (Crowell 2013, 176).

The second widely shared claim is that this minimal or pre-reflective self is constitutively tied to temporal structures and the experience of lived or "intrinsic time," and in ways that cannot be adequately reconstructed from a third-personal "view from nowhen" (Price 1996) or a metaphysical account of "objective" time characteristic of many strong forms of naturalism. This view puts the lie to claims of strict metaphysical neutrality for phenomenology, since it is not clear that phenomenologists can both criticise "vulgar" and "metaphysical" conceptions of time but also offer a presuppositionless and autonomous treatment of temporal experience that is metaphysically neutral and disjunct from scientific treatments of time. It is also not clear why the methodological shift that phenomenology inaugurates would be necessary or helpful, unless putative metaphysical reductions and eliminations were thought to be problematic in some way.

Thirdly, phenomenologists standardly make a claim about priority or anteriority, in that this pre-reflective self-awareness is argued to be a necessary condition for more reflective and robust understandings of selfhood (e.g. the level of diachronic persons, whether understood as narratively constructed or otherwise), and for scientific practice. In short, this pre-reflective self-awareness, based in a lived comprehension of time that institutes the "here" and "now," enables the kind of stability of perception, observation, and thoughtful activity that is required. To give an example, we might say that the active uses of memory, expectation, and

prediction—upon which our conscious lives are largely oriented (especially within the natural attitude)—depend on a series of passive temporal syntheses that enable those conscious experiences to be as they are. To think that this automatically rules out sub-personal explanations of that temporal phenomenology, however, would appear to be akin to a category error, and the question we will come back to in conclusion concerns the methodological and metaphysical consequences of this circular presupposition of temporal phenomenology at the heart of any putatively non-temporal metaphysics.

Phenomenological Time(s): From Husserl to Gallagher

It is worth briefly sketching out a commitment to these three "theses" in regard to some of the canonical figures of the phenomenological tradition. This will make my generalisations about the phenomenological tradition more plausible, and enable me to fill in my (thus far) rather condensed claims.

Although his theory is subsequently revised in various ways, in *Phenomenology of Internal-time Consciousness* Husserl offers a very influential account of internal time consciousness as a condition for perception, action, and the first-person perspective more generally. Presaged by a short homage to Augustine, Husserl then offers his justly famous and important account of primary memory (which he comes to call retention), primary expectation (which he comes to call protention), and primal impression, as a condition of both our experience of external objects (say in listening to melody, or reaching to grasp an apple from a tree, etc.) as well as in relating to ourselves as an object. In short, Husserl claims that our integrated experience of a melody—even on first listening—implies that any so-called "now" must have a retentive element that retains the past notes, and a protentive moment that anticipates future elaborations, as well as a primal impression. No doubt there are other possible explanations one might give here that have not been exhaustively ruled out, as might reasonably be thought to be required for such a strong claim of necessity. Husserl, however, would claim that any other sort of explanation would presuppose these very same aspects of time consciousness rather than offer an independent explanation of them. I think that such a claim both is (and normatively needs to be) motivated and shown to be plausible via engagement with other such explanations; this means, in the

end, that phenomenological claims concerning transcendental necessity are more like an inference to the best explanation rather than a necessary or apodictic truth (cf. Reynolds 2016).

But we still need to understand the connection of this temporal dimension with the first-person perspective and the pre-reflective self-awareness of experience, and Evan Thompson summarises Husserl's view as follows:

> … pre-reflective self-awareness is a necessary condition for the experience of temporal phenomena. To be aware of phenomena across time, consciousness must be retentionally and protentionally aware of itself across time. Therefore, time-consciousness entails pre-reflective self-awareness. In other words, our being conscious of external temporal phenomena entails that our temporally enduring experiences of these phenomena are self-aware. Inner time-consciousness is thus nothing other than pre-reflective self-awareness. (Thompson 2007, 328)

Gallagher and Zahavi interpret Husserl in a closely related fashion:

> It is this implicit, non-observational, pre-reflective self-consciousness which allows the experience to be felt as part of my stream of consciousness. The sense of ownership or mineness for the experience thus involves no reflective, second-order, metacognition. On the contrary, Husserl's account of the structure of inner time-consciousness (protention-primal impression-retention) is precisely to be understood as an analysis of the (micro)structure of pre-reflective self-consciousness (Gallagher and Zahavi 2008, 80).

Such insights regarding the relationship between time and the pre-reflective self are not restricted to Husserl's work or elaborations on it. While Heidegger is sometimes considered to be fundamentally opposed to Husserl (partly due to remarks they both made to that effect), and while Heidegger also expressed well-known grievances about the metaphysical assumptions at the heart of Husserl's idea of "internal time-consciousness," Heidegger also contends, for example, in his 1924 lecture "The Concept of Time," that "Dasein is time" and "time is Dasein" (Heidegger 1992, cf. also Overgaard 2004, 172). In *The Basic Problems of Phenomenology*, Heidegger says, "Dasein is intentional only because it is determined essentially by temporality" (Heidegger 1982, 268). It is with *Being and Time*, however, that such remarks get fleshed out in his accounts of the present as involving an "in order to," the future as a "for the sake of," and the past as characterised by a "thrownness," in that we find ourselves in

an historical situation not of our making and within which our action is always projected ahead of itself (we are, he says, a "thrown thrower"). For Heidegger, then, temporality is analysed in purposive terms and purpose is irremediably temporal and moulds temporal structures.[1] According to Heidegger, this differentiates Dasein from both inanimate objects like stones, and from animals, the latter of whom are famously said to be poor in world for temporal reasons. In particular, their existence is not conditioned by the temporal transcendence of action characteristic of Dasein, which is always "in order to …" and "for the sake of …." Additionally, Heidegger contends that their being is not determined in relation to its possibility not to be, as with Dasein and being towards death.

We can and should dispute Heidegger's residual humanism on both philosophical and empirical grounds (cf. Okrent 2007), but if time and subjectivity are tightly linked in this way, and if time is not a thing or an object, this will directly lead to paradoxical and non-substantialist conceptions of subjectivity and selfhood along the lines of Heidegger's and Sartre's enigmatic conceptions of the structure of Dasein/for itself: in Sartre's famous formulation, the for itself "is not what it is, and is what it is not" (Sartre 1995, 79). Sartre even explicitly contends that the principle of identity holds only for being-in-itself, not for the for-itself. This is because the for-itself is not just in time but is constituted by it, and exists most primordially as a project towards what will be, rather than what is. The meaningfulness of the present depends on being seen in the light of future possibilities. It is for related reasons that Heidegger claims in *Being and Time* that only Dasein can be or not be itself (Heidegger 1958, 33), and only Dasein can experience the call of conscience, and the meaning and normativity attached to that (cf. Crowell 2013).[2]

While it is up for debate regarding whether or not Merleau-Ponty's account of the time of the body subject in *Phenomenology of Perception* ultimately problematises the strict separation between a non-temporal nature (a block universe) and the temporalising subject (see Toadvine 2009), he makes many comments that likewise emphasise the relationship between time and the minimal self. Notably, Merleau-Ponty suggests: "we must understand time as the subject and the subject as time" (2008, 422). On this understanding, time is a dimension of our being, rather than an object of our knowledge: time is not for someone, that is, a pregiven subject, it is someone. He also says: "if we rediscover time beneath the subject, and if we relate to the paradox of time those of the body, the world, the thing, and others, we shall understand that beyond these there is nothing

to understand" (Merleau-Ponty 2008, 365). These formulations are not strictly equivalent, but in both cases what Merleau-Ponty calls the tacit cogito—pre-reflective embodied consciousness—is primarily its temporal structures. Temporality is tightly linked here with selfhood and ipseity. It is hence arguably true that Merleau-Ponty privileges a perspectival view of time over the aperspectival "point of view of being" (Gardner 2015). And it is the aperspectival view of Being that naturalism is typically attempting to get at, hence the ontological programme and the methodological desire to reduce or eliminate the first-person perspective in a manner that does not fall victim to some of the problems that phenomenologists have argued will undermine such a project.

To parse this a little, we might note that two fundamental features of Merleau-Ponty's general philosophical position—motor intentionality and perception—are irremediably temporal. Merleau-Ponty says, "the perceptual synthesis is a temporal synthesis" (2008, 239). Briefly, perception of an object gives us other sides that we anticipate, and might move towards or use in some future activity. Moreover, in practical activities like perceiving a painting or playing sport, we are solicited to achieve an optimal Gestalt within a given field, and the connection between perception and possible future actions are argued to be a fundamental part of the perception itself, rather than a separate interpretation (perhaps involving belief–desire psychology) that is added to the neutral sense data. This line of thinking has been influential on the ecological psychologist J.J. Gibson, as well as on current research on 4e cognition: that is, embedded, embodied, enactive, and extended cognition (cf. Kaufer and Chemero 2015, 171).

Shaun Gallagher has recently developed some related views by highlighting the role of "intrinsic temporality" in regard to two central features of the minimal or pre-reflective self: self-ownership and self-agency. Self-ownership refers to the idea that experiences are mine and are happening to me, while self-agency refers to the idea that actions have been initiated by me. Although they are often difficult to distinguish, these two factors can sometimes come apart (e.g. if someone pushes us, or if we suffer from schizophrenia). Gallagher's basic claim is that a necessary, albeit not sufficient, condition for action and agency is both a proprioceptive sense of one's own body, and a temporal synthesis regarding one's own movements in time, which cannot be adequately understood from the outside in an objective account of the sequence of events.

To motivate this argument, Gallagher discusses the intrinsic temporality of the neonate (Gallagher 2012, 107). Developmental evidence strongly

suggests that the neonates' experience is not the "buzzing blooming confusion" that William James postulated, and that many psychologists from Piaget to Lacan (via Henri Wallon) remained invested in. Neonates generally do not appear to need, for example, to closely visually monitor their limbs, and their actions are not fragmented in the manner we would expect if James was right: they do not move their arm to their mouth, then hit their mouth, and then open their mouth, in something akin to the manner in which Schneider (and more recently Ian Waterman) was forced to, on account of his war injuries (Merleau-Ponty 2008). Even at very early ages (including in uterine grasping), the neonate is able to anticipate the hand and open their mouth in a manner that is temporally attuned to the imminent arrival of the hand, suggesting both some tacit understanding of their body schema grounded in proprioception and some rudimentary self–other differentiation (cf. Gallagher 2005; Merleau-Ponty 2008, 354). This sort of self-organising of the body occurs largely on the pre-reflective level, although we can attend to it phenomenologically, to some extent, and are perhaps more likely to do so when what Hubert Dreyfus calls our smooth coping is disrupted. Justification for this view hence comes from *both* phenomenological accounts and the relevant empirical sciences in a manner that Gallagher sometimes calls "dialectical phenomenology," and at other times labels the "mutual enlightenment" view (Gallagher 1997).

In cashing this out, Gallagher draws on some remarks from Merleau-Ponty in *The Visible and the Invisible* discussing the "time of the body, taximeter time of the corporeal schema" (Gallagher 2012, 108). This "taximeter time" varies in relation to particular projects and external factors in one's environment: it speeds up and slows down, for us, and he argues that the time of action and agency is necessarily of this nature, at least from within the first-person perspective. Of course, a third-personal explanation of this may be in the offing. Indeed, Howhy et al. (2015) have recently proposed that their predictive coding model can parse the strength and dynamics of our distrust in time, in such a manner that it can:

> explain why the same objective duration can seem to either drag on or fly past. If there is a strong expectation of change, then there will be a stronger urge to distrust the present and the window will move faster. For example, events may seem to succeed each other rapidly in highly volatile situations such as a war zone. On the other hand, if change is not expected, then there will be less of an urge to distrust the present, and the window will move more slowly. This might happen in boring contexts, such as waiting in a dull airport or being confined to a hospital bed, where time seems to drag along:

here the context informs the agent that it is very unlikely that there will be much change, so the present is less distrusted, slowing down time.

This proposal cannot be assessed here, but the point is that these kind of explanations, whatever their utility and sub-personal accuracy, do not directly contradict phenomenological accounts of "intrinsic time" unless they are tied to a metaphysics of non-temporal properties. Then, we may have something like a "show down," since Gallagher claims that intrinsic temporality involves: " a temporal structure that is not captured by objective time. It is not enough to say that action takes time; there is a time in action, an intrinsic temporality or a temporal structure in action" (Gallagher 2012, 112). He goes on to note that this "time in action" is also tied to the meaning of the action in various ways, and not simply to the instrumental attainment of given ends (e.g. grasping the cup in front of me), but to our perception of the intentions of others, and their facial and bodily expressivity.

While Gallagher's phenomenological account of intrinsic time draws on and is supported by findings in relevant empirical sciences, science also provides various potential challenges to this kind of position. For example, our sense of agency and volitional decision-making might be said to be temporally misleading, since when we think we have made a decision at any given instant to raise or flex our finger, the studies of Libet, Wegner, and others highlight the neuronal activity within our brains 300 ms before any conscious decision. On some construals, this "readiness potential" suggests that the decision has been made earlier and our phenomenological sense of self-agency is hence not to be trusted (Libet et al. 1999, but cf. Romdenh-Romluc 2011). Moreover, our experience of self-agency and self-ownership grounded in proprioception and intrinsic time can go awry, as happens in clinical studies concerning somatoparaphrenia (delusion regarding identification/ownership of parts of one's body), motion agnosia (in which there is no perception of transition from state to another), and other experimentally manipulated scenarios like the rubber hand illusions. While the jury is out on these questions, such data do not seem to count against a minimal rendering of the immunity against error idea in regard to self-ownership at least, although the challenge is more acute for self-agency. The errors in somatoparaphrenia, for example, are not about the basic datum of who one is, or whose body is involved on the functional side (and it is sometimes accompanied by anosognosia that involves a tacit recognition of the side of the body ostensibly expelled as foreign), and even in schizophrenic episodes, individuals will reportedly

still say "my body has been moved," thus again suggesting the persistence of some basic "mineness" about experience (Gallagher 2012, 135). Likewise, "thought insertions" are said to intrude onto *my* thoughts, for example, and the experience is often considered by the patient themselves as non-normal (Parnas et al 2005, 266). Moreover, the dilemma for the naturalist who is sceptical regarding first-person experience is that if claims concerning the user illusion are pushed too far—for example, generalised by the philosopher or scientist—then they threaten to render the practice of science itself inexplicable and are thus vulnerable to the charge of performative contradiction, perhaps even to the point of tacitly endorsing a global scepticism that is intrinsically unstable.

Of course, it is certainly the case that various sciences can explain lived time via neurology and a biological account of the relationship between an organism and its milieu, as work in empirically minded phenomenology has done (e.g. Varela 1996) and alternative inferential explanations like predictive coding (Hohwy et al. 2015), along with other work in dynamic systems theory (e.g. Van Gelder). These explanations are all more or less successful. Additionally, there is nothing precluding them becoming increasingly successful and we should expect them to do so. But it is a further question whether it can be done in the manner standardly advocated by the scientific naturalist who subscribes to *both* the ontological and methodological naturalist theses, which hold, in short, that: (1) what there is, is only those entities or processes that our best sciences are committed to; and (2) that the only reliable methods for attaining knowledge are through those same (usually natural) sciences. For many, the conjunction of these two views requires the elimination or the replacement of temporal and first-personal items with non-temporal and non-first personal properties. Can this be adequately done? I will return to this question but would first like to show the significance of these phenomenological accounts for Lynne Baker's "near naturalism," since this will augment her important work, and also make clear what is at stake in the final section of the paper when I venture some tentative metaphysical conclusions.

Temporalising Lynne Baker and the First-person Perspective

Although there are various more liberal versions of naturalism currently being propounded (see DeCaro and Macarthur 2010), one of the most persistent critics of reductive and eliminativist versions of naturalism within

the analytic tradition has been Baker. Baker's focus has been on the first-person perspective in general, albeit with an account of the ontological reality of a robust self as a necessary condition for morality, mentality, and so on (cf. Baker 2012, 185). For her, "the point of naturalizing projects is to show that phenomena that appear to be incompatible with a complete scientific ontology (e.g. consciousness, intentionality, normativity) can really be accommodated by a complete scientific ontology" (Baker 2012, 28). As such, scientific naturalism is true "if and only if every apparent property is naturalized either by reduction or elimination" (Baker 2012, 30). Although she is unsympathetic to such projects, her characterisation of this trajectory is broadly correct, albeit we should broaden her definition to allow that scientific naturalism may be "taken to be true" if there are good grounds for thinking that every apparent property will be able to be naturalised by reduction or elimination (e.g. reducing the first-person perspective to non-first-personal items, or eliminating the first person).

Baker then presents a series of differing arguments about why the first-person perspective cannot be eliminated or reduced, but her basic position is closely related to ideas stemming from phenomenology regarding "mineness" and first-personal experience, and the related ideas of self-ownership and self-agency, as she herself notes (Baker 2012, 31, fn 2), albeit emphasising our linguistically grounded ability to conceive of ourselves as ourselves. Baker suggests that her view depends on the following basic "Datum": "If there is a robust first-person perspective, then there is a distinction between thinking of oneself as oneself* in the first-person and thinking of someone who happens to be oneself" (Baker 2012, 64). Her claim is that scientific naturalism not only effaces this important difference, but does so in question-begging and problematic ways: that is, inconsistently, hypocritically, with performative contradiction, etc., and she highlights occasions of this in the work of Metzinger and Dennett in particular. It is important to note, however, that in fleshing out this "Datum," she borrows an example from Ernst Mach of phenomenological significance that is avowedly a "situated thought." Mach, and now Baker, ask us to consider the difference between seeing an unkempt person in the window of a bus, and then coming to realise that one is that unkempt person (Baker 2012, 64). Surely, Baker suggests, our feelings on discovering that "we" are the unkempt person are not on a par with what we may feel observing another person's unkempt attire. Now it seems clear that there is a phenomenological difference between such cases: only in one of these situations is the thinker co-implicated with the content of

what is thought in a manner that involves matters concerning personal identity, and the difference between ourselves as a locus of experience (minimal self) and ourselves as diachronically and narratively understood (as a person). But is it also a distinction of ontological significance? Baker says it is, if it cannot be adequately accounted for in the third-personal idiom that is privileged by the ontological and scientific naturalist (at least of reductive and eliminativist varieties), and this, she maintains, is what cannot be provided without attendant problems concerning performative contradiction and the tacit positing of homunculi, and so on. Moreover, she contends that if we were to fail to make the distinction in The Datum, we would never have any beliefs about what we were doing or thinking (Baker 2012, 65).

Now, for many naturalists this might look like a "God of the gaps" style argument, or even akin to the dualist position when it comes to qualia and the knowledge argument.[3] Nonetheless, I think there is something to this quasi-Sartrean exploration of shame, and indeed to Baker's critique of scientific naturalism in the first half of her book. That said, I also think that phenomenological considerations regarding the link between temporality and the minimal self better justify Baker's case, and avoid some potential weaknesses associated with her emphasis upon reflection and the robust self (as opposed to the pre-reflective and minimal self emphasised throughout this paper). What we need are reasons for thinking that "the Datum" cannot be accommodated by any scientific naturalism that aims to eliminate or reduce the first-person perspective, beyond the assertion that this is so, as well as an account of what is it about the perspective that is special without that explanation becoming metaphysically "spooky." Without a detailed account of the temporal dimensions of this first-person perspective, Baker appears to be faced with two problems: firstly, and immanently, she does not fully explain why the first-person perspective might not be subsumed within an objective ontological order, perhaps in the manner of John Perry and David Lewis whose work on indexicals she criticises; secondly, her position raises explanatory worries concerning the genesis of the robust self, which are not satisfactorily addressed.

In relation to the first claim, what resists objectivist accounts of the first person is not just the first-person perspective alone, since that can be treated as a general item, tacitly atemporal, an ongoing perspective, as with Perry and Lewis. The best candidate for what resists such objectivism is, rather, the manner in which our very perspective is itself temporally placed, an insight that we have seen developed by many of the major phe-

nomenologists (cf. also Stokes 2014). In this respect, it is worth considering again Baker's appropriation of Mach's scenario regarding the unkempt man. It is not the first-person perspective alone that is significant, or even the reflective capacity to think of oneself as oneself. Rather, it is the thick temporal reflexivity at stake when an individual goes from noticing an unkempt person to realising that they are that unkempt person (and this is characteristic of doubt too, on John Drummond's 2007 analysis, but also Kierkegaard's). Moreover, it is no accident that the experience seems to depend on something closely related to Husserl's account of protention and retention, and his phenomenology of internal time consciousness. After all, the shame that might be part of Mach's scenario is not (necessarily) brought about by any act of explicit judgment. Rather it is, as Sartre contended in *Being and Nothingness*, "prejudicative," and depends on a passive synthesis that includes the retention of one's earlier experience, and a tacit awareness of the manner in which one both coincides and does not coincide with the self that was blithely peering at an (apparent) stranger in the bus window. As such, Baker's case against reductive versions of naturalism ultimately depends on the temporality of lived time, although she does not recognise this. By adding this to her account, we get a better explanation of why one might contend that the first-person perspective is irreducible. Strong forms of naturalism (e.g. scientific naturalism) are ontologically committed to the view from "nowhen," due to considerations derived from physics most fundamentally, and to a methodological rejection of the "times of our lives," and yet minimal subjectivity is temporally constituted at a pre-reflective level. For example, self-agency and self-ownership are bound up with the "here" and "now," and they also enable the institution of the more robust self—the level of persons—wherein diachronic and narrative temporal matters play a more central role.

This explanation of the irreducibility of the first-person perspective via "intrinsic time" is also amenable to weak forms of naturalising, insofar as it is able to be given a genetic and developmental story that is empirically plausible, and can be pursued in concert with the relevant psychological and biological sciences as Varela, Gallagher, Thompson, and others working in empirically minded phenomenology have done (cf. Varela 1996; Gallagher 2005; Thompson 2007). There is evidence from developmental psychology and neurology that the rudimentary or proto-self depends on intrinsic time and proprioception that we have from birth (and in utero), and this can be accounted for via a biological and evolutionary story that does not privilege the human or endow the human alone with special

qualities, perhaps in the manner of Varela's enactivism (Varela 1999, 267), but other empirical hypotheses might also give intrinsic time something like the role that Varela's position does. Moreover, on the question of how one might come genetically to have a robust self, the story here is multifaceted: proprioception and lived or intrinsic time provide the initial conditions for self-agency and self-awareness, including the capacity to come to recognise oneself as a "self" as embodied in the mirror stage, along with embodied imitation and interaction with others, and narrative and linguistic dimensions of the sort that takes place when one learns the transitivity of the "I" and the "you," and can subsequently pass the false belief tests. That is a long and complex story that cannot be done justice to here, and one that would also need to thematise the role of temporal disruption and partial breakdown (see Ratcliffe et al. 2014). But the key point is that there are advantages for decamping from the robust self to the minimal self, and looking at it both phenomenologically and empirically. It avoids Baker's strong account of the human–animal divide that appears potentially spooky to a naturalist (cf. Sider 2002), and at least sometimes looks more like a non-naturalism than the "near naturalism" she wants to endorse (Baker 2012, xvi).

A Metaphysics of Intrinsic Time?

Temporal experience, then, is the fundamental problem for scientific naturalism today; more fundamental than the first-person perspective, which derives its putative irreducibility from issues to do with intrinsic time and its apparent inability to be timelessly comprehended. Gallagher and others usually defend this sort of account on primarily methodological or epistemic grounds, arguing that science itself depends on intrinsic time and the stability of certain temporal structures. The question that we have come to, however, is whether or not we should extend Baker's work on the first-person perspective and grant "intrinsic time" some sort of prima facie metaphysical status, or at least recognise its negative metaphysical significance as one of the prime stumbling blocks for scientific naturalism. Baker bootstraps an explicitly metaphysical conclusion to insights related to those stemming from phenomenology. Should we agree with her that these considerations justify a metaphysical anti-eliminativism and anti-reductionism, but in this case linked to 'nowness,' 'passage,' and qualitative change, along with other features of lived time, including "time in action" and the "taximeter time" of embodiment?[4] These are all clearly

fundamental "for us," but can we not just say that some non-temporal property causes us to have these sorts of temporal experience, thus potentially reducing the temporal to the non-temporal in our account of the basic furniture of the world?

While I don't have any knock-down a priori objection against such a possibility, empirical matters do not themselves (yet) settle this argument about whether we should take intrinsic temporality to be real. Empirical data can be drawn on to support both of these views, and it is not that one position is pro-science and the other anti-science. On the contrary, empirically minded phenomenologists (like say Thompson 2007; Varela 1996, etc.) are inclined to trade on the findings of 4e cognition and accounts of biological processes in which temporality remains central, while the proponent of the reducibility of temporal experience to non-temporal properties will be likely to avail themselves of differing sorts of empirical (and trans-empirical) data, in particular those which suggest that ultimately physics gives us the furniture of the world. Partly due to the influence of special relativity, in particular, for the current naturalist orthodoxy there is no in principle difference between the past and the future, and the "now" or living present is but a subjective illusion, dependent on a conception of simultaneity undermined by Special and General Relativity. Instead, eternalism, for example, gives us the block universe and space-time with four dimensions, with no indexicals required, and the rival growing universe theory is also meant to be able to be analysed in non-temporal terms, referring to an objective sequence of events, before and after, but with no reference to past, present, and so on. On both of these views the possible configurations of a system do not evolve but simply are, and on this mathematised rendering time is inessential to the laws of physics. While these views are occasionally contested (e.g. Smolin 2013), and sometimes due to recent findings in regard to quantum gravity, they remain the orthodoxy and exert a normative force upon potential research programmes. In particular, they incline the philosophical naturalist who subscribes to the thesis of the unity of science to look for a reduction.

Of course, one doesn't have to go to physics for such a point. One might merely note, with Dennett (1991, ch. 6), that there is no strict isomorphism about claims about the properties of the contents of experience (e.g. what it is like) and claims about the properties of the brain states, the vehicles of those contents. As Kiverstein nicely puts this point, "it may well be true that a conscious state must be composed of retentional and protentional components if it is to conclude (sic) a minimal sense of

self. We shouldn't however expect to find any straightforward mirroring of this structure at the neural level" (Kiverstein 2009, 70). Perhaps the most notable recent account seeking to reduce temporal experience to static and non-temporal properties is that offered by L.A. Paul (2010). Drawing on metaphysical arguments of a more or less a priori kind *and* on well-corroborated results in cognitive science, Paul gives an account of how flickering dots on a computer screen, if they are fast enough, get represented as motion from one side to the other, but in the absence of any actual movement. Elaborating on this, she says, "The reductionist can then argue that, if the brain can create the illusion of flow in cases of apparent motion, then it can create the illusion of flow in cases of experiences as of passage" (Paul 2010, 353). Here we have a poverty of the stimulus style argument: what we "see" is interpreted and understood by us in this rich manner, but in a way that goes beyond and even falsifies the stimulus. There are plenty of other arguments of this kind concerning change blindness, inattentional blindness, and so on.

But this kind of argument, powerful as it may appear, can also run in the reverse direction. Gibson and many others show, for example, that optic flow enables us to access information that is not apparent in a succession of retinal images too, in which case there is a richness of the moving and perceived stimulus in a manner that is not accessible if our temporal experience of succession is removed from the picture, since it is about the way optic flow varies in relation to movement over a duration (cf. Noë 2004, 20 and Gibson 1979). Alva Noë likewise asks us to think about an aeroplane taking off. It appears to us as if the front is rising, thanks to our vestibular system, yet nothing has changed for us visually. But in what sense is this experience an illusion or error? Our emplaced body has access to a rich repertoire and fine-grained experience that exceeds that provided by only the visual stimulus on the retina (cf. Noë 2004, 26). If, as Noë contends, "the information available to an active animal greatly outstrips information available to a static retina," then perhaps when we interpret scenarios like Paul's as getting at something more general about *all* perception (and then by analogy to *all* temporal experience), we are guilty of a rather standard kind of philosophical error in which we take an apparently simple example to stand for the whole. And, of course, the ostensibly simple experiment invoked is actually far from simple, downplaying some core features of perception and its usual co-imbrication with action and movement. Additionally, the phenomenological claim about temporality is not just about perceiving objects in time courtesy of the structures of

retention, protention, and so on, but also about what this means for the identification of ourselves as an enduring locus of experience. Does the analogy hold that Paul draws between the perception of motion and the reflexive temporal experience at stake in the examples that concern Baker and the phenomenologists? Arguably it does not, since there is a thicker conception of temporality at stake in the latter unlike the former. Is it enough, as she suggests (Paul 2010, 355), that there be an empirically plausible possible reduction, whether or not it ends up being confirmed, for reductionism to be vindicated? Only if reductionism is assumed to be the only game in town, and I have tried to open up the possibility here that it is not the only game in town.

What other reasons might be provided by the putative reducer in favour of their position? A key one is ontological parsimony. As Paul puts the point in arguing against presentist and dynamist accounts of the reality of the flow of time:

> *Reductionists* argue that, for reasons of ontological parsimony, we should not postulate the existence of fundamental properties of nowness or passage unless we have better metaphysical and empirical reasons to do so. They hold that there is no reason to take these features of our experience as ontologically robust, since there is no sufficiently attractive metaphysical or empirical reason for endorsing the existence of nowness or passage. (Paul 2010, 337)

But considerations to do with parsimony (and attractiveness in a theory) are notoriously difficult to decide. For example, Paul's proposal seems to give us something akin to a two-world (even Platonic) view in which there is a metaphysical reality that is disjunct from our myriad first-personal illusions, an idea which is difficult to conceptualise, let alone to provide the desired reductions for. This kind of "view from nowhen" is radically revisionary, asking us to think about self-agency and self-ownership in ways that have hitherto not been countenanced and coherently theorised, let alone lived. While this promissory dimension might be thought to be a theoretical virtue (at least if it is fruitful), there is also a theoretical principle favoured by many scientists that remains on the side of the more liberal naturalist here: Occam's razor. While this may seem to be a pragmatic or methodological reason for distancing oneself from scientific naturalism, and hence not strictly bear on metaphysical matters, much of what I have

said throughout this paper has highlighted the close interdependence that obtains between methodology and metaphysics.

Moreover, we have seen some reasons to push back on Paul's claim about the lack of robustness of temporal experience, both empirically and metaphysically. As Paul herself notes, the anti-reductionist who insists that the experience of temporal passage and "intrinsic time" is real can maintain that it is indispensable for understanding the flourishing or disintegration of an organism within a given environment. As she puts it: "successfully perceiving or detecting motion is one of our most cognitively basic functions and is essential to our success as functioning agents in the world, he can extend this to the way we seem to perceive the motion of passage and the centrality of such perceptions to successful functioning, to justify his claim that we must really be detecting passage" (Paul 2010, 338). This is part of evolutionary biology's famous "four Fs" that are argued to be selected for, including the visual system (cf. Noë 2004): fighting, fleeing, feeding, fornicating. We might add that bodily motility and bodily intentionality seem from the beginning of life to be temporally tensed: proprioception is evident in uterine and early neonatal life, and seems to require some kind of experience (no doubt inchoate) of time and passage, even if questions regarding the carriers or "vehicles" of this content of experience are not thereby settled. It does, appear, however, to be reasonable to seek an understanding of an "intelligible interplay" between such levels as Wheeler suggests (Wheeler 2005, 232), and, contra Paul, deciding what this might consist in is not just a matter of a philosophical intuition about the reality of temporal experience versus a mature scientific account that is well justified. While part of the argument is indeed that we have some evidence for intrinsic time from "within" our first-personal experience, other considerations must also be adduced, including that such temporal experience seems to be presupposed by reductionist programmes, that those attempted reductions have not yet convincingly borne fruit, that intrinsic time seems empirically plausible and even naturalistically respectable, playing a role in neurology, biology, and some of the new sciences of the mind associated with 4e cognition. We might even attempt to contest the physics that is essentially committed to timelessness (see Smolin 2013). Finally, and most weakly, in the absence of any good reductionist account of temporal experience, anti-reductionism might be said to hold as the default position. But I hope to have made a stronger case than that. There are plausible reasons for insisting on the irreducibility of lived time in regard to objective time, or an atemporal sequence of events. That does not entail

that philosophy must only concern itself with that domain. It does not justify the methodological position that the first-person perspective should be privileged. If it is true, however, it does offer some justification for an anti-eliminativism and anti-reductionism about the first-person perspective, which are central dimensions of many versions of scientific naturalism.

Notes

1. This point is indebted to Marilyn Stendera.
2. Such remarks suggest the potential significance of temporality for the "placement problem" concerning naturalism and the so-called "4Ms" that present as an explanatory gap or agenda—Mind/Mentality; Meaning; Morality; and Modality (Price 2004).
3. The same charge might be raised against this paper—that is, that it involves an ontological inflation through temporal experience similar to dualist posits based on qualia (cf. Paul 2010, fn. 12). Perhaps, but I hope to show that my argument has certain features that such arguments do not. The "spookiness" is at least somewhat gone, since some significant research programmes in empirical science are part of the picture and my philosophical armchair is more a posteriori than (say) Jackson's in the knowledge argument, but for that very reason my argument is also weaker, more inductive than deductive.
4. Such an argument bears some relationship to contemporary presentism, which insists on the reality of properties of "here" and "now," and these are indeed part of what we are calling intrinsic time. However, my view is not reducible to presentism, since it is not committed to saying only the present, or only the "here" and "now," is real (temporal *dynamism* is perhaps more accurate).

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CHAPTER 3

Phenomenology and the Scientific Image: Defending Naturalism from Its Critics

Richard Sebold

Phenomenology Contra Naturalism

At the beginning of the twentieth century, why did Husserl think a new philosophical method was needed? *Why phenomenology*? For Husserl, what primarily motivated the development of a new philosophical perspective were the failures, as he saw it, of the then dominant schools of philosophy. One such school singled out by Husserl was naturalistic philosophy, or roughly trying to answer philosophical problems by using the scientific method. So while phenomenology was to be a rigorous science, it was explicitly cast as an alternative to and a progressive step beyond *scientific naturalism*.[1] Why phenomenology? In part, to overcome the inadequacies of naturalism, according to Husserl (1965).

But what exactly is naturalism? The notion of naturalism is normally thought to come in two separate varieties: one metaphysical and one methodological. Metaphysical naturalism claims that the entities that exist in the world are those that are quantified over by our best scientific theories. Metaphysical naturalism is often characterized as being synonymous with *physicalism*, which is the view that what exists are the entities posited in physics. Thus, for the physicalist, if anything is either not explicitly a part of physics or not reducible to, however that is to be construed, a base that can be described in the language of physics, then it does not exist. While most metaphysical naturalists might also be physicalists, the two are not necessarily the same thing. For anyone who believes that there are unique and irreducible facts within the biological domain, they would be classified

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as non-naturalistic according to the naturalism as physicalism definition. But there is a world of difference between the non-reductive biologist and the kind of metaphysical non-naturalism of those who talk to Gods or heal themselves with cosmic energy fields. So I think any fair conception of metaphysical naturalism must allow for non-reductive variations. Besides, what is crucial for the metaphysical naturalist is the connection between *science* and one's ontology, not just physics and ontology.

The methodological naturalist holds that the appropriate methods to investigate and gain knowledge about the world are, broadly, the methods of the various sciences. Of course there is no fully articulated algorithm which one must follow in order to be deemed as practicing science. Instead, the scientific method is much more like a family resemblance concept that includes overlaps and divergences. This would incorporate the techniques of hypothesis formation, prediction, observation, data analysis, and theory formation, and would include theoretical virtues such as consilience, explanatory depth, and parsimony. These can be considered as the general characteristics of all empirical inquiry.[2]

Most naturalists would likely consider themselves naturalists in both senses. However, strictly speaking, the two can come apart. One could be a metaphysical naturalist while also believing there are non-scientific ways of knowing about science's ontological posits. Conversely, one could believe that even though science is the only way to *know* anything about the world, through faith or some other means she comes to believe in things that are not found in any scientific theories.

With this dual conception of naturalism in view, one can be an anti-naturalist in various ways, for example, rejecting either metaphysical or methodological naturalism or both. Husserl, and as I'll show in more detail in what follows, is an anti-naturalist in both senses. Furthermore, skepticism of scientific naturalism is a common characteristic of Husserl's phenomenological successors. The ontic-ontological distinction found in Heidegger (1962), which is retained albeit in modified forms in both Merleau-Ponty (1958) and Sartre (1956), restricts both elements of scientific naturalism. There are aspects of the world, the ontological realm, that cannot be investigated by the methods of science, which are only appropriate to ontical investigations, and therefore, not posits within some scientific theory. Their natures are different from or more than what science says of them. So it appears that the very origin of classical phenomenology is tied up with a rejection of naturalism; it's not only Husserl who answers the question of 'why phenomenology?' in the

way that he does despite the many differences between the pioneers of phenomenology.

More recent phenomenological developments are not as hostile to the scientific perspective. These neo-phenomenologists have a greater appreciation of the relevancy of scientific findings, in particular, those emerging from the cognitive sciences, to common phenomenological questions and concerns. They also have a greater appreciation of empirical methodology with less of an emphasis on treating phenomenology as a 'rigorous science'. However, these neo-phenomenologists are still skeptical of strong forms of scientific naturalism, which ignore or diminish the importance of subjective, lived experience with some even going so far as to declare that the self is an illusion.[3] They favor instead a weak or liberal form of naturalism, which makes room for the self and first-person way of knowing. So, again, it appears as if antipathy toward strong scientific naturalism is part of what it means to practice phenomenology.[4]

Despite this phenomenological consensus on the limits to naturalism and the need for an alternative, I think the naturalistic perspective has much more going for it than the phenomenologists are prone to admit. To back up this claim, my aim in this paper is to identify and assess specific phenomenological arguments against scientific naturalism. In particular, I will respond to three broad types of anti-naturalist phenomenological arguments with several variations: the metaphysical, the semantic, and the methodological.

I should disclose at the outset that not every argument, either type or token, is entertained by each phenomenologist. Moreover, not every single possible variant of each argument will be discussed below due to a lack of space and fortitude. With each argument, I try to distil the spirit of the charge against naturalism instead of engaging in detailed textual exegesis. As a result, my discussion will tend to be more general than not in the anticipation that I can defend naturalism against a greater number of detractors who have made broadly similar unfavorable remarks. This means that, at the very least, I can really only hope to disrupt the anti-naturalist consensus among phenomenologists by raising doubts about the effectiveness of some of their favorite criticisms of naturalism, although the stronger result of a definitive refutation would be even more welcome. Additionally, I will *not* be considering the general viability of the phenomenological method. My principle task is then to elucidate why these anti-naturalist arguments are deficient and to intimate how this might cause a problem for the continued need of the phenomenological method.

The Metaphysical Argument Against Scientific Naturalism

Which research methods are appropriate in any given context depends upon the nature of what is being investigated. For instance, if some object does not reflect light observable by the naked eye, then it would not make much sense to try to study it without the aid of instruments that register light beyond the visible spectrum. Or, similarly, if supernatural entities exist, then the methods of the *natural* sciences would be all but useless for *direct* study. Scientific naturalism, on the other hand, treats all objects as of the same natural order, which is why it believes its methods, broadly speaking, are appropriate across the board.[5] Whatever phenomenon one is interested in studying, because it is wholly natural, science is how you examine it. However, according to some phenomenologists, particularly Husserl,[6] there are some phenomena that are of a certain nature that *it is inappropriate to investigate them via scientific methodology*. Therefore, to investigate them properly, a different method must be used, and phenomenology is just such a method. The metaphysical argument against naturalism is thus based on a set of claims about the existence of non-natural phenomena, which are precluded from natural scientific explanations.

To justify this argument, the phenomenologist needs to put forward plausible candidates for being non-natural phenomena. I think two in particular are the usual suspects for being beyond the purview of science: logic/mathematics and consciousness.

The Ideality of Logico-Mathematical Objects

The classic way of treating logic and mathematics naturalistically is to think of them as psychological modes of thinking. A logical inference, for instance, is not some abstract law but a concrete thought process. If this is correct, then the various psychological sciences would be perfectly adequate in understanding their natures, hence why this view is known as *psychologism*. Despite being sympathetic to psychologism early on, Husserl later unequivocally rejected it, with or without the help of Frege. In fact, Husserl's 'Prolegomena' to the *Logical Investigations* (1970a) is thought to be *the* definitive refutation of psychologism.

In its place, Husserl adopted a type of idealism that treated logico-mathematical objects as transcending the mundane world.[7] It is not just the case that, for example, logic is normative in the sense that it tells one

how *to* think instead of how one *does* think as a matter of fact and therefore cannot be treated naturalistically. Rather, Husserl's idealism about logico-mathematical entities sees them as being of a radically different nature than ordinary, worldly objects. While there might be concrete instantiations of triangles, the essence of triangularity itself is not exhausted by its existing instances, and it is this essence that is the proper object of mathematical analysis. Science might be able to speak legitimately about triangles found in the trusses of bridges or even how we cognize about them, but it cannot, *in principle*, adequately discuss triangles in their ideal form. So, in general, the ideal existence of logico-mathematical objects proves that naturalism is false; only an ideal science like phenomenology is capable of such a task.

The Unique Substance of Consciousness

Again for Husserl, the second phenomenon that resists a naturalistic treatment is consciousness. Even early on in the development of phenomenology, Husserl accepted Franz Brentano's characterization of the mental as being intrinsically intentional, which is what distinguishes it from material objects. In Brentano's words,

> [e]very mental phenomenon is characterized by what the scholastics in the Middle Ages called the intentional (and also mental) inexistence of an object, and what we could call, although in not entirely unambiguous terms, the reference to a content, a direction upon an object. (Brentano 1960, 50)

Assuming Leibniz's Law—A = B if and only if whatever is true of A is also true of B—consciousness cannot be identified with some physical realization because the latter categorically lacks the attribute of intentionality, which is one of, if not, *the* mark of the mental.

In *Ideas I* (1969), Husserl continues to argue that consciousness is unique, and subsequently, should be treated not as just another material thing constituting part of the natural world. This is infamously defended in Husserl's thought experiment about the annihilation of the world:

> let us think of the possibility of non-Being which belongs essentially to every Thing-like transcendence: it is then evident *that the Being of consciousness*, of every stream of experience generally, *though it would indeed be inevitably modified by a nullifying of the thing-world*, *would not be affected thereby in its*

> *own proper existence. … Thus no real thing*, none that consciously presents and manifests itself through appearances, *is necessary for the Being of consciousness itself* (in the widest sense of the stream of experience).
>
> *Immanent Being is therefore without doubt absolute in this sense, that in principle nulla 're' indigent ad existendum.*
>
> *On the other hand, the world of the transcendent 'res' is related unreservedly to consciousness, not intended to logical conceptions, but to what is actual.*[8]

So, for Husserl, consciousness is not only a substance apart from the transcendent things of the natural, but it is also the more foundational substance upon which the rest of the world depends. Clearly then, consciousness cannot be investigated by the natural sciences because it is non-natural, but the nature of consciousness also poses a problem for the scientific attitude because it is commonly accepted that the dependence relationship is the opposite of how Husserl sees it. The natural attitude of science is that material substance is the ground of everything, including consciousness, so a reversal of the grounding relationship casts doubt upon the primacy given to scientific explanations.

Toward the Naturalizing of Logic and Mathematics

The road ahead for the naturalist intent on countering an anti-naturalism about logic and mathematics is certainly arduous. Moreover, any adequate response would require a fully fleshed out alternative to Husserl's logico-mathematical idealism. It would not be sufficient merely to point out that Husserl's own neo-Platonic perspective suffers from its own set difficulties, for example, how are we able to come to know these radically ideal objects, and how are they able to interact with the non-ideal realm?

Instead, I want to at least point to plausible naturalistic reconstructions of logic and mathematics. In particular, Penelope Maddy (2007) has sketched how we might go about bringing these abstract discourses down to Earth. Interestingly, regarding mathematics, she contests that the kind of mathematical theories that have had the most empirical success are not those normally considered pure, but were developed with their application in mind. This makes the unreasonable effectiveness of mathematics seem much more reasonable. But even if this were not the case, Maddy provides an evolutionary explanation for certain innate mathematical (and logical) ways of thinking, which were selected because they corresponded to naturally existing patterns and relations. If certain parts of our mathematical cognition are the

result of evolutionary pressure and real world patterns, then there is really no such thing as *pure* mathematics, in the sense that mathematical reasoning, even if not explicitly so, will always be contaminated by empirical influences albeit from our evolutionary past.

Naturalizing logic might seem to be even more difficult due to its normativity, but this actually helps. How one should reason depends upon what one is trying to achieve. Thus, logic is only conditionally imperative rather than categorically so. Changing one's goal might change the preferred rational strategy. But once a goal has been set in place, it is an empirical question which way of reasoning is best suited to obtaining it. This then undercuts the need to posit ideal logical objects because a perfectly naturalistic explanation is available in order to account for logic's normative force. Husserl would forcefully object to the relativism implied by this conception of logic, but it is not clear that logical monism is correct; perhaps pluralism is the answer.[9]

Furthermore, with the subsequent flourishing of naturalism within philosophy itself, from Quine onward, anti-psychologism can no longer be taken for granted. Combining this insight with the naturalistic sketches presented above, there is, at the very least, a plausible way of conceiving of logic and mathematics as not being exceptions to the ontological monism of the scientific attitude, thereby blocking Husserl's first metaphysical route to non-naturalism.[10]

Long Live Cognitive Science!

Arguing against Husserl's second metaphysical route to non-naturalism is both easier and more difficult. The past 100 years of development in the cognitive sciences has made dualism (almost) totally unsupportable. In other words, given what we know now about how consciousness is realized in the brain, the case for treating the mental as a unique substance, let alone a more foundational one, is increasingly hard to make. If a phenomenologist continues to insist on the metaphysical specialness of consciousness, she needs to appeal to better arguments than to something like Husserl's conceivability thought experiment about consciousness surviving the annihilation of the world, since it is unclear what, if anything, a thought experiment by itself can determine about the nature of reality.

Moreover, appealing to Brentano's distinction in order to deny the physicality of the mental is an example of the intentional fallacy.

Premise 1: Phenomenologists believe that mental states are intentional
Premise 2: Phenomenologists do not believe that material states are intentional
Conclusion: Therefore, mental states are not material states

To get around this objection, the phenomenologist enthralled by Brentano's distinction needs to admit the possibility that the two are the same, but perhaps an unlikely one, although the weight of the evidence from the cognitive sciences presents a compelling case. This is enough to undermine the in-principle argument that consciousness is so radically different from the rest of nature that science is incapable of investigating it.

One might get the impression that the naturalistic standpoint is at least committed to a reductive materialistic account of the mental, but this is mistaken. If we suppose, contra Kim (1998), that non-reductive materialism is a coherent possibility, then, rather than phenomenology being vindicated, it is the special psychological sciences that benefit. As Jerry Fodor (1974) points out, a non-reductive perspective on the mental only counts against a certain naturalistic perspective on the relationship between the various sciences, that is, the view that ultimately everything is either explicable in the language of physics or must therefore be ontologically eliminated. But this is perfectly compatible with another naturalistic perspective that treats each science, from physics to psychology, as its own exclusive explanatory domain. In other words, psychology is legitimate as a unique area of study even if it cannot be reduced to some micro-physical base. I am not endorsing this picture of inter-theoretic relations between the sciences. All that I need currently from this discussion is the realization that even if consciousness is irreducible to some physical substrate, this does not foreclose a *scientific* understanding of the mental. The non-reducible nature of consciousness would call for the necessity of a special science, just not phenomenology.

The Semantic Argument Against Scientific Naturalism

As mentioned above, the metaphysical argument against scientific naturalism is primarily a Husserlian concern; other phenomenologists were less idealistic, in the various senses of this term. A more common criticism against naturalism focuses on the very intelligibility of scientific theories and concepts, that is, the way in which science becomes *meaningful*, rather than what kind of non-natural phenomena are thought to pose a problem for the imperialism of scientific explanation.

The scientific image tells us, among other things, how we are to understand ourselves and the world around us. But the very meaning of the scientific image, according to these phenomenologists, necessarily traces back to the pre-given lifeworld. That is, the very intelligibility of the scientific project depends upon the meaning of the pre-theoretical lifeworld. Therefore, the scientific image can never replace, or even substantially revise, the understanding that comprises the lifeworld since this would be self-undermining. Thus, the scientific perspective is asymmetrically dependent on the lifeworld. The argument here seems to go like this:

1. The semantic content of science is grounded in the lifeworld.
2. Any attempt to transcend this ground makes the scientific image incoherent.
3. Consequently, the pre-theoretic lifeworld must always be preserved if science is to be meaningful,
4. Only phenomenology can adequately disclose the sedimentary meaning of the lifeworld, which animates scientific practice.

This semantic argument against naturalism is usually cast as a claim about the very meaning of scientific discourse, hence my characterization of it as dealing with 'content' (1 above). However, there is also a claim about the necessity of a non-scientific method, the task of which is to unearth the semantic content (4 above). These are separate claims because it could be the case that although the meaning of scientific theories and terms does not ultimately trace back to the lifeworld, the only adequate way of accessing this meaning is through phenomenological investigation. Both of these points assert different ways in which scientific naturalism is limited due to semantic issues: either scientific discourse is forever tied to a pre-theoretic meaning structure and thus can never surpass it, or scientific methods are necessarily incomplete because, in order to access the meaning of certain terms crucial for scientific theorizing, a non-naturalistic, first-person perspective is needed, that is, phenomenology. I will deal with each of these variants of the semantic argument in turn.

Experience and the Meaning of Science

Versions of the first semantic argument pop up throughout the writings of the principal phenomenologists. Husserl in *The Crisis of European Sciences and Transcendental Phenomenology* (1970b) made the foundational role

played by the lifeworld in grounding science his central concern. According to Cristina Lafont (2000, 179), for Heidegger,

> understanding (and not knowing) is our primary or fundamental relation to the world, [and that this means that] our experience (and thus its objectivity as well) does not come about through knowledge and its conditions, but instead arises as a result of our prior understanding. This means that such an understanding fulfils a *world-disclosing* function, for it is only through understanding that *intraworldly* entities become *accessible* as such.

And since science is a way of *knowing*, it depends, as a transcendental condition of possibility, upon a thoroughly linguistic pre-theoretical understanding.

But perhaps the clearest expression of a semantic limitation to scientific theorizing comes from Merleau-Ponty (1958, 502) in his *Phenomenology of Perception*:

> For what precisely is meant by saying that the world existed before any human consciousness? An example of what is meant is that the earth originally issued from a primitive nebula from which the combination of conditions necessary for life was absent. But every one of these words, like every equation in physics, presupposes *our* pre-scientific experience of the world, and this reference to the world in which we *live* goes to make up the proposition's valid meaning. Nothing will ever bring home to my comprehension what a nebula that no one sees could possibly be.

In this passage, one can see the clear semantic connection between the language of science and some pre-given lifeworld that grounds the former. Any attempt to sever this connection would render scientific discourse literally meaningless.

This version of the semantic argument I think rests on a certain semantic assumption. In particular, versions of this argument tend to rest on a verificationist or empiricist view of meaning, that is, the meaning of a term depends upon possible experience. For example, the content of the concept *tree* is constituted by past or possible future observations made of trees. More controversially, even the concept *atom* or *nebula* only has sense if it is tied back to some possible observation. Thus, scientific terms and theories about unobservables are mere abstractions out of our lifeworld that contains a rich pool of lived experiences that continually serve as the ground to which we must constantly return.

But the content of scientific theories, including their operative concepts, transcends the empirical/pre-theoretical data that is part of the former's development. Basically, no one currently accepts a verificationist view of scientific meaning and for good reason. As Thomas Baldwin (2004, 20) explains in a commentary on the above Merleau-Ponty passage,

> [e]ven though we may rely on ordinary pre-scientific experience to help fix the reference of terms like 'nebula', this method of reference fixing is just a ladder we climb before we dispose of it. The meaning, or reference (there is no significant distinction in this case), of 'nebula' is a type of stellar system, and in coming to understand what nebulas are one also learns that the existence of nebulas is wholly independent of that of human beings, and indeed of any intelligent consciousness.

The basic thrust of the response here is that even though scientific theorizing might start with certain experiences, this poses no restrictions on where it will ultimately end up. In other words, the genesis of science does not serve as the legitimating force for all subsequent scientific development.[11] So, since a type of verificationism/empiricism about meaning seems to be motivating this phenomenological pushback against the totalizing nature of scientific practice, and this theory of meaning has been soundly rejected, then this argument fails and the naturalist has no need to worry.[12]

Phenomenology as Conceptual Analysis and Its Scientific Alternative

But as I previously said, there is a second way of construing the semantic argument against naturalism, one that does not saddle phenomenology with a commitment to anything like verificationism. Instead, phenomenology is used to *determine* the content of our concepts, not a claim about what *constitutes* the semantic content of our terms and theories. For example, take the following transcendental claim: intentionality is the condition of possibility for consciousness. Rather than thinking of this as a metaphysical assertion about the nature of consciousness, perhaps it is an example of an explication of the concept *consciousness*, that is, we apply the *concept* 'conscious' to only those phenomena that display intentionality. So, phenomenological analysis is something like *conceptual analysis.*

The anti-naturalist import animating this conception of phenomenological practice is the thought that a third-person, scientific approach cannot successfully carry out this conceptual task. Only an internal perspective of the language user could accomplish this. Moreover, conceptual analysis is an *essential* component of competent science. To adequately study the nature of consciousness, science must first define what exactly it means for something to be conscious. This latter task involves conceptual analysis, which can only be done from a first-person perspective. Scientific practice, then, would be grasping in the dark if it were not for the conceptual contributions made via the phenomenological method. Good science is phenomenological science.

I think the scientific naturalist has two potential responses. First, the development of experimental philosophy might show a possible alternative to the standard practice of conceptual analysis. It uses experimental techniques to elicit the responses of language users, and involves cross-cultural analysis.[13] It is similar to standard accounts of conceptual analysis except that its results no longer depend upon the personal intuitions of one or more philosophers. Why exactly should we trust the reliability of a phenomenologist in determining what the essential aspects of any given concept are? Surely to trust a proposed analysis, it must be tested against the semantic intuitions not only of other philosophers from different traditions but also those of non-philosophical language users. Thus, a successful analysis of a concept requires the use of third-person, scientific techniques, for example, cross-cultural surveys.[14]

Second, and independently of the first, the model of concepts that allows for standard conceptual analysis is possibly seriously mistaken. The view of concepts that emerges out of discussions in psychology treats them as prototypes that have vague boundaries. In other words, concepts are much closer to family resemblance notions, and just as there are no necessary and sufficient ways of being a member of a family, there are no necessary and sufficient conditions for the application of concepts within a proposition.[15] This means that even if something like experimental philosophy is incapable of furnishing the precise application boundaries of concepts, the very nature of concepts themselves undermines any such attempt, phenomenological analysis included.

The Methodological Argument Against Scientific Naturalism

This second way of formulating the semantic argument against scientific naturalism overlaps with the third cluster of ways that phenomenologists

reject a totalizing naturalistic perspective. Rather than claims about the limits of science based on non-natural phenomena or the semantics of scientific theories, phenomenologists take issue with the methods employed in scientific practice. In particular, phenomenologists see scientific methods as being incomplete and unable to gain certain types of knowledge about the world. So, while what phenomenology investigates might be the same thing as what science studies, contra the metaphysical argument against naturalism, it does so in a unique way.

I think there are two versions of this argument: (1) Phenomenology furnishes us with a priori, necessary knowledge of the essences of phenomena, for example, consciousness *as such*, something that the scientific perspective cannot do since it can only produce contingent knowledge at best[16]; and (2) phenomenological accounts are first-person descriptions, which cannot be reduced or eliminated in favor of a purely third-personal, scientific explanation, which itself requires a first-person perspective.[17] In other words, first-person experience in general cannot be perfectly translated into a third-person register. Counting in their favor is the fact that both versions of the methodological argument escape the problems of the metaphysical and semantic arguments. Ultimately, however, neither formulation of the methodological argument calls for any substantive revisions to scientific naturalism.

Metaphysical Necessities and the *A Priori*

With respect to the first version of the argument, it is no longer taken for granted that there cannot be *a posteriori* necessities. Since the work of Saul Kripke (1980) and Hilary Putnam (1975), most accept that scientific identity statements, for example, water = H_2O and natural kind terms, count as necessary truths *even though they are scientifically discovered*. In other words, and contra the phenomenologist, science can discover essences.

But an even more important consideration that counts against this version of the methodological argument is the realization that supposed a priori knowledge might not be immune from empirical modifications. Probably the most well-known argument against the very idea of pure a priori knowledge comes from the writings of W.V.O. Quine who thinks that beliefs hang together in a holistic manner much like a web. The truths of mathematics and logic are no different in kind than observational beliefs although they occupy a position closer to the center of the web, which makes them more resistant to revision but not completely immune. As Quine remarks in his 'Two Dogmas of Empiricism' (1980, 41), 'Our

statements about the external world face the tribunal of experience not individually but only as a corporate body'. What this means is that being confronted by a recalcitrant experience does not determine which specific belief needs revision or elimination. Beliefs located at the periphery of the web, for example, observational beliefs, are the easiest to amend or discard but there is nothing in principle stopping someone from tinkering with one's core beliefs, which include many thought to be a priori. And this is why Quine thinks that the set of a priori beliefs is empty.

To better see why, consider the following reconstruction of Quine's master argument against the a priori:

1. The belief in *S* is a priori.
2. We cannot falsify *S* by experience.
3. The belief in *S* is used together with other beliefs to make empirical hypotheses.
4. These empirical hypotheses can turn out to be false.
5. We are free to choose to reject *S* rather than the other beliefs to accommodate false predictions.
6. 5 contradicts 2.
7. Hypothesis 1 must be false.[18]

A hypothetical example in which central beliefs might be abandoned due to empirical pressures includes rejecting classical logic in light of quantum mechanics. A real historical example would be the shift away from a Euclidean geometry as a result of Einstein's theory of general relativity. Whatever the example, the conclusion is the same: pure a priori beliefs do not exist. All beliefs are subject to empirical confirmation or falsification. Therefore, there is no such thing as a priori knowledge and no unique way of knowing different from the empirical attitude of science.

Unsurprisingly, the specifics of Quine's argument have been challenged on various grounds.[19] Even if the details of Quine's position are rejected, its general thrust can be salvaged. Kornblith (2000, 68) remarks that much of what was previously thought to be a priori knowledge, 'claims which seemed wholly transparent to reason', in the end proved false. The long line of historical examples from science, logic, mathematics, and (possibly) phenomenology of purported a priori knowledge that turned out to be erroneous should increase one's skepticism to future a priori claims about essences or otherwise. If there is something like rational insight, it doesn't

appear to be very reliable. Moreover, such examples put significant stress on the idea that beliefs can be justified wholly independent of experience.

In the end, Kornblith judges that the notion of a priori justification is epistemically idle.

> Surely it would be unreasonable, given the extent to which we have been mistaken about such matters in the past, to turn our backs on questions about the extent to which apparently a priori claims fit with current empirical theories. Questions of this sort are always worth entertaining, even if, in the end, we should find that an apparently a priori claim continues to seem justified entirely independent of empirical information. So from the point of view of actually seeking to provide good reasons for believing a claim, its relation to empirical claims will always be relevant. (ibid. 71)

Perhaps, as it turns out, the skeptics of a priori knowledge are wrong, and we turn out to be endowed with a reliable mechanism for rational insight. Nevertheless, from the perspective of the epistemic agent who lacks all information, including the truth about our rational abilities, assessing the extent of justification will always invoke issues surrounding coherence with our scientific knowledge. Hence, practically speaking, the category of a priori knowledge is useless. The only sound methodology in light of past experiences is to always check our beliefs, no matter how remote they might seem, against empirical considerations. So, even if the in principle argument against a priori knowledge fails, the category is not automatically rehabilitated. For the phenomenologist, this means that the purported deficiency regarding a priori knowledge in the scientific method is illusory. In fact there is no pure a priori alternative to a method that must always take into account empirical considerations. This unique way of knowing does not exist.

The First-Person Perspective

But, instead of invoking an a priori grasp of essences, perhaps what sets phenomenology apart from the scientific way of knowing is the importance of the first-person perspective, and this is what causes the limitations to scientific naturalism. However, I think this isn't fair to actual scientific practice. It is not the case that the first-person point of view is entirely ignored, but rather the first-person report is one piece of evidence, although highly fallible and unreliable, that is to be incorporated

with all other types of evidence to produce an adequate theory. In other words, the first-person perspective is already part of scientific practice; it just does not play a foundational role.[20]

But more crucially, it is not clear that the first-person perspective can distinguish itself enough from the third-person perspective in order for this argument to have any bite. The first-person knowledge we have of ourselves is regularly thought to involve a privacy[21] and transparency of the self that is unique to ways of knowing. Whereas science is highly inferential, self-knowledge is direct, unmediated. The disparity between these ways of knowing is a generating factor in the perennial problem of the existence of other minds. My access to the mind of another person is always mediated by interpretation, which causes it to be exceedingly fallible, while the access to my own mind is unproblematic due to its epistemic clearness. Overall, self-knowledge via phenomenological analysis is just a different kind of way of knowing and cannot be made to fit the model of scientific knowledge.

The obviousness of the first-person perspective has led to its being privileged in matters epistemic. But why not question this privileging? Instead of self-knowledge causing problems for scientific knowledge, maybe scientific knowledge should raise caution concerning first-person knowledge?[22]

First, it is far from clear that we are very reliable when it comes to introspecting on our internal states. Relying on work done in the cognitive sciences, Eric Schwitzgebel forcefully concludes that:

> We fail not just in assessing the causes of our mental states or the processes underwriting them; and not just in our judgments about nonphenomenal mental states like traits, motives, and skills; and not only when we are distracted, or passionate, or inattentive, or self-deceived, or pathologically deluded, or when we're reflecting about minor matters, or about the past, or only for a moment, or where fine discrimination is required. We are both ignorant and prone to error. There are major lacunae in our self-knowledge that are not easily filled in, and we make gross, enduring mistakes about even the most basic features of our currently ongoing conscious experience (or 'phenomenology'), even in favorable circumstances of careful reflection, with distressing regularity. We either err or stand perplexed, depending—rather superficially, I suspect—on our mood and caution. (Scwitzgebel 2008, 247)

If the information about ourselves obtained through introspection is unreliable, then once again this puts strain on the notion of self-knowledge *qua* knowledge. And since we are prone to error concerning our own

selves, then that means whatever self-beliefs we have are not as transparent as normally thought.

Indeed, this is why Peter Carruthers (2011) titled his book *The Opacity of Mind*. In it he develops a theory of self-knowledge, what he calls the Interpretive Sensory-Access Theory, as a way of unifying various results in cognitive science. While the details of his theory are not necessary for present purposes, what is important is his claim that the opacity attributed to our self-access is due to the thoroughly interpretive nature of the way we go about knowing ourselves. For Carruthers, this means that *self-knowledge is no different in kind* than the way we come to know the internal states of others. Both involve inferential efforts, perhaps only implicitly, based upon, among other things, bodily position and movements. One demonstrated consequence of this is the way we consistently confabulate stories about the sources and reasons for our beliefs, the nature of our intentions, and the timing of our decisions.[23] Such poor track records in other contexts would call for the relinquishing of the title of being competent knowers. In other words, it'd be difficult to speak of knowledge here at all.

The interpretive nature of self-access also points to a way in which the distinction between the first-person perspective on the one hand and scientific knowledge on the other breaks down. Similar to a hypothesis detailed by Wilfrid Sellars (1991b) in his 'Empiricism and the Philosophy of Mind', psychological studies over intentional knowing involving infants suggest that the way we come to know ourselves and others may not be that different from the more sophisticated way in which scientists theorize. Here is Alison Gopnik summarizing studies conducted by her and others:

> Empirical findings show that the idea of intentionality is a theoretical construct, one we invent in our early lives to explain a wide variety of evidence about ourselves and others. This theoretical construct is equally applicable to ourselves and others and depends equally on our experience of ourselves and others. (Gopnik 1993, 2)

Thus, the way we know ourselves is just as much theory-laden as how we know the intentional states of others. She goes on to describe these implicit (folk) theories that infants develop as defeasible and revisable in the face of recalcitrant evidence. There is nothing inviolable about the common sense way in which we interpret our own intentional states. Therefore, it is an open possibility that our folk psychology could be massively in error just as our discredited folk theories of biology and physics.

This thought has been a common element in the writings of Paul Churchland. In his (1981) 'Eliminative Materialism and Propositional Attitudes', Churchland speculates on the very real possibility that the intentional idiom of our folk psychology is irredeemably wrong and should be eliminated in favor of a more accurate theory based in neuroscience. Once this new theory is learned, we can employ the terminology in the same contexts where we previously relied upon our folk theory.[24] This complements the Sellarsian idea that the distinction between theory and observation is methodological rather than substantive. That is, terms that were once theoretical since they were treated as posits can be subsequently utilized in reporting roles. Thus, a theory constructed for the purpose of explaining the intelligent actions of others can switch roles and serve as the vocabulary with which one can describe their own internal states.[25]

What this means for the idea that the first-person point of view is distinct from the scientific third-person perspective should be now more apparent. The way we go about knowing ourselves already incorporates theoretical aspects. This folk theory, while adequate in most everyday contexts, may turn out to be false once we learn more about our cognitive system. Thus, the ultimate truth of our judgments about ourselves will be determined by the shape of our mature cognitive science. Self-knowledge will only count as knowledge if it coheres with our best scientific theories. The idea that first-person knowledge is a distinct form of knowledge independent of scientific knowledge is unsustainable. We will only know ourselves when we scientifically know ourselves.

The Limited Nature of Science as a Vindication of Phenomenology?

Up to this point, I hope to have cast doubt upon the various arguments put forward in the name of phenomenology that purportedly demonstrate serious deficiencies with a scientific naturalist perspective. In a word, the phenomenological case against naturalism is far less assured than proponents like to believe. However, I acknowledge the possibility that my counterarguments will be insufficient for some toward providing anything like a definitive refutation of the phenomenological reservations concerning scientific naturalism. Again, at the very least, I've tried to make the viability of the naturalist perspective appear more plausible.

Suppose, on the other hand, that none of the above responses to the anti-naturalist arguments are anywhere near satisfactory. Suppose, in other words, I have seriously failed to achieve even my more modest aims. Does this then serve as a vindication of the phenomenological perspective? Does a successful negative case against naturalism imply, not in any strictly logical sense, positive justification for phenomenology? Without belaboring the point too much, I think the answer is clearly, 'No'. Unless naturalism and phenomenology are contradictory, rather than just contraries, the rejection of one does not thereby prove or even raise the likelihood of the other.

To show why this is the case, consider a similar context wherein scientific naturalism is contrasted with a religious perspective. Those defending the religious point of view often assert that because science, broadly speaking, cannot explain some phenomenon, for example, the origin of the universe or abiogenesis, then one is justified in holding that the religious explanation is adequate. Oversimplifying, if science cannot account for *x*, then God did it. Colloquially, this is known as the God of the Gaps Argument wherein proof of God's existence is allegedly found within the gaps of scientific knowledge. But such an argument could only begin to work if there is an independent, positive case for the religious epistemology responsible for the religious explanation. So even if scientific knowledge is limited in some domain, and perhaps necessarily so, this is not evidence that religious knowledge concerning the same domain *is not* limited. It is entirely possible that both science *and* religion are currently, or in principle, unable to comprehend the contested phenomenon. Thus, the religious believer cannot rest content with merely elucidating the defects of the scientific perspective; one must also show why his or her own perspective is worthy of acceptance.

Likewise, the same goes for phenomenology's contestation of naturalism. Merely showing that naturalism is inherently limited is not enough to justify the phenomenological method. Otherwise the phenomenologist would be propounding a Method of the Gaps Argument. There might be similar or unique problems concerning the viability of phenomenology, for example, skepticism over a priori reasoning or the extent to which phenomenology *actually* differs from introspection.

At this time, I cannot outline such a negative case against phenomenology, although I think such a case can indeed be made.[26] But neither do I need to go this extra step. All that is required at this time is the acknowledgment that a failure to defend naturalism against phenomenological

attacks does not result in the triumph of phenomenology. Perhaps whatever limits there are to the naturalist perspective are just the limits to what we can know and understand about the world period leaving no gap to be exploited by phenomenology.

Whither Phenomenology?

I began by remarking that part of the motivation for initially developing the phenomenological method and for its continued relevance in some philosophical circles relates to a supposed inadequacy in the naturalistic worldview. I then argued that these purported limitations vanish under unbiased scrutiny. What then are the consequences for the contemporary need for phenomenology? To begin to answer this, consider the following *Anti-anti-naturalist Phenomenological Argument*:

1. Phenomenology is needed because scientific naturalism is deficient.
2. The phenomenological arguments called upon to demonstrate the deficiency of scientific naturalism can all be adequately met.
3. Consequently, one of the primary motivations for the development and continued existence of phenomenology is no longer available.
4. This then puts tremendous pressure on proponents of phenomenology to show why their favored approach is at all needed.

Crucially, this argument does not claim to have undermined every possible reason for needing the phenomenological method. There might be various starting points that ultimately lead toward the establishing of phenomenology. Importantly, however, my argument does neutralize a traditional and rhetorically significant justification for the need for phenomenology. The next move then belongs to the champions of phenomenology to provide a different and better answer to the absolutely necessary question: *why phenomenology*?

Notes

1. A note on terminology: in what follows, I use scientific naturalism and naturalism interchangeably. The qualifier 'scientific' is used to distinguish prominent strands of naturalism today from those that pre-dated the scientific revolution.
2. My formulation of what constitutes naturalism borrows from Papineau (2015) and Ritchie (2008).

3. For instances of the latter, see Metzinger (2003, 2009).
4. Indeed, Glendinning (2007) more or less defines phenomenology as an antipathy toward strong scientific naturalism. For examples of what I am calling neo-phenomenologists, see Gallagher and Zahavi (2008) and Reynolds (2016).
5. This metaphysical commitment of naturalism can either be an a priori methodological constraint or a pragmatic conclusion of previous attempts at explanation. In other words, the metaphysical uniformity of nature could just be a starting premise of the scientific perspective but is agnostic about the existence of supernatural entities or a judgment about the nature of the world based upon the previous explanatory failures that include supernatural posits. The latter conception of naturalism, although a stronger and therefore harder to defend claim, is, I think, the more widely held version of naturalism, so it will be the type I defend in this section.
6. Although the focus on transcendental structures among the early phenomenologists could place them in a similar situation as Husserl, depending on how those transcendental structures are construed.
7. Just how Platonistic Husserl's view is a controversial matter, but for my argumentative purposes later on, I fortunately do not need to take a stand on this issue.
8. Husserl, *Ideas*, §49. Note that the statement '*nulla "re" indigent ad existendum*' is traditionally used in characterizing a *substance*, in a metaphysical sense. This is important because it complicates the nature of transcendental consciousness and its relationship to the natural world, including the empirical ego.
9. See, for instance, Beall and Restall (2005).
10. It is worth pointing out that although Husserl's arguments against psychologism are more or less taken for granted in large parts of the philosophy profession, this might not be because of the quality of the arguments. Martin Kusch (1995) has chronicled the reception of Husserl's anti-psychologistic arguments and has pointed out that proponents of psychologism at the time presented powerful rejoinders that make it less certain that anti-psychologism triumphed due to the force of being the better argument. Instead, Kusch claims that sociological factors relating to the unwanted encroachment of psychologists into academic philosophy departments solidified a united front between the phenomenologists and Neo-Kantians, which sought to protect an intellectual space reserved for philosophical investigation. Thus, what explains the spread of anti-psychologism are non-cognitive worries about the precarious position of philosophy in a rapidly naturalizing academy.
11. This point is excellently expressed by Wilfrid Sellars in his 'Philosophy and the Scientific Image of Man' (1991a, 20).

12. For those who are still not convinced that there is anything fatally wrong with this conception of scientific meaning, please see Sebold (2014, ch. 6.3.2) for a fuller treatment.
13. For more on experimental philosophy, see Knobe and Nichols (2008).
14. A further problem for this phenomenological argument is posed by the scientific practice of explicitly defining the operative terms in ways that are dissimilar to their normal usage. So, while the notion of *measurement* is frequently employed in the discussions surrounding quantum mechanics, its meaning is sometimes not the same as the word's ordinary expression. In quantum mechanics, it specifically concerns the collapsing of the wave function out of a superposition, not something like observation via specialist instruments.
15. For more on this way of characterizing the nature of concepts and the negative consequences it has for conceptual analysis, see Ramsey (1992) and Papineau (2009).
16. Again, this is more of a Husserlian concern, but Heidegger, Merleau-Ponty, and Sartre, each in their own way, saw phenomenology as concerned with the study of essences, something which the natural sciences are incapable of doing.
17. This concern, on the other hand, is one shared across the phenomenological perspective and is the principal reason neo-phenomenologists are hesitant to endorse something like strong scientific naturalism.
18. This is taken from Mares (2011, 94).
19. See Mares (2011, §§6.7–6.8) for a discussion of some of the responses.
20. This characterization of the way that the scientific method handles the first-person point of view is similar to Daniel Dennett's notion of *heterophenomenology*. See Dennett (1991, 2005).
21. For an interesting suggestion of how we might be able to overcome mental privacy and meld our experience with another, see Hirstein (2012).
22. This is the stance taken in Kornblith (2012, 2013).
23. See Carruthers (2011, ch. 11) for more on confabulation.
24. This suggestion is also made in Churchland (1979, 1985).
25. For Sellars, this allows self-knowledge to be both private and sharable intersubjectively.
26. See Sparrow (2014) for the beginnings of such a negative case.

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CHAPTER 4

Enacting Productive Dialogue: Addressing the Challenge that Non-Human Cognition Poses to Collaborations Between Enactivism and Heideggerian Phenomenology

Marilyn Stendera

The discourse generated by interactions between phenomenological and scientific perspectives is characterised by a particularly rich exchange between the specific and the general, the foundational and the applicative. That is, discussions about the insights produced by particular collaborations often feed into and enrich (rather than only occurring in succession to) debates over fundamental questions about the very possibility of any genuine cooperation between these discourses. The dialogue between phenomenology and the sciences seems to recognise almost more than any other that the conditions of its existence in general can come into view much more clearly in light of the challenges and benefits that arise in the context of specific negotiations.

The present chapter seeks to take advantage of this dynamic. It will examine how one particular proposal for interdisciplinary collaboration deals with conflict between the perspectives that it asks to cooperate, in the hope of shedding some light on the kinds of negotiations that make for fruitful dialogue between the phenomenological tradition and the natural sciences more generally. The proposal in question—a call for sustained cooperation between Heideggerian phenomenology and the enactivist approach to cognitive science—is one that I have set out and defended in detail elsewhere;

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hence, for the purposes of this chapter, I shall proceed as if such a partnership is both desirable and possible (at least in principle).[1] While I will offer a very brief outline of the intersections between Heideggerian and enactivist perspectives that motivate these claims, I want to look at some of the challenges and opportunities that arise once this project is already underway and its interlocutors think that there is something in it that makes further negotiation a better option than simply abandoning the venture. The specific site of conflict that I shall focus on here is generated by the differences in scope between Heideggerian and enactivist analyses. That is, the parts of Heidegger's account that I want to bring into contact with enactivism analyse the structures of one particular entity—Dasein—while enactivism investigates features belonging to a very broad range of systems, which might lead one to question whether these perspectives have much of interest to say to one another. It is my contention that they do. While I cannot comprehensively address this problem in such a short piece, I shall here put forward one kind of approach that I think may work if developed further. I will suggest, moreover, that this proposed solution not only benefits the Heideggerian enactivist collaboration but also offers resources that can enrich how each individual discourse responds to significant debates arising within its native context. In doing so, I hope to illustrate some of the conditions that facilitate productive, rather than competitive, negotiations between phenomenological and scientific frameworks.

Preamble: Intersections Between Heideggerian and Enactivist Perspectives

The collaborative project I am referring to here is one that brings together Heidegger's early analyses of Dasein's purposive and intrinsically temporal Being-in-the-world with the model of cognition that developed out of Varela and Maturana's theory of autopoiesis.[2] Before exploring how it might negotiate one potential conflict, I want to summarise why I think this partnership is an inviting prospect in the first place. To this end, I will run through some of the main claims that I have made in previous work, focussing on what I take to be three significant points of intersection between the discourses; constraints of space mean that I can only sketch each link very roughly here.

One anchor mooring my claim that we ought to set up a more sustained dialogue between Heideggerian and enactivist thought lies in the

history that they have already shared. The ancestors of each discourse, so to speak, had significant contact with one another—a fact that has been studied in various other fields, yet rarely been brought to bear upon contemporary exchanges between enactivism and the phenomenological tradition. A prime example of this lies in the Heideggerian connections to the work of enactivism's philosophical forefathers, Hans Jonas and Jakob von Uexküll.[3] Jonas was, of course, a student of Heidegger's. More than this, he also famously engaged in an extensive critique of Heideggerian thought, one that revealed the close connections as well as tensions between their approaches—as well as a resonant repudiation of Heidegger's actions. Meanwhile, while we know less about what von Uexküll might have thought of Heidegger's ideas, we do know what the latter thought of the former. In *The Fundamental Concepts of Metaphysics,* Heidegger described von Uexküll's work as one of the most important advances towards bringing biology and phenomenology closer together.[4] He went so far as to suggest that von Uexküll's work invited a phenomenologically driven 'radical interpretation' that would enable it to realise its 'fundamental significance', and affirmed that 'the engagement with concrete investigations like [von Uexküll's] is one of the most fruitful things that philosophy can learn from contemporary biology' (Heidegger 1995, 263/383).

Beyond these historical connections, I also suggest that there are notable resonances between the content of Heideggerian and enactivist approaches. One of these lies in the way that each perspective describes the relationship between the entity at the centre of its narrative and the world that this entity negotiates. More specifically, it is my contention that the analysis of Dasein that Heidegger presents in *Being and Time* and the type of enactivism that focusses upon autopoiesis both strike a delicate balance between (a) emphasising the co-constitution of entity and world and (b) retaining a view of the entity as a centre of concern. Claim (a) refers to the insistence, present in both discourses, that entity and world are intertwined and co-constituting, shaping and defining one another so that neither can be understood as what they are—or even be what they are in the first place—in abstraction from the other. For enactivism, cogniser and world define one another; the former needs the latter, not only to produce the conditions for its existence and survival but also to be the context against which it defines itself as a self-generating unity.[5] The latter, meanwhile, is only intelligible as a *world* as well as an environment

because it is being navigated by an organism with needs and capacities that is capable of the relational meaning-generating process that is cognition.[6] This picture is, I think, deeply compatible with the way that Heidegger sets out the interdependence of Dasein—which, after all, *is* Being-in-the-world, 'is its world' (Heidegger 2009, 416/364)—and the world whose very worldhood is constituted by relations of purposive significance generated by Dasein's concerns, ends and projects. The second component being held in equilibrium, claim (b), is based upon both Heideggerian and enactivist perspectives maintaining a role for an entity, something whose concerns orient the meaning of its world, in their frameworks. For both discourses, there is a centre—not a self, an ego, a *res cogitans*, but a fundamentally world-situated locus of some kind—from which meaning-generation proceeds, one that relates to its world and participates in its world's being without being dissolved into it. Autopoietic, adaptive cognition by definition involves the self-maintenance and reproduction of a unity, permeable though its border is. Meanwhile, it is Dasein's striving for-the-sake-of-itself that orients worldhood; there is an ineluctable nexus, a perspective that is not eliminated or irretrievably dispersed even in the face of its ontological entanglement with its world. Both enactivism and early Heideggerian thought assert the inseparability of entity and world and reject traditional subject/world oppositions, yet neither takes this to necessitate surrendering the notion that there is a locus or core of concern to which the world is significant.

The other main conceptual sympathy between Heidegger's early thought and contemporary enactivism that I want to touch upon here is generated by the temporal structures operating in both accounts. Proceeding from an extensive Heideggerian exegesis that I cannot reproduce here, I have elsewhere defended a reading that ascribes three key attributes to the model of temporality which Heidegger sets out in *Being and Time*. These identifying features—which can be summarised under the headings of purposiveness, self-concern and futurity—can, I have argued, also be traced out in the process of cognition as enactivism describes it. I suggest that this connection has the potential to generate significant insights and benefits for both participants in the collaboration, a few of which I will mention in the next section; before I proceed, though, let me briefly explain what these shared temporal features are.

Firstly, I read the account of *Being and Time* as suggesting that temporality and purposiveness are entwined in an inseparable, mutually shaping

reciprocity, such that neither can be fully understood without taking into account the role of the other. I should note that this is a somewhat controversial claim, for the standard interpretation takes Heidegger to insist upon a unidirectional relation (in which temporality founds purposiveness). I contend, however, that there are significant textual and philosophical motivations for adopting a more complex, nuanced view. Returning to the features of Heideggerian temporality, the second attribute that I ascribe to it is an intrinsic connection to the self-concern of the temporal entity, as manifested in the temporal structuration of Dasein's concern for its own Being and striving for-the-sake-of-itself (both of which in turn also permeate and structure Dasein's lived temporality). Finally, I take the temporality of *Being and Time* to be weighted towards an indeterminate futurity, according a special significance to a radically open-ended directedness towards possibility as such.

As I explain elsewhere in more detail, I think that each of these dimensions of Heideggerian temporality can be recognised within the structures of meaning-enacting cognition. Autopoietic, adaptive cognition also evinces temporal purposiveness and purposive temporality. The enacting system's self-perpetuating striving is only intelligible through integration into a temporal continuum that meaningfully links past and present states with future possibilities, even as past, present and future are encountered in terms of the connections between problems, means and ends. This enacting cogniser's temporality is structured by the concern that defines it as a self-generating unity directed towards and by its own survival, a concern that is itself cashed out as the carrying over of the past entity towards further possibilities. Yet the cognising is also defined by its reaching towards an aim—its own continuation—that can never definitely arrive or be fully anticipated. Since self-maintenance requires the precariousness of a continued resistance, the possibility of the system's dissolution, final stability, only comes with annihilation. The end of self-perpetuation never arrives, for the struggle towards it can only end with death.

There is, of course, much more to be said about the details of this collaboration, particularly about the extent and consequences of the continuities that I have posited. This brings me to the next section, and the heart of this chapter, for the specific site of tension that I will examine is also a prime starting point for fleshing out some of the points that I raise above.

A Problem for Heideggerian Enactivism: Dasein and Other Autopoietic Cognisers?

The challenge to Heideggerian enactivism that I have in mind here arises when we consider the kinds of entities to which each perspective tends to apply its analyses. The aspects of Heidegger's account that come into play in the collaborative venture outlined above are all taken to be structures specific to Dasein. Enactivism, meanwhile, attributes meaning-enacting cognition to a vast range of systems. While there is some debate about how simple a system can be while still classifying as at least minimally cognising (and about just where any of these lines should be drawn), it is relatively uncontroversial to say that the class of enacting cognisers would embrace far more entities than just those which could be called Dasein. This difference creates a significant problem for collaboration between Heideggerian and enactivist perspectives. On the one hand, it would seem that a discourse which affirms the continuity between simple and complex cognisers would either lie in tension with or be (at best) indifferent to a phenomenology that focusses only upon one kind of entity. On the other, it also appears to be difficult to reconcile a Heideggerian perspective with the extension of the structures he posits in his account to other kinds of entities. Dasein, the Heideggerian might worry, has a special role for a reason, and it is unlikely that this could be preserved by a more ecumenical reinterpretation of its analyses.

Considering this issue from either a Heideggerian or an enactivist approach may well lead one to simply give up on their cooperation, or at least limit it only to those cases when enactivism might be particularly interested in one kind of cognition alone (and prepared to draw a hard and fast line between this cogniser and other entities). One reason why one might not want to do so immediately, at least if one sees any value in the insights that Heideggerian phenomenology can contribute to dialogues with the cognitive or other sciences, is that the problem outlined above—the seemingly restricted scope within which Heideggerian analyses can be applied—may undermine more and more of these exchanges. While disbanding the partnership is always an option, I think it is worth seeing if there is a way that we could have at least most of our Heideggerian cake and eat it, too.

Towards a Solution: Extending the Structures of Dasein

One approach that suggests itself here is to contend that Dasein may not necessarily be confined to humans alone. While the narrative of *Being and*

Time strongly suggests that Dasein belongs primarily to humans, the most explicit and direct statement we get from Heidegger in that text is the claim that Dasein is the 'entity which each of us is himself' (Heidegger 2009, 27/7). However, he also maintains that 'Dasein' is not a synonym for, nor equivalent to, 'human' or 'human being' (ibid. 71/45–75/50). So, it might be possible to conceive of the Dasein of *Being and Time* at least as a set of particular characteristics, with any entity that can meet the criteria qualifying as Dasein; even if (and this is a genuinely open 'if') humans have so far been the only ones to do so, there is no need to insist that this will continue to be the case.[7] While I think that this way of reconceptualising Dasein has merit, it also strikes me that it does not get us far enough; the connection between Dasein and entities that do not qualify as Dasein needs to be made more explicit. One way of moving further along this path, and the kind of response that I shall advocate here, is to argue for the extension of Dasein's fundamental structures, not just beyond humans, but beyond Dasein itself, such that other kinds of entities participate in some of these characteristics without having to be 'full-blown' Dasein. I think it is indeed possible to conceive of some of Dasein's structures being shared by other entities (particularly those which we would today classify as cognisers) and, moreover, to do without thereby completely dissolving the special position allocated to Dasein, because it remains possible to think of Dasein itself as something like the fullest instantiation of all of the structures Heidegger analyses. In my view, the purposive, self-concerned and future-weighted model of temporality that I ascribe to Heidegger presents itself as the kind of structure that facilitates such a perspective. If we deem it possible that versions of these basic structures are shared by all enactive cognisers, then the complexity of the way in which they shape, and manifest in, the striving of such organisms could form the basis for a spectrum of temporal complexity, one that we could use to compare and relate different kinds of entities.

Adopting such a position could ease further collaboration between Heideggerian and enactivist discourses. However, as it stands, this may also appear to be a one-sided adjustment to the former on behalf of the latter in what is after all meant to be a dialogue. If the Heideggerian perspective is to be modified along the lines that I have suggested, then we might well ask what influence it can in turn have upon its interlocutor. Before I proceed to set out the details of the 'spectrum reading', then, I want to draw out what I think this take on Dasein could offer enactivist approaches.

Heideggerian Enactivism and the Problem of the 'Cognitive Gap'

One enactivist debate to which I think that my reconceptualisation of Dasein's structures might contribute is that dealing with what is often referred to as the problem of the 'cognitive gap', that is, of accounting for the distinctions between various cognisers while remaining within a framework that emphasises their continuity.

Autopoiesis and autonomy were originally conceived by Varela and Maturana as features exclusive to the metabolism of single cells, or of very simple organisms at the most; both initially resisted the application of these terms to any domains of inquiry outside of biology.[8] While contemporary enactivism applies these concepts to the definition of cognition in general, most of its practitioners maintain a strong emphasis upon autopoiesis establishing a continuity between very simple and complex organisms.[9] For enactivists, even single-celled organisms display autopoiesis, which they take to be a necessary condition for something to be a living entity; that a basic feature of cognition is part of the very definition of life itself underlies the 'life-mind continuity thesis' prominent in enactivist literature.[10] This approach faces the challenge of accounting for and organising the differences between the kinds of organisms that it classifies as cognisers. For example, if they are both autopoietic, then how can one conceptualise the distinctions between single-celled organisms and humans in enactivist terms? The concern here, in the words of Andy Clark, 'is that by stressing unity and similarity we may lose sight of what is different and distinctive' (Clark 2001, 118–119).

The salience of the problem of the cognitive gap to the enactivist approach has motivated a number of responses within the discourse, most of which focus upon delineating some additional factor or mechanism to explain the varying complexity of cognisers and situate the highly advanced capabilities of humans.[11] In their paper about the problematic, Froese and Di Paolo show that such attempts at finding an additional category for classifying cognisers need to meet two constraints. Firstly, such a factor cannot be so specific to humans that it completely undermines the continuity between human cognition and other autopoietic systems (Froese and Di Paolo 2009, 442). Secondly, simply positing what they call 'more of the same' will not suffice as an answer that can satisfactorily capture the distinctiveness of complex cognition; the difference needs to be defined qualitatively, rather than quantitatively (such that a human does not just have more of quality x than a bacteria) (ibid. 441).

I want to suggest that the conception of Heideggerian temporality that I have advanced here and elsewhere can provide enactivism with an additional way of responding to the problem of the cognitive gap by offering a classificatory schema for the complexity of cognisers. That is, I think that the ways in which the structures of Heideggerian temporality (captured in the three features I emphasised earlier) (a) resonate in meaning-enacting cognition and (b) can be extended beyond Dasein and taken to constitute a spectrum of temporal complexity along which we can locate both Dasein and non-Dasein entities enable us to (c) also take that spectrum to be one of cognitive complexity, such that we can describe and compare varying levels of cognitive complexity in temporal terms.[12] To see how this might work, however, more detail about the nature of this spectrum is needed—a matter to which I shall now finally turn.

A Heideggerian Schema of Temporal and Cognitive Complexity

At one end of the range, we would find the simple cognisers whose temporal self-concern manifests in the drive to maintain themselves across time, whose relation to futurity is a basic striving outwards and a responsiveness to possibilities shaped by their capacities and ends, whose temporal purposiveness and purposive temporality manifest in primal, adaptively regulated, past-present-future-concerns-means-ends patterns. Moving along the spectrum in the direction of increasing complexity, we would see each of these structures framing and operating in expanding scopes and levels of detail that mark both quantitative and qualitative shifts. The temporal field within which cognisers operate widens. While this broadening can relate to quantitatively longer lifespans (although this does not always correlate to cognitive complexity, as witnessed by the many organisms that outlive humans), it refers primarily to the length and qualitative richness of the projects a cogniser can take up. Increasingly, temporally complex cognisers can strive towards possibilities that can become more distant, with a growing capacity to transcend or balance immediate needs with an eye to ends that may be not only further away but encompass an enriched relation of past to future, as the former affects the cogniser in different and ever more intricate ways, shaping what it is that is to be continued into the future and also what that future means to the cogniser. Projects come to be more entwined with one another, with the past–present–future of basic tasks integrating into a broader timeline ever more delicately and explicitly. The level of detail and the explicitness of a cogniser's participation in

temporality both increase and change in kind. The temporality of a complex cogniser's meaning enaction can itself become part of the meaning that is enacted. The way in which the past is carried over and the range of futures towards which a cogniser may strive become more significant and less interchangeable. Cutting off certain possibilities may attain a meaning of its own and even lead to regret; the manner in which the implicit and explicit influence of the past is taken up, and the tone in which projection is carried out, come to matter in themselves. The cogniser can develop a set of temporalised priorities that are defined by particular relations between history and projection, such that various ends which might otherwise lead to the same end come to be differentiated and preferred according to their effect upon, and relation to, self-concern's meaningful stretching towards futurity. These ends themselves, meanwhile, can grow to be simultaneously more vague (with open-ended notions of satisfaction affecting the meaning of immediate, concrete tasks) and yet more detailed (through the greater potential for intricate connections between consequences and possibilities; the multiplication of the ways in which past, present and future can interact; and the diversification of the kinds of meaning that tasks, goals and futures can have for the cogniser). Here, futurity becomes increasingly indeterminate as well as more constrained (as the temporal meaning a cogniser wants to manifest divides the paths it needs or wants to take from the ones that it can pursue) and threatening (for more is at stake, and that which is at stake is understood as such).

At Dasein's end of the scale, we see a capacity to relate to its entire life as one long project, with a striving towards possibilities that may be decades away (or even longer, if an individual has grander ambitions) and an ability to relate immediate activities to an extended narrative through which Dasein may try to give its past and futures a distinct kind of meaning. The valence of the past *as past* takes in not only personal but also communal and even cultural historicity; it shapes, enriches and constrains futurity in dynamic, interconnected ways that give Dasein a singular understanding of what is at stake. It can make sense of its preferences of some futures and histories over others in terms that shape how it participates in and enacts them. Its future-directed precariousness develops into a Being-towards-death that radically alters the meanings it generates and structures the way it relates to its self-generating identity.[13] Dasein's purposive temporality and temporal purposiveness structure the most complex kinds of practice, enabling it to participate in sophisticated linguistic, cultural, historical, social and scientific contexts. Its temporalised self-concern reaches its

apotheosis in Dasein's capacity for ontological inquiry, its understanding of its Being and the Being of other entities, of Being itself.

This means that an understanding of the temporality of other cognisers, too, can become part of the world of significance that Dasein navigates. As their participation in temporality becomes more complex, cognisers can shape and respond to one another's temporality in ever richer ways, encountering others as entities with a self-concerned future-directedness. Cogniser A might encounter cogniser B as a competitor whose behaviour (shaped by its concern for self-perpetuation and its striving to bring its past into its future) constrains the possibilities A might encounter, and whose own possibilities A can affect. Cogniser C might encounter D as prey meeting a predator; D's self-perpetuating may come at the cost of C's future and self-concern, influencing the way in which C experiences precariousness, while C's evasive manoeuvres—its striving towards possibilities that maintain its identity most effectively—constrain the possibilities towards which D can strive, the meaning that it navigates and responds to. Several cognisers might encounter one another as collaborators, capable of participating in a shared project and manifesting a communal history, whose interactions enrich and complicate the possibilities towards which each may strive. Higher-level cognisers (such as Dasein) would have the capacity to understand what is at stake in each of these encounters explicitly, and to do so in temporal terms; such a cogniser can recognise another cogniser's future as a future that matters to it because of its self-concern; it can see another's past as that which must be related to in a particular way for that cogniser to remain itself. A cogniser like Dasein can relate its own temporal participation to that of cognisers both like and unlike itself, and can understand how it shapes them even as they shape it explicitly, with its temporality mattering to it in a way that is itself entwined with the temporal structuration of its self-concern.

In this way, Heideggerian temporality provides a spectrum or 'factor' for classifying cognitive complexity that establishes a radical continuity through the shared participation in temporal structures across the entire range of cognisers without slipping into a schema that only posits 'more of the same'. Dasein is not just 'more self-concerned' or 'more futural' or 'more purposive' than more basic cognisers; each of these temporal (and temporality-shaping) features is also qualitatively different. There is a significant distinction between, for example, basic temporalised self-concern and Dasein's capacity for ontology; nonetheless, both participate in, and are shaped and enabled by, the same temporal structuration.

I would also suggest—though I cannot set this out this in detail here—that this spectrum of temporal complexity integrates particularly well with one of the most significant contemporary enactivist responses to the problem of the cognitive gap, namely, the sociality-based account put forward by Froese and Di Paolo (drawing upon their previous work with De Jaegher). This approach argues that even basic cognisers can radically expand the meanings generated by the navigation of their worlds simply through contact with other such entities, an effect that is then progressively amplified by the sophistication of interactions and the different possibilities for communication. The 'difference between the sense-making capabilities of a simple single-cell organism and that of a fully developed human agent' can then, for Froese and Di Paolo, be largely attributed to the increased range of options and meanings available through more complex forms of intersubjectivity. It seems to me that this view invites an exploration of the temporal dimension of sociality, and that such a development could enrich the current discourse.[14] I would even suggest that sociality and temporality are linked in a way that means the latter is crucial to explaining how the former operates. Recall, for example, Cogniser A and Cogniser B, who compete for resources. It seems to me that in order to view them as socially linked systems, rather than just cognisers who exist alongside each other without affecting one another's enaction and navigation of meaning, we need to be able to say that they can shape one another's futures and that, if they do so *over time*, they have a shared past. Cogniser B's behaviour may change if Cogniser A does something, but to render that intelligible as an example of sociality, this change needs to be appreciated in temporal terms as Cogniser A constraining the future possibilities of Cogniser B. They have a relationship to each other in virtue of their temporal self-concern, of their respective needs to continue their pasts into their respective futures impacting upon one another, whether through direct or indirect contact. The increasing complexity of these relations—in communal and cultural terms—itself moves along a temporal axis, as each level of social complexity is marked by a distinct relation to historicity, to the meaning that a shared past can have, and to the ways this can both generate and curtail possibilities and projects.

Friction, Negotiation, Dialogue

While the proposal detailed here may ease the conditions for collaboration between the discourses, it may seem like an overly radical departure from

the Heideggerian account upon which it is founded. However, I would suggest that, with further work, it can preserve enough of the special place that Heidegger's account assigns to Dasein whilst leaving itself open to changing insights about the nature of the distinction between humans and non-humans. There are significant qualitative differences between Dasein's temporal structuration and the manifestation of temporal structures in simpler cognisers giving Dasein a special place in the spectrum of cognition This may not be sufficient for the concerned Heideggerian, but I think that the question of whether we gain or lose more by extending the scope of the analysis of Dasein in this way at the very least remains an open one. Compare the theory of autopoiesis; that its original restrictions of scope could neither contain the insights it generated nor hold back the flood of varied and novel applications enriched, rather than undermined, the discourse. While the stakes are different in the Heideggerian case, the outcome need not be; it is not unfathomable to consider that the early Heidegger was right about at least some of the structures that constitute Dasein, but not about the range of entities to which they could be gainfully applied.[15]

This is not to say, however, that approximating Heidegger's views about the non-human/human distinction (whatever we may take them to be) as closely as possible should be the ultimate goal here; I am not suggesting an enactivist apologetics that can make room for all aspects of Heidegger's account. Rather, I think that, where there are significant tensions between Heideggerian and enactivist perspectives on this matter, the latter gives us reason to challenge, interrogate and revise the former. Here, we find ourselves at a point where the notion of phenomenology and cognitive science informing one another can become both radical and concrete. I am not suggesting that we reject Heidegger's claims about the exclusivity of Dasein purely because a type of cognitive science contends that we need to; I do not believe that this is how the dialogue between the disciplines should proceed. The challenge to Heidegger's exclusivism with respect to the structures of Dasein comes from both within and beyond the Heideggerian perspective. On the one hand, it is the applicability and profound resonance of the structures that Heidegger's account posits which itself demands their extension beyond Dasein. On the other hand, the problem of the cognitive gap is a salient example of the way in which Heideggerian phenomenology and contemporary cognitive science can enrich one another through the challenges they pose to each other. Although I have suggested that we should question it, Heidegger's insistence that the structures he describes

are unique to Dasein nonetheless provides a new perspective from which to take the problem of the cognitive gap seriously, offering us further reasons why a model of cognition such as enactivism needs to respond to the challenge of incorporating the qualitative differences between basic organisms and higher-order cognisers (which I think it can, as I have shown). Conversely, the very possibility that Heideggerian temporality does offer us a way of responding to that challenge on behalf of enactivism precisely because it constitutes a schema of both continuity and distinction between simpler cognisers and Dasein gives us grounds on which to reinterpret and question Heidegger's own seeming exclusivism. Enactivism offers us motivation for extending Heidegger's account beyond the bounds that it stipulates for itself because it shows how the concepts articulated within that account apply in ways that the latter did not originally posit. I think that this enhances, rather than violates, Heidegger's framework (although I concede that exegetical violence may be necessary sometimes), for the wide applicability of its concepts is surely a point in favour of their usefulness and continued salience; new uses for Heideggerian concepts suggest that they can still generate new insights. A Heideggerian model of temporality, then, intersects with enactive models of cognition in a way that expands the latter's possible responses to the problem of the cognitive gap, while at the same time providing impetus for a re-evaluation of some aspects of Heidegger's own account, illustrating how a dialogue between these fields can work towards productive friction.

Concluding Remarks

This chapter briefly summarised the case for a collaboration between early Heideggerian phenomenology and enactivist cognitive science, before considering how such a venture might reconcile significant differences in the way that each discourse applies the structures it discusses. There is, of course, much more work to be done; my discussion here provides only a very rough sketch of a much broader project, one that deals with many sources of tension beyond the one that I have begun addressing here. Nonetheless, I hope to have suggested why the integration of Heideggerian and enactivist perspectives is worth pursuing further, and that it has the potential resources for approaching conflicts between these interlocutors in a productive, rather than destructive, manner.

Notes

1. This previous work can be found in Stendera (2015) and my doctoral dissertation, 'Dasein's Temporal Enaction: Heideggerian Temporality in Dialogue with Contemporary Cognitive Science' (PhD diss., The University of Melbourne 2015). I should note here that (a) Section 1 of this paper summarises, but does not exactly reproduce, many of the aforementioned paper's main arguments; and that (b) the rest of this chapter is derived from (previously unpublished) parts of Chap. 8 of my dissertation.
2. The following discussion applies to that part of enactivist discourse (exemplified by the work of e.g. Ezequiel Di Paolo and Evan Thompson) which focuses on autopoietic, adaptive cognition. I am not referring to the recent Radically Enactive Cognition movement, nor to the perception-focussed work of Noë (to which Thompson has also contributed).
3. For a further analysis of enactivism's philosophical roots, see Froese and Ziemke (2009), Thompson (2007) and Weber and Varela (2002).
4. Heidegger's praise here is tempered by his rejection of von Uexküll's insistence upon the continuity between humans and other animals, a point that foreshadows the problematic I discuss later in the chapter.
5. My discussion of enactivism here and throughout this chapter draws primarily on key accounts such as: Di Paolo (2006), Froese and Ziemke (2009), Thompson (2007), Varela (1997) and Varela et al. (1991).
6. This raises the question of whether these resonances extend to the most basic systems that enactivism investigates. It is worth noting that there is much debate within enactivism about how to cash out the life–mind continuity and how to view the kind of enrichment that renders life cognitive, meaning that the framework for asking this is not yet settled enough to determine an answer either way. 'How far down' we can find purposive, concerned and future-weighted temporality is arguably an empirical issue which calls for further investigation.
7. This position is harder to reconcile with works like the *Letter on Humanism* and *The Fundamental Concepts of Metaphysics,* but a comparative analysis of these with *BT* is beyond the scope of this chapter. I think one could read Heidegger's distinctions between lacking a world, being poor in world and Being-in-the-world as reflecting something like the spectrum of complexity I propose later, something I try to do elsewhere. Here, however, I am more interested in recovering the insights that can be generated if we modify the framework of *Being and Time* a little than in retaining every part of its analyses.
8. Varela explains his original stance and the development of his work towards cognitive science in Varela (2011).

9. See Froese and Ziemke's history of this development in 'Enactive Artificial Intelligence', 476–484.
10. See, for example, Thompson's account in *Mind and Life,* and Di Paolo's work in 'Autopoiesis', 429–452ff. The term is used throughout the literature.
11. Froese and Di Paolo (2009), 441–442.
12. Connecting temporality to cognitive complexity is not unheard of; there is, for example, much interesting research into different cognisers' relation to the future. Two comprehensive overviews of such work can be found in Raby and Clayton (2009) and Suddendorf and Corballis (2007). Whilst neither study's conception of futurity is equivalent to mine, I think that there are opportunities for further collaboration here.
13. These descriptions may remind the reader of Heidegger's account of authenticity. The advent of Being-towards-death is what I would (with deliberate oversimplification) call one of the 'existential complications' encountered by a cogniser of Dasein's temporal complexity.
14. This is further suggested by Di Paolo's own emphasis upon the temporal dimension of enactive cognition. For him, there is 'a *minimum temporal granularity* in adaptivity' (444, original italics) that is necessary to account for the ways in which 'the ongoing coupling with the environment, and the precariousness of metabolism, make their collective action also self-renewing, thus naturally resulting in *valenced rhythms of tension and satisfaction*' (444–445, original italics). I think that this is just the kind of account that can enter into dialogue with a Heideggerian model of temporality as inherently purposive, self-concerned and futural, one that is thick enough to accommodate and account for valence and can connect self-concern with future-directedness in a way that makes sense of precariousness.
15. Thanks to Richard Sebold for inspiring this way of articulating the idea.

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CHAPTER 5

The Rest is Science: What Does Phenomenology Tell Us About Cognition?

Michael Wheeler

Naturalists Anonymous

Let me put up my hand straight away: I am a naturalist about cognition. What does this mean? First things first: I take 'cognition' to be a catch-all term encompassing the various states and processes that we typically identify as psychological phenomena (the states and processes of memory, perception, reasoning, etc.). The guiding thought of naturalism is that philosophy should be continuous with empirical science. So the naturalist about cognition (that's me) thinks that the philosophical understanding of cognition (of the states and processes of memory, perception, reasoning, etc.) should be continuous with cognitive science. I take the naturalist notion of continuity with empirical science to be determined by the following principle of conflict resolution (Wheeler 2013): if and when there is a genuine clash between philosophy and some eminently well-supported (by the data) empirical science, then that is a good reason for the philosopher to at least revisit her claims, with a view to withdrawal or revision. The envisaged clash, on its own anyway, puts no such pressure upon the scientist. So where phenomenology (as a branch of philosophy) and well-supported cognitive science conflict, it is the phenomenologist, and not the cognitive scientist, who should revisit her claims.

The purpose of my up-front confession of naturalism is to expose the following points, which add up to an un-argued-for commitment made throughout this chapter. Put crudely, good cognitive science tells us about cognition, so if our target question, 'What does phenomenology tell us

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about cognition?' is to receive an upbeat answer—if, that is, phenomenology too is to tell us about cognition (or have a chance of doing so)—then it had better be continuous with what good cognitive science tells us. So, if a phenomenological analysis conflicts with good cognitive science, then we have a strong reason to believe that it does not tell us about cognition. You might disagree. You might think that phenomenology may tell us about cognition even though (or even because) what it says about cognition is in conflict with what good cognitive science tells us. If so, I am prepared to have a conversation with you—just not today. For today, what is not up for grabs is that there is a sense in which cognitive science is in the driving seat.

It's good to get that off my chest. So now, what is this thing called phenomenology that I have seemingly placed in naturalist shackles? A preliminary definition, but one that plausibly captures how the term is standardly used in analytic philosophy of mind and mainstream cognitive science, might go as follows: phenomenology is the study of the structures of consciousness, carried out through a first-person investigation of what experiences are like for the experiencer. This definition comes with an important stress on the term 'preliminary', because anyone reading this chapter with a background in contemporary European philosophy will immediately want to complain that it doesn't really do full and proper justice to the kind of philosophical theorizing performed by Husserl, Heidegger, Merleau-Ponty, and other thinkers from that tradition who are readily identified as phenomenologists. This observation is not only true, it will be pivotal in the later arguments of this chapter. Nevertheless, our preliminary definition will do for starters, because even if one thinks of phenomenology solely in terms of that definition, there is little doubt that it has become an increasingly important notion in recent cognitive science. This is not only because the project of studying conscious experience scientifically is currently *de rigueur* in the field, but because there has been a growing sense that if we don't have a scientific understanding of conscious experience, then we don't really have a cognitive science at all. (The latter position is held explicitly, or is implied by the views of, e.g. Varela et al. 1991; Searle 1993; Thompson 2007; Gallagher and Zahavi 2008.)

Historically speaking, such consciousness-centred thinking is in marked contrast to most cognitive-scientific theorizing, which has tended to proceed in a behaviourist or (more commonly) a functionalist register, without giving much explicit attention to conscious experience as such. That said, if we respond to the recent turn towards experience by suggesting

that cognitive science should be bound by the results of a study of the structures of consciousness, carried out through a first-person investigation of what experiences are like for the experiencer—that is, by the practice of phenomenology as initially characterized above—then the howls of derision (from psychologists in particular) will be hard to ignore. In what follows, I shall first briefly explain the source of this derisory howling. Then I shall suggest, in part via a treatment of a popular example from recent work on consciousness, that there is undoubtedly something to be said for the scepticism to which the howling gives voice. At that point in the proceedings, the answer to our question 'What does phenomenology tell us about cognition?' might seem to be a resounding 'not much', with the vast explanatory slack being taken up by precisely the kind of third-person psychological science that has tended to sideline first-person accounts of experience. However, this downbeat conclusion may be dangerously premature. For I shall argue that if we allow ourselves access to a notion of phenomenology that is shaped by contemporary European thought, then a mildly more optimistic take on the contribution of phenomenology to our understanding of cognition becomes available. This more positive result is in tune with a number of recent (and not-so-recent) claims to the effect that contemporary European phenomenology may play a productive role in relation to cognitive science (see e.g. Varela et al. 1991; Gallagher 2005; Wheeler 2005, 2013; Thompson 2007; Gallagher and Zahavi 2008; Rowlands 2010; Wheeler and Di Paolo 2011). One outcome of the present chapter should be a better understanding of what such claims entail and of a problem that they face. The key thoughts here are (a) that any fundamental appeal to contemporary European phenomenology in the vicinity of cognition will end up concluding that there is a kind of systematic intimacy between cognitive science and the social world, and (b) that there remains work to be done to eradicate the sense that there is a tension between this species of phenomenology and the naturalism that I am taking for granted, but which in any case a healthy respect for cognitive science seems to require.

The Howling

Let's imagine that the relevant spoiler in the introduction hadn't happened, and that the tabled suggestion is that cognitive science should be bound by phenomenology, understood in our preliminary fashion, as the study of the structures of consciousness, carried out through a first-person investigation

of what experiences are like for the experiencer. Here is a natural way to understand this claim. The experiencer provides a first-person introspective report of how it strikes her that her cognitive states and processes are unfolding (or unfolded), based on her conscious experience of what is happening (or of what happened) in her thinking, and the scientist then uses that report as a guide to the cognitive states and processes that are (or were) in play. Anyone who has spent an hour or two in a psychology laboratory will almost certainly find this suggestion wanting. As Rupert (2009, 157) observes, 'cognitive psychology does not give trumping power to [first-person introspective] reports or take them as revealing, in some unqualified way, the details of the cognitive processes occurring at the time of the report', while 'a large body of empirical results directly calls into question the reliability of subjects' reports on their own cognitive processing'. Rupert's point, then, is that even though subjects' first-person introspective reports of their own cognitive processing are sometimes used as starting points for, or as data to be accounted for by, cognitive psychology, and even though such reports have occasionally proven useful in cognitive psychology as a guide to cognitive mechanisms, the fact remains that, as a general rule, reports of that kind are not treated by scientific psychologists as useful tools for constraining or shaping their accounts of cognition.

So the scepticism reported by Rupert is certainly genuine. The interesting question is: what is behind it? As Rupert explains, cognitive psychology has overwhelmingly settled on the view that there are unconscious states and processes active in our cognitive systems, where unconscious means 'beyond *any* conscious access'. Moreover, according to the received view, these unconscious states and processes control a good deal of thought and behaviour. Given this kind of inaccessibility, what happens when subjects are asked to provide first-person reports on their own cognitive operations is that they unconsciously confabulate a sometimes plausible, but more often than not inaccurate, story about the states and processes in play. A nice example of the sort of inaccurate reporting that goes on (one mentioned by Rupert) is provided by Roediger and Gallo's (2005) list learning experiments. These experiments demonstrate that subjects who are given a list of words to remember will regularly claim that they recall, as being on that list, words which were not listed, but which are related in some way to other words that were. Moreover, some subjects report having a distinct memory of the experimenter saying the mistaken word in question, and sometimes even describe what they were thinking about at the time they allegedly heard the word said.

The basic idea here, that there is often a mismatch between first-person reports and underlying cognitive processing, receives further support from a widely discussed example due to Dennett (1991). Imagine walking into a room where the wallpaper features nothing other than a repeated identical image of Marylin Monroe's face, in the style of Andy Warhol's famous silk-screen paintings. If anyone asks you about your visual experience, you will presumably report that you see a wall of identical Marylins. But, although that is how the experience seems to you, there is a sense (more on which below) in which the claim that you see a wall of identical Marylins can't be quite right. To see any particular Marylin would require foveating on it, since peripheral vision simply doesn't deliver information of sufficient detail. However, the human visual system functions in such a way that you would be able to foveate on only a tiny number of the available images at any one time. So what explains your apparent conscious experience of seeing a wall of Marylins? A tempting hypothesis is that your visual impression of a wall of Marylins is the result of your brain building an internal, and in effect pictorial, representation which contains all the details that your experience seems to have. This account would preserve a match between your first-person report and the underlying cognitive processing, since both would involve the same detailed content. However, as Dennett argues, the claim that your cognitive processing involves such 'filling-in' is far from mandatory, since the brain might represent *that* there is a wall of identical Marylins, without building the sort of detailed representation just suggested. It might do this by identifying a few identical Marylins and then 'jumping to the conclusion' that the rest of the wall (the other blobs it detects in peripheral vision) is just more of the same, that is, more identical Marylins. Under these circumstances, we are back in the realm of a mismatch, since nowhere in the purported cognitive processing do we find the kind of detailed content that figures in the reported visual experience. In other words, if we took the first-person report of the experience as a guide to the cognitive processing concerned, we would expect to find an inner representation featuring detailed Marylin-specifying content, in line with the filling-in account, but no such inner representation features in the Dennett-style explanation.

It is worth noting that the conclusion I am drawing from Dennett's example is, in a way, more conservative than the conclusion that others, including perhaps Dennett himself, have drawn. This is because I am treating the limitations of the human visual system and the claims about what the brain represents to be matters to do with unconscious cognitive processing. The

consequence of this is that I am moved to classify the relevant discrepancy as one that, in line with Rupert's observations, occurs between conscious experience (one's visual impression of a wall of Marylins) and unconscious cognitive processing (the lack of an inner representation in the brain with detailed Marylin-specifying content). However, there is a seemingly more radical conclusion waiting in the wings, namely, that our conscious experience is not as we report it to be. In other words, although it seems to me as if I am experiencing a wall of many identical Marylins, in reality my experience is very different. If this is right, then one's first-person access to one's own current experience is itself untrustworthy (see Schwitzgebel 2008 for an independent development of such a view), and the discrepancy that exists is one that occurs *within* experience, not *between* experience and something else. (See e.g. Rowlands 2001 and Noë 2004 for statements of this interpretation, which they attribute to Dennett. As we shall see, neither Rowlands nor Noë endorses the idea that the putative discrepancy within experience exists.)

How should we respond to the more radical interpretation of what is shown by the wall of Marylins example? Having set out this interpretation, Rowlands (2001, 189–191) argues that once we straighten out our analysis, there is in truth no conceptual room for a discrepancy between how an experience seems and the way it really is. Rowlands' thought is that whereas the former involves attributing content to a person or organism, the latter involves the attribution of content to 'the sub-personal mechanisms that (in part) underwrite content attribution to the organism' (Rowlands 2001, 190). Given that these are attributions to different things, there can be no incompatibility. Now, I agree with Rowlands that we are making attributions to two different things here, and that the two things are (a) persons (or organisms) and (b) subpersonal mechanisms. I also agree with him that what this demonstrates is that there is no incompatibility *within experience*. So the more radical conclusion is not mandated. However, where Rowlands goes wrong is in holding that subpersonal content attribution is in the business of specifying 'the way an experience really is'. *That* he thinks this is clear. He writes: '[w]hen we talk about the way an experience really is, we are talking about the various types of operations performed by sub-personal mechanisms, and we are making an attribution of content to these mechanisms in virtue of the operations they perform' (Rowlands 2001, 190). But I see no reason to believe that such subpersonal content attribution directly specifies structures of experience, as opposed to features of the unconscious psychological processing that causally enable the

organismic-level phenomena. On the latter view, when one notes, with Dennett, that the brain might identify a few identical Marylins and then 'jump to the conclusion' that the rest of the wall is just more of the same, one is specifying an unconscious subpersonal cognitive process, which of course helps to explain why we don't have any conscious experience of making the inference in question.

At this point in the Marylins dialectic, one might perhaps concede my point that the subpersonal content attribution in question is at the level of unconscious cognitive processing, but be tempted to maintain a Rowlands-inspired claim that there can be no incompatibility or discrepancy here. After all, one might argue that what eliminates the possibility of the mismatch is that we are making attributions to two different things. If that's right, then the fact that the alleged mismatch is rightly located as being between conscious experience and unconscious psychological processing, rather than between how an experience seems and the way it really is, doesn't prevent the cleaned-up analysis from successfully eliminating that mismatch. Here, we need to be more specific about what we mean by a mismatch. If the cognitive processing underpinning the experience of a wall of identical Marylins accorded with the filling-in account, then there is a straightforward sense in which there would be an *isomorphism* between the experience and that processing, in that both would amount to a structure with detailed Marylin-specifying content. In such circumstances, the former might be used as a reliable guide to the latter. *Where no such isomorphism exists*, a mismatch occurs between the experience and the cognitive processing. In these circumstances, the former cannot be used as a reliable guide to the latter. And that's all that the howlers demand.

We'll be returning to Dennett's wall of Marylins example in a few paragraphs' time. The conclusion of the present reasoning, however, is that although the example falls short of demonstrating that there is an incompatibility between how an experience seems and the way it really is, it does provide support for the claim that there is sometimes a conflict between first-person reports of conscious experience and what is going on in unconscious cognitive processing. Of course, this is not to say that no compelling case could ever be made for the more radical thought that we can be wrong about our own conscious experiences. It is to say that no such case can be made on the strength of the wall of Marylins example alone.

Here, then is a provisional conclusion that one might reasonably draw from the combination of our preliminary notion of phenomenology and

the points made by Rupert and Dennett. Phenomenology is, at best, a kind of defeasible point of departure in our understanding of cognition; the rest, it seems, is science. Here is a more careful way of putting the point. It's not that phenomenological reports are *necessarily* inaccurate guides to cognitive processing, but rather that we have no good reason, on any particular occasion, to take such reports as good guides to cognitive processing. The rest of the graft—which here equals where the real work of coming to understand cognition is done—is a well-rehearsed scientific process of theory-driven hypothesis construction and testing, where the explanatory target is a range of phenomenologically hidden causal wellsprings of intelligent behaviour that may not reflect the structures of consciousness as revealed by first-person description. So, although phenomenology may not be quite silent about cognition, whatever it says is just as likely to be noise as it is to be reliable advice.

Feeling the Twinge

Having drawn a somewhat pessimistic provisional conclusion regarding what phenomenology tells us about cognition, let's see what can be done to destabilize it. Here is an observation: where our scientific accounts of cognitive processing fail to respect first-person experience—that is, where the kind of discrepancy we have been discussing is in force—we feel a twinge of dissatisfaction and seek a mitigating explanation, or, even if we don't feel the twinge of dissatisfaction ourselves, we know that others will, so we feel moved to offer a special mitigating explanation anyway. An example of this twinge and mitigation dynamic in the latter register is to be found in Clark's (2013) recent discussion of predictive coding models in neuroscience. Very roughly, if the predictive coding account is correct, then the brain's fundamental *modus operandi* is to attempt to correct errors that exist between (a) its top-down expectations regarding what sensory inputs it should be receiving, given its models of the causal structure of the world, and (b) the sensory inputs it actually receives. Typically, such error correction would involve the brain adapting its models. As Clark points out, the predictive coding picture throws up a clash (a failure of isomorphism) with first-person experience. He writes: '[t]he world, it might be said, does not look as if it is encoded as an intertwined set of probability density distributions! It looks unitary and, on a clear day, unambiguous' (Clark 2013, 16). Clark himself claims not to feel any twinge of dissatisfaction here, stating (with a nod to the sort of personal–subpersonal

distinction operative in our earlier discussion) that there 'is clearly no inconsistency in thinking that the brain's pervasive use of probabilistic encoding might yield conscious experiences that depict a single, unified, and quite unambiguous scene' (Clark 2013, 16). Nevertheless, presumably with some thought in the background that not everyone will endorse his assertion, he gives a mitigating explanation anyway, writing that 'it would do the evolved creature no good at all to keep experiencing the scene as to some degree uncertain if the current task requires a firm decision, and if its neural processing has already settled on a good, strongly supported bet as to what's (most probably) out there' (Clark 2013, 16).

So, Clark's strategy is to permit the kind of discrepancy we care about here to exist, but to give us a good reason (evolution protecting us from action-debilitating uncertainty in experience) for why it exists. However, an alternative response to kind of the twinge in question would be to take a second look at our report of the experience. (Logically speaking, one might equally take a look at the account on offer of the cognitive processing, but if that account is the product of what we take to be well-supported cognitive science, this will not be the naturalist's favoured option.) The idea that we might adjust our first-person report in order to eliminate the unsettling discrepancy may be approached by way of Noë's response to the wall of Marylins example (Noë 2004, 54–59). Like Rowlands, Noë reads Dennett as claiming that if the brain does conclusion-jumping rather than filling-in, then there is a mismatch between how the experience seems and the way it really is. In reply, Noë seeks to deny that there is any such mismatch, by arguing that Dennett's own first-person account of the character of the experience—that is, that one seems to see a wall of identical Marylins—is inaccurate, at least if it is understood to mean that while you are attentively gazing at any particular point on the wall, you have a clear and high-definition experience of hundreds of identical Marylins. Noë's alternative phenomenological description (which, for what it's worth, strikes me as correct) goes roughly like this: while one is attentively gazing at any particular point on the wall, one doesn't in fact have a high-definition visual impression of a wall covered in identical Marylins. What one has is (a) a high-definition visual impression of a tiny part of the wall containing a Marylin or two, plus (b) a sense that there are other Marylins present, in part because one thinks that one could access them if one actively looked around. But if this is 'how the experience seems', then there is no uneasiness between the (newly adjusted) first-person report and the description of the underlying mechanisms suggesting that those mechanisms represent

that there is a wall of identical Marylins, by identifying a few identical Marylins ((a) above) and then jumping to the conclusion that the rest of the wall is more of the same ((b) above). What Noë has done, then, is adjust a phenomenological description with the explicit goal of eliminating a supposed mismatch between how an experience seems and the way it really is. But note that, if Noë's revised phenomenology is right, then the kind of mismatch in which we have been interested—that is, one between experience and unconscious cognitive processing—is also eliminated, since the structure of the underlying mechanisms remains the same on either version of the discrepancy. Of course, if there is no mismatch, then the first-person report (the right one anyway) is reinstated as a reliable guide to the cognitive processing.

In this section, I have explored the thought that we might destabilize the claim that first-person reports of experience will standardly be unreliable guides to cognitive processing. When all is said and done, however, I strongly doubt that the kinds of considerations I have canvassed can do anywhere near enough to silence the howling. On the one hand, the 'twinge and mitigate' strategy ultimately keeps the problematic discrepancy in place. On the other, the 'revise one's phenomenology' strategy, although successful in eliminating the target discrepancy, looks dangerously limited, if, that is, what is to be revised is a first-person report of what experiences are like for the experiencer. After all, given a point of departure in which our initial phenomenological report is in tension with what cognitive science tells us, and given that that phenomenological report is 'no more than' a report *of how things strike us in experience*, on how many occasions will we find a satisfying alternative phenomenological description that coheres with the scientific model? Noë's response in the wall of Marylins case threatens to be unusual, in this regard. So where do we go from here? One option is to emigrate.

Moving to the Continent

So far we have been assuming that phenomenological analysis is tantamount to first-person introspective reporting. That has left phenomenology in, at best, a precarious position when it comes to the contribution that it might make to our understanding of cognition. But the philosophical discipline of phenomenology, as practised centrally by Heidegger and others in the contemporary European tradition, is a very different beast

to the thing called phenomenology that we have been considering so far. In its continental guise, phenomenology is a theoretical (or, depending on one's account of what constitutes a theory, a meta-theoretical) philosophical enterprise that, through an attentive and sensitive examination of ordinary human experience, aims to reveal the *transcendental yet historical* conditions which give that experience its form. The goal of phenomenological analysis so conceived is thus to articulate certain conditions of possibility of human experience, conditions which are transcendental in that they are presupposed by the structure and nature of human experience, but which are historical in that they do not stand outside of human social history.

As an example, consider the account of temporality as a transcendental condition on human sense-making given in Heidegger's *Being and Time* (Heidegger 1927/1962). Although Heidegger's text strongly suggests that the *most abstract form* of temporality, which is *thrown projection plus falling/moment-of-vision*, should be counted a universally shared feature of human sense-making, nevertheless the specific transcendental structures in virtue of which events of human sense-making take the particular forms that they do (the culturally dependent, content-laden elements that, as it were, fill the slots in the abstract temporality schema) are historically embedded. Thus, thrownness—predominantly the past dimension of the human sense-maker's temporality—concerns the fact that the human sense-maker always finds herself embedded within a pre-structured field of intelligibility into which she has been enculturated. Projection—predominantly the future dimension of the human sense-maker's temporality—concerns the way in which she interprets herself in terms of culturally determined possibilities for action that hail from that same field of intelligibility. And falling and moment-of-vision—predominantly the present dimension of the human sense-maker's temporality—concern (roughly) the ways in which she either loses sight of her thrown and projective character due to the distractions of the now as established by the crowd (falling) or comes to own her particular thrown and projective character by appropriating the past in the present as a set of templates for self-interpretation onto which she may creatively project herself (moment-of-vision). On the Heideggerian model, then, the content of each transcendentally presupposed temporal dimension of human sense-making is culturally conditioned and is therefore susceptible to variation and transformation, as the various structures and background attitudes characterizing different cultural ways of being shift over space and time.

It is a feature of phenomenological analysis, as just sketched, that the conditions of possibility of specific historically embedded acts of human sense-making cannot simply be read off from the surface of ordinary experience via some pre-theoretical introspective glance. Indeed, if the phenomenologists are right, the conditions in question are standardly *concealed* from any such untrained inward glance, which is why a disciplined and careful analysis of experience is needed to reveal them, and why phenomenology is not equivalent to routine introspection. As Heidegger puts it, 'pre-ontologically [i.e., before analysis]… the entities which we encounter in concern are proximally hidden' (Heidegger 1927/1962, 96).

In order to appreciate how phenomenology (from now on I shall use the term in its contemporary European sense, unless otherwise indicated) might contribute to our understanding of cognition, consider the following analysis. According to Gallagher (2008), phenomenology teaches us that the skilled mountaineer does not build an inner representation of the mountain before her and infer from that representation, plus additionally represented knowledge of her own abilities, that it is climbable by her. Rather, from a certain distance, in particular visual conditions, the mountain 'simply' looks climbable to her. Her climbing know-how is 'sedimented' in how the mountain strikes her. So what are the phenomenologically identified transcendental conditions for this nonrepresentational experiential structure? In relation to this question, Dreyfus (2008, 345–346) writes that 'all coping [hitch-free skilled know-how]… takes place on the background of [a] basic nonrepresentational, holistic, absorbed, kind of intentionality, which Heidegger calls being-in-the-world'. This introduces us to the phenomenon of the *background*. As described by phenomenologists, the background is the vast, holistic, indeterminate, and therefore *unrepresentable*, web of embodied, psychological, social, and cultural structures that constitute one's world and that are implicitly presupposed by concrete examples of human sense-making. Knowing one's way around the background (Heidegger's being-in-the-world, as Dreyfus interprets it) amounts to a nonrepresentational familiarity with one's world. It is, then, the configuration of the skilled mountaineer's background and her familiarity with that configuration which jointly determine that her experiential encounter is of the mountain as being climbable by her.

Even from this brief introduction to our second species of phenomenology, it should be clear that, in the context of the present treatment, there is an elephant in the room. That elephant is naturalism. Staying with our example of the background, if what phenomenology has revealed here

is a genuine and robust transcendental condition for skilled human know-how, then presumably that condition ought to place restrictions on the cognitive science of such know-how. Indeed, cognitive science would irrevocably be on the hunt for a nonrepresentational mechanism that enables a skilled agent to respond to, and to navigate, the background. (Reflecting this kind of constraint, Dreyfus himself cites with approval the nonrepresentational neurodynamical framework developed by Freeman 2000; for discussion, see Wheeler 2010.) But any restriction that runs from phenomenology to cognitive science seems, on the face of things, to be at odds with the naturalism that, as I pointed out earlier, is a non-negotiable assumption of this chapter and, it seems, an unavoidable corollary of any philosophy that takes cognitive science seriously. For naturalism requires that it is empirical science, and not phenomenology, that ultimately gets to call the shots.

As things stand, I do not think it is possible to eradicate this tension entirely (see Wheeler 2013 for a more detailed attempt to do so). What I can do is highlight the feature of phenomenology where, I think, the beginnings of a possible solution may be found. Once the transcendental is placed firmly within human history, in the way that phenomenology demands (see above), there is no reason to think that its cognition-illuminating credentials depend on it being systematically insulated from science. After all, science as a practice is itself an activity located within human history, one whose results often invade, and then become integrated with, the cultural structures that constitute the transcendental conditions of everyday human sense-making. To illustrate this point, here is an example that I have used before (Wheeler 2013). In most forms of western culture, we would not interpret a spate of sudden infant deaths as being caused by the actions of blood-sucking witches, and we take the behaviour of the inhabitants of Tlaxcala, Mexico, who do offer such an interpretation, to be an instance of a common pattern in which tragic human misfortune is blamed on supernatural assault (Fabrega and Nutini 1993). One does not do proper justice to the inter-cultural difference between the Tlaxcalans and us by depicting it as a quarrel between alternative explanations, one of which must be false. That would place the dispute too close to the periphery of the sense-making practices concerned. What one needs to say is that the culturally embedded structures that condition the most widespread of the sense-making practices that characterize western culture simply do not leave room for supernatural assaults by blood-sucking witches, precisely because those structures have been

invaded, in a way that the sense-making practices of the Tlaxcalans have not, by what contemporary science tells us is possible.

Science—and that includes cognitive science—is part of our social world, and part of our social world-making. That's why a properly historicized transcendental phenomenology is not insulated from it. And if phenomenology so conceived is not insulated from cognitive science, then perhaps the door is open (in a way that seemed implausible in the case of phenomenology conceived as a first-person investigation of what experiences are like for the experiencer) to the naturalistic commitment that, in genuine situations of conflict between phenomenology and science, our phenomenological analysis may be revised to reflect what cognitive science tells us. The sticking point, of course, is that any model that opens the door to a form of naturalism in this way establishes the following asymmetry: what phenomenology claims to tell us about cognition remains open to falsification by science in a way that what science claims to tell us about cognition is not open to falsification by phenomenology. If this really is the way things are, then although phenomenology and cognitive science are both legitimate ways of exploring the structure and character of cognitive states and processes, the rest—by which I mean the final word on cognition—is a matter for science.

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CHAPTER 6

Affect as Transcendental Condition of Activity Versus Passivity, and of Natural Science

David Morris

Distinctions between activity and passivity structure ancient Greek thinking about society, politics, and sexual relations—and also deeply inform ancient Greek philosophy.[1] For example, Aristotle's innovative concepts of form and matter, and *energeia* (actuality) and *dunamis* (potentiality), reflect as well as elaborate the activity–passivity distinction. In turn, concepts such as these, and the underlying activity–passivity distinction, inform and are transformed in later philosophy and science—and not without prejudicial effects.[2] It is not surprising that the activity–passivity distinction figures so prominently in our conceptual frameworks: it seems a basic, clear, and obvious feature of everyday reality itself. Here I pursue a transcendental, phenomenological argument that the distinction is in fact not so clear or obvious, specifically that it cannot be wholly and determinately defined via a purely abstract, discursive procedure, since specifying which of two interacting terms is the active one entails an implicit orientation to and by a pre-scientific, affective experience. Nonetheless, I think the distinction is conceptually fundamental for key domains of natural science, despite scientific imperatives to abstract from it. Together these arguments highlight, within science itself, Husserl's and Merleau-Ponty's point that life is a transcendental condition of science; that is, science is not simply an activity conducted by living beings, rather, our living, as inherently oriented by affect, provides us with a pre-scientific feel and

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criterion for the activity–passivity distinction, without which, I argue, we could not grasp key issues in, e.g., biology and quantum mechanics.

I introduce the problem and conceptual stakes of the activity–passivity distinction via Merleau-Ponty and Husserl. I then argue that the determinacy of the distinction is rooted in lived affect and then suggest how the distinction is nonetheless crucial to physics and also more evidently to biology. My argument proceeds via an analogy with Kant's argument that our bodies provide us with a criterion without which we could not denominate which of the two hands is left versus right.

The Activity–Passivity Distinction in the Phenomenology of Merleau-Ponty and Husserl

My interest in the activity–passivity distinction stems from Merleau-Ponty. The distinction is already important, if implicit, in the *Structure of Behaviour* (1942), given its attention to ways organisms depend on their environment, and is also crucial to the *Phenomenology of Perception*'s (2008) emphasis on the body and perception as acting in and affected by the world. Passivity becomes an explicit issue in the *Phenomenology*'s discussions of synthesis as necessarily having passive aspects that are already oriented by pre-personal levels, and by temporality itself (these discussions stretch across part two, and the "Temporality" chapter). Here Merleau-Ponty is clearly influenced by Husserl's attention to passive syntheses as necessarily prior to and implicated in active syntheses, and Husserl's general point that passivity is necessary if syntheses, associative processes, and fields are to have a determinate structure or orientation.[3]

The activity–passivity distinction takes on greater weight in Merleau-Ponty's later work. In this work, to which I return below, we find him arguing that passivity is not merely a characteristic of perception, conceived as a relation between different sorts of beings (e.g., subject and object, or body and world); passivity is rather a constitutive ontological "ingredient" of being, and is crucial to his radical reconception of perception. Roughly put, being is conceptualized as a fundamental divergence between activity and passivity, and perception arises via an internal complication in the way this divergence has stretched over place and temporality. To illustrate: we actively touch things only in being reversibly passive to being touched by them; but this touching–touched relation is not accomplished in or by us

merely, it opens in us via things that are encrusted in us, and also manifest a touching–touched divergence. The touching–touched divergence in us crosses over and is the reverse of a touching–touched divergence in things, a complex relation Merleau-Ponty indicates with his concept of "chiasm."[4]

Husserl argues that passive syntheses and fields are transcendental conditions of sense-genesis, and Merleau-Ponty also sees that the activity–passivity distinction anchors and orients sense. But Merleau-Ponty goes further, since he is trying to think of this distinction as an elemental characteristic or operation of being itself, yielding something like an ontological twist on Husserlian *Wesensschau*, in which *Wesensschau* appear via an internal "deformation" or "hollow" of being that is opened by ontological passivity.[5] I mention these points not to plunge into an exposition of Merleau-Ponty's ontology, but because his effort to think of activity–passivity as ontologically basic imposes important constraints on conceptualizing the activity–passivity distinction.

These ontological implications and conceptual constraints are spelled out in Merleau-Ponty's 1954–55 lectures on passivity (2010), which also clues us into passivity being a key theme of his philosophy from the beginning. In these lectures, he argues that philosophy can do justice to perception only via the concept of passivity as a "new genre of being" that is not reducible to a lack relative to activity. This is a key point. Passivity is a paradoxical genre of being: it is positively given as in itself "incomplete"[6]; it is given in the mode of itself manifesting incompleteness in its *own* terms. At one point, he uses the image of a "softness in the dough" (136): passivity is a kind of give that is necessary within something for it to act as it does; in English we could say that this is a kind of givenness with a give in it, that gives by giving out under its own weight. The conceptual point couples with his repeated criticisms of an "activism" that reduces everything to pure activity, and thus reduces passivity to an absence of activity (as in certain kinds of idealism and intellectualism); and of a "passivism" that reduces everything to pure passivity, and either eliminates activity or reduces it to an absence of passivity (as in certain kinds of empiricism). Activism and passivism are conceptually inadequate to phenomena such as falling asleep, which is not purely an activity, since I cannot actively put myself to (genuine) sleep, I must wait for it to fall; but it is also not purely passive, since there is someone who is doing the falling asleep, who is overcome by it. Similar sorts of issues arise in perception in general: activism and passivism fail to do justice to phenomena of sense that we do

not constitute, but (abductively) follow.[7] Merleau-Ponty's point, beyond Husserl, is that grasping such phenomena entails a very specific conception of activity and passivity as two ontologically counterpart, yet mutually irreducible principles.

The Activity–Passivity Distinction as Non-Discursive, Non-Abstract

There is, then, a lot at stake in the activity–passivity distinction, yet, as I will now argue, this distinction cannot be fully defined via an abstract procedure. I pursue this argument via a link to the distinction between left and right hands, which exhibit handedness, *chirality*. Kant conceptualized hands as incongruent counterparts, and was interested in them because they challenge our effort to reduce all differences to pure abstractions. A way to put Kant's point is to imagine a hand (that exhibits handedness, like human hands do) popping into existence in an empty space.[8] An observing consciousness can grasp that it exhibits *chirality*, that there is a counterpart object that has the same shape, yet is incongruent with it (i.e., cannot exactly match the hand's envelope). But is this hand what we humans call a left hand, or is it a right hand? This determination depends on what I'll call a chirality convention that specifies which of a chiral pair of shapes is denominated the left one. The problem is that it is impossible for this convention to be abstractly communicated to or grasped by the observer. In Kantian terms, it is not a discursively specifiable determination, and even more than that, as Kant realized, it entails a concrete, bodily anchorage and orientation. As Onora O'Neill (2011) argues, the problem of chirality leads Kant to realize that our thinking is ultimately oriented by something concrete, not abstract. (To this degree, Kant anticipates Husserl's and Merleau-Ponty's emphasis on pre-philosophical orientation as key to philosophy.)

Let me briefly review a somewhat famous argument, by the popular mathematics writer Martin Gardner (1979), for the non-abstractness of chirality conventions, as this clarifies the issue, and lets me adapt the argument to the activity–passivity distinction. Imagine we have contacted a distant alien civilization; Gardner called it Ozma. Without knowing anything about them, we can, by sending patterns to them, build up and then build on shared mathematical and logical abstractions so as to establish shared terms for numbers, mathematical and logical operations, geometry, and so on; and then, figuring out ways to depict and/or reference

universal physical phenomena, we can build a shared vocabulary of physics and chemistry. This imaginative variation on experience amounts to a sort of Husserlian suspension of the sense of number, mathematics, logical operations, and so on, followed by an effort to reconstruct their sense in terms of what we imagine the flow the experience to be like for an Ozmaian or any other consciousness. I take this as a sort of variation on Husserlian practices of *epoché* and variation of the phenomena, what I will call an "Ozmaian *epoché*." The results of the logical investigations of "an Ozmaian Husserl" and of our own Husserl would prove especially helpful if we actually were pursuing this Ozmaian *epoché*. So imagine we proudly send the Ozmaians an image of Husserl. They message back: "The body parts you call hands are incongruent counterparts. In your convention for specifying the chirality of such counterparts, what's your term for the hand holding the object? (Machine parts and operations often depend on chirality; if we want our spaceships to link and work together when we meet, we'd better settle this convention.)" It's tempting to think you can message back "We call that the *left* hand." But, as Gardner argues, while our shared mathematics can let us build and communicate a convention for transmitting pictures as number sequences, there is no way to specify which *way* a transmitted picture is to be displayed. So the Ozmaians could be looking at this picture left-right reversed—and ensuring they are not entails communicating a display convention that already presupposes our chirality convention. While you can abstractly communicate and conceptualize left *versus* right, you cannot so communicate *which* of two hands is the left one. Ways of resolving this problem all in effect rely on some sort of physical, chiral thing that we can both reliably access as exhibiting the same orientation relative to us, for example, a spiral galaxy we can both observe (with a specified orientation relative to us), so we can then specify that the top arm of the galaxy curves to what we humans call left. If we sent them a plastic hand there would be no problem; or if we know their astronomical location, we can specify a position on their planet, from which to make an observation in a specific direction at a specific time, of a chiral, spiral galaxy that we can also observe, and use this to specify the convention; or perhaps we could specify the construction of a chemical polymer that reliably folds in a particular chiral way. Finally, it now turns out that certain fundamental physical processes are asymmetrical, and we could refer to these in order to specify a common chirality convention. But crucially, no stream of information, purely in time, can resolve the problem: there needs to be some shared space and matter, whether by

now sending a plastic hand, or by our happening to live in a shared space with a physics that has reliably spread to both our positions.

The philosophical point here is that certain kinds of conceptual distinctions cannot be preserved through certain sorts of *epoché*: if you suspend access to a cosmos with already determinate chiral features, you lose the sense of which is left versus right. (Related issues are background to Husserl's *Crisis* and "*Umsturz*" fragment (1970, 2002) on the origin of spatiality, as grounded in Earth as "originary ark.")

I now want to make a similar point about activity and passivity. Following Merleau-Ponty's insights, I conceptualize activity–passivity as exhibiting what I call ontological chirality: neither of these terms is a primary given, with the other a lack relative to it; the terms are fundamentally dual, we need to give a positive characterization of each term in its own right, including passivity. In any case, *lack* elides with issues of passivity, so definition of activity–passivity in terms of lack, negation, and so on, slides into circularity. How are we to specify which of two interactants is active, and not passive, or vice versa?

This may seem a very odd question, precisely because it seems basic and self-evident what is active versus passive. But first, let me note a point to which I return, namely, that a universal physics enjoins principles of relativity and of background independence, which means we must drop any sort of non-arbitrary or privileged framework of measurement or description, any fixed background against which to assess things—and this means dropping the activity–passivity distinction and any other framework that would objectively anchor it beyond our point of view. Instead, we must think about actions that are equally reactions, such that passivity and activity alike are actions.

Second, let us put the active–passive distinction through an "Ozmaian *epoché*," that is, think about whether we could communicate the chirality convention of this distinction via abstract information. Recalling the sorts of phenomenological experiments conducted by Albert Michotte on our perception of causality (Thinès et al. 1991), we might think we could do this by transmitting animations of shapes interacting, for example, a large red shape bumping into and pushing a small blue shape, and specifying "the red one exhibits activity." But grasping the meant sense of this communication presupposes the recipient grasping the temporal–spatial profile of the motion as a case of "passively being bumped," versus the blue shape actively escaping from the red, or using its momentum to slingshot in a new direction. That is, we can envisage animations that, if understood

correctly, depict and specify the activity–passivity distinction in terms of principles and measure of physics. For example, on grasping the red shape as active, the Ozmaian could take the principle to be that the bigger of two interactants is the active one, or the one that appears as having more mass, energy, and so on. The point above is that it is possible that the Ozmaian would take the red shape as passive, and reverse the physical principle. More important, I would argue that in fact no purely physical measure is actually decisive in specifying how we judge which of two interactants exhibits activity. If you consider various cases of the physics of interactions, you will find that mass and acceleration do not univocally track our judgements of active versus passive, and the forces involved are equal but opposite, so forces too cannot track the distinction. Trying to correlate active versus passive with such measures, is equivalent to picking privileged rest points or frames of reference for measurements—and physics itself cannot do this. (Consider a game resembling *bocce*, involving throwing balls of differing masses; if a ball is to move its target, it is judged as actively hitting the target; but if it is thrown so as to stop in proximity, it is taken as acted upon by the target's mass. These judgements will not univocally track mass or acceleration. Similarly, the energy expended in activating a fire, etc., is much smaller than that of what is activated, indicating that measures of energy do not track the active term.) While physics can give measures *corresponding* to active versus passive terms, or independent and dependent variables, measures proper to physics cannot themselves *denominate* which term is active versus passive, independent versus dependent.[9]

A different way to grasp this is by realizing that issues of animacy and agency are inevitably going to modulate judgements of activity versus passivity: is the bird that immobilizes itself and feigns injury, to tempt the cat into attacking it versus its offspring, passively suffering, or actively deceiving the cat? Is the person moving down a gravitational field actively diving into the water, or passively falling? In fact, there is a disanalogy between communicating the left-right convention to Ozma, versus communicating the active–passive convention. The problem in the left-right case is that we can't be sure that the Ozmaians are accessing the visual information in the correct way. This is not a problem in the activity–passivity case: they can encounter the visual features of our animations as we take them to be salient. The problem is that we cannot be certain that they grasp these visually salient features as communicating the sense of activity versus passivity that seems obvious to us. This is because communicating the distinc-

tion entails referencing physical interactions, but in physical terms, each such interaction is ambivalent or ambiguous: we might see the red shape as acting upon the blue one, but this also involves the blue acting on the red, and this could be grasped as the red being in the sway of and needing to follow the blue, and so on (and we have seen that the physics of physical interactions won't disambiguate either). We might think we could resolve this via principles or feelings we take to be primitive to all moving, sensing beings, but I think this presupposes certain claims about how living and moving happen, which might not hold in all variations. For example, we know that certain humans, when they see other people being touched, feel that touch as happening in them[10]; and we all have probably had the experience of feeling a painful act inflicted on another as an incursion on our own being. We know that certain organisms produce offspring only by essentially having their own bodies destroyed. Could this not suggest the evolution of a way of being in or perceiving the world in which what we take to obviously by passivity would be felt as activity? Kafka, for example, suggests this in his story of the hunger artist, who experiences starvation and the vanishing of activity as artistic activity. That is, even death, action against biological life, could conceivably be construed as an activity—and this is surely part of our cultural variational world.

Really, though, these highly imaginative variations are meant to stir up the realization that communicating the activity–passivity chirality convention would entail reference to a shared experiential valency of living[11] movement, and this would require a shared affective orientation to the world. That is, we can communicate the convention only if we can reliably think that certain kinds of motion profiles between certain bodies would be construed as exhibiting a determinate affective valence—but the only way to check this valence with the Ozmaians before meeting them is by having a shared activity–passivity language in which to conduct the check.

In turn, this is meant to prompt the realization that the activity–passivity distinction, like the left-right one, is not completely definable in an abstract way: yes, there would be some way of specifying activity versus passivity abstractly, specifying what we mean by this difference; but fully capturing and specifying which of the two interactants ought be denominated the active requires something more. Underneath all of this, the conceptual issue keeps looping back on itself, making me wonder if ultimately there really is a way to define the activity–passivity distinction or affect in a manner that does not already presuppose activity, passivity, and affect as

determinate phenomena that already orient and indeed motivate the sense of this definition. If this is so, it supports Merleau-Ponty's point that the activity–passivity distinction is (in my terminology) ontologically chiral: activity and passivity are each basic terms, irreducible to one another or to a relative lack, since grasping the distinction already entails experiencing lack and passivity as primordial terms; yet the two terms are inherently coupled.

Living Affect as Primordial Activity–Passivity Distinction

The issue we are running into is due to something fundamental to physics: each action A entails and involves an equal and opposite reaction, R, such that the action A is also a reaction R if looked at a different way. I push and act against the Earth when I walk from here to there, but equally the Earth pushes against and acts upon me. Now, of course, this doesn't figure in my everyday life: I am vanishingly small relative to the Earth, I affectively feel myself moving, the Earth does not feel itself, so in walking, I feel myself pushing, and myself acting. But suppose I am in microgravity, and need to bounce myself between and off moving debris; I might then feel my walking-like motions as also being pushed by something. But here we need to turn to a deeper issue: in physics, the very framework we are using and this very concern, about the active versus the passive, *must vanish.*

This vanishing of activity versus passivity is enshrined in key meta-principles of contemporary physics, mentioned above, namely, *relativity* and *background independence.*[12] Roughly, the principle of relativity specifies that concepts and laws must be the same in any frame of reference in which we measure things, independent of where or who we are, and non-accelerating motion; and the principle of background independence specifies that concepts and laws must be independent of any presumed absolute background that would stand as determinate independent of our frame of reference. (Leibnitz's critique of Newtonian absolute space and time is an early version of an argument for background independence.) As far as I know or understand, accepting these meta-principles entails a way of thinking about things in which, if we just stick with what is described at this physical level, there is no non-arbitrary way of determining which of the two interacts is the active one, and so on, and the distinction is in fact

meaningless and irrelevant. For the physicist, activity–passivity could be dismissed as a subjective illusion—as some treat the reality of time.

Nonetheless, I wonder if an operation intrinsic to physics in fact *entails* a non-arbitrary determination or understanding of the active–passive distinction. This is the *measurement of quantum mechanical systems*. Here, we verge into vexing territory, especially given the many competing interpretations of quantum mechanics. (These also present methodological challenges for phenomenology: just what quantum phenomena show depends on one's interpretation…but such interpretations appear pervasively shaped by precisely the sorts of conceptual presumptions that phenomenology is trying to avoid…by appealing to these very phenomena.) I focus on *quantum entanglement*, a "working phenomenon" that can let us put aside, to some degree, theoretical interpretations, in favour of empirically challenging results. *Quantum Chance* (2014), by physicist Nicolas Gisin, gives a lucid and philosophically insightful introduction to this phenomenon, in which, for example, "twinned" photons, A and B, are produced with entangled quantum states, and sent to Alice and Bob, at far apart locations. Until measured, the quantum mechanical state of each photon (involving factors such as spin or polarization) is not fully determinate, or cannot be known as fully determinate—just how this is so is where issues of interpretation arise. But we can put these issues aside, focusing on the fact that the resultant states eventually measured *cannot* be predicted by any spatio-temporal causal relations we know of. As Gisin puts it, the result is pure chance. What is challenging is that quantum mechanics predicts that once one of an entangled pair is measured, its entangled counterpart will "instantaneously," *no matter how far away*, exhibit *exactly the same* determinate measure. Entangled quantum particles thus exhibit *non-locality*: it as if two dice were thrown and ("by pure chance") turned up *exactly the same way*, at locations far from one another. We might suspect that some hidden signal communicates the resultant state from one location to the other, thereby causing this "spooky" correlation. But current tests, which have now confirmed the result over distances as long as 1.3 kilometres, are ruling out such "loopholes," and demonstrate that the correlation happens at speeds faster than light signal communications would allow. While this result cannot in fact be used to communicate information, it allows Alice and Bob to generate a purely random cryptographic key, that they share and no one else knows (certain protocols let them detect, with arbitrarily high certainty, if an eavesdropper has intercepted and measured their entangled particles). What is crucial, and what Gisin emphasizes, is

that since the result is pure chance and cannot be predicted, the basic sorts of causal correlations we appeal to cannot explain the facts: there is no determinate series of events that could determine in advance the measured states of A and B, or their correlation. Yet, once one of A or B is measured, A and B are determinate, and correlated.

This phenomenon thus enables a comparison between two different interactions with the "same" system, where the interactions are not simply masses colliding, but count, qua part of scientific investigation, as measurement making (which is not a merely psychological or felt interaction). It thus gives us variations of a kind of interaction that is very different than our *bocce*-like game, on which to deploy or test out activity–passivity distinctions. On first glance, it makes intuitive sense, in this comparison, to say that when Alice (with her measurement apparatus) measures A, she *acts* on A (as not yet determinately manifest); and that she is then acted upon and *passive* to A. That is, her measuring interacts with A in ways that must wait for A to manifest and "respond" as determinate to her measuring probes. The need for such activity–passivity type distinctions is emphasized by the peculiarity that once Alice measures A, Bob cannot act on B in the same way that Alice acted on A: he turns out to have measured an already determinate B. But (on my understanding) this way of putting it falls into a conceptual trap: it is only *after* Alice and Bob have communicated (via signals that do *not* exhibit non-locality), and they find out who measured what when, that matters can be described as above. In their own time, each experiences: obtaining a determinate measure from what is not yet (or cannot yet be known as) determinate. But let us shift to a higher level: the whole phenomenon, and quantum cryptography, hinges *on each of them not knowing whether their photon's state is determinate or not, or who is active versus passive* (*in the intuitive sense just indicated*). They cannot know this until after measuring and communicating about it. Yet, obtaining the empirical results described above hinges on a transition to what is determinate from what is not, a transition to having acted, from having not yet acted as measuring—this sort of transition is crucial to the result turning up as pure chance, versus resulting from local causal series.

This analysis leads me to conclude that (1) being able to grasp that a measurement (in the above sense) has been made (that quantum mechanical systems are no longer non-determinate, either in their being, or as known), is equivalent to being able to deploy activity/passivity distinctions *in ways that can be rendered determinate by reference to such phenomena* (e.g., by drawing distinctions between the before and after, in comparisons

of Alice and Bob making such measurements). (2) It is, however, possible to take my claim as implicitly and wrongly interpreting measurement as a sort of activity that acts to render systems determinate, either in their being, or as known (even though I am trying to remain agnostic about this point). However, the contesting view is still going to have to conceptualize pure chance results as turning up in ways that escape local interactions, and understanding that, I suspect, involves implicit appeal to (assertion or denial of), the activity–passivity distinction or something close to it, for example, conceiving systems as spontaneously—"without passive interference"—collapsing, and so on.

This suggests to me that a basic activity–passivity distinction can be preserved and communicatively indicated through an "Ozmaian *epoché*": communicate the physics of entanglement, and specify that the process wherein the state of entangled particles first becomes manifest as determinate counts as activity; or, that you need to draw such distinctions to tell an intelligible story about what is going for scientists observing or trying to understand such experiments ("Bob wasn't really acting on B in the way that Alice was on A!") and the peculiarity of these experimental results, in comparison with local causal interactions. Thus, despite the fact that relativity and background independence suspend all non-arbitrary, objective standards for setting activity–passivity chirality conventions, physical phenomena present us with challenges that we can understand only if we are pressed into cognate conventions, or the distinctions behind them. Put another way, the transcendental condition of grasping the strangeness of quantum entanglement—grasping the scientific question posed by these phenomena—is grasping how they either challenge our ability to act on them as measuring, or how they manifest a kind of spontaneous activity beyond the kinds of collisions that can be analysed in ways that dispense with activity–passivity distinctions; grasping the problems requires a different kind of orientation towards physical phenomena than we find in the analysis of collisions, and so on (perhaps involving issues of time, e.g., irreversible befores and afters of measuring).

The need for non-arbitrary activity–passivity conventions is much more emphatic in biology. While we do not have an agreed upon definition of life, I cannot conceive a way of doing biology that would not in some way depend on perceptually picking out, observing, and studying objects that stand out for us as living only in virtue of ways in which we take them to be exhibiting activity versus passivity.[13] You might think a Kantian concept of teleology could get around this: we don't need the activity–

passivity distinction to differentiate biological systems from other things, we just need to identify wholes that reciprocally generate and depend on their parts. But this, I think, presumes easy identification and picking out of such wholes, and this depends on the timescale and spacescale of our observation; and setting the boundary conditions for living wholes can in fact be quite complex, in ways that would lead to arbitrariness if we did not already have a more primitive activity criterion. (Does the earthworm whole include the tunnel that it builds, which, it turns out, is key to its being able to maintain osmotic pressure in its organs, such that the tunnel functions a bit like a kidney? (Turner 2000).) That is, a being insensitive to the activity–passivity distinction would be incapable of discerning the objects of biology. Evan Thompson (2007) has argued, via Hans Jonas, for something like this point, that only living beings can perceptually and conceptually encounter things as living: encountering life entails an orientation by your own affective living. Thompson is also drawing on Merleau-Ponty's point in *Structure of Behaviour* that living structure is not a physically neutral or objective phenomenon, but a perceptual one. I note that Merleau-Ponty's later turn to activity–passivity as "ontologically chiral" in effect reconceptualizes structure via a sort of primordial affectivity within being itself: relative to its *own* passivity, being can manifest within itself structures that we can perceive; since these structures are there in virtue of being's passivity, they are not merely artefacts of perception.

Husserl was already ahead of things here. In Addendum XXIII of the *Crisis*, Husserl discusses biology.[14] As Darrian Meacham (2013) argues, this addendum suggests that, for Husserl, like Merleau-Ponty, biology is necessarily anchored in an empathic relation to organisms. Husserl writes that "a general biology has the same worldly generality as physics," but, he adds, "Every sense that a biology of Venus could have, which we ought to speak of as a possibility, is thanks to the original sense formation of our lifeworld and moreover to the theoretical elaboration of this sense formation through biology." In a kind of "Ozmaian *epoché*," Husserl is arguing that the sense "life" could have on Venus is necessarily oriented by the affectivity of the scientist's living—which can be studied by biology. Biology is thus quite a special science, because its "constructions [do not] rise up dizzily to the sky—through countless stages and levels—like those of mathematics"; biology is necessarily anchored in our living as something that must be described, versus abstractly constructed. In quite an astonishing claim, Husserl writes that "this grants [biology] such a proximity to the depths of the things themselves, that its access to transcendental phi-

losophy should be the easiest and with it the access to the true a priori to which the world of living beings refers"; biology, Husserl says, "hides an ontology in itself." Husserl, I think, is getting at a point similar to the one we have been pursuing, namely that biology presupposes an encounter with being as having certain basic orientations, but these orientations can only be accessed from within their givenness, not via abstract construction. In fact, I think activity versus passivity is a key and basic orienting distinction that must already be given. Biology provides a rigorous way of studying this givenness, and thus an insight into being as having a pre-philosophical orientation that we cannot ourselves construct—although these insights would also demand philosophical critique.

All this would mean that a pre-philosophical way of determinately orienting to the activity–passivity distinction is crucial to a science that can grasp our own position as living observers and measurers. This, I think, would be provided by our being affective beings, by an activity in which we feel our own activity and feel activity as acting against us, feel ourselves as passive, and passive to something. But this affectivity could not itself be a product of our own activity, as Husserl emphasized (a point with which Schelling (1978) also grappled). Affect would have to name a sort of primordial relatedness of passivity and activity that arises within being and enables being to relate to itself in terms of activity–passivity. But at this point, I am also wondering if affect really can be conceptually articulated, or if we have to follow its being and merely describe it, and whether our description can actually mean anything, have any sense, except as taking place and being followed from the being of what is being described. It could be that passivity and our affective sense of it must be passively given for there to be science or sense in the first place.

Notes

1. For example, Svenbro (1993) shows how this distinction in its sexual aspect informs concepts of reading and thence philosophy.
2. Hubbard (1990) is a classic text that shows how the bias that females are passive and males active (which goes back to the Greeks) prejudices biology and betrays the phenomena.
3. Husserl (2001) and Husserl (1973), esp. §16. Cf., for example, Villela-Petit (2009), also Steinbock (2004), Steinbock (1998).
4. Cf., for example Merleau-Ponty (1968), 264, the note "Activity:passivity—teleology." See Morris (2010) and Morris (2011) for more on this topic.

5. Cf. the theme of ideas arising as "concrete deformations" within things, discussed in Carbone (2010).
6. Incomplete is not the right word: it indicates incompletion relative to something else, whereas passivity's "incompleteness" is manifest within it itself, as a "positive softness." Nonetheless, passivity is counterpart to activity, but their interaction is not a flow or rebalancing along one line of exchange, it is a more complex and creative interaction in which each contributes its own ontological genre.
7. Derrida is likely pursuing similar issues.
8. For papers on this topic in Kant and beyond, including translations of Kant's texts, see van Cleve and Frederick (1991).
9. Thanks to Steven Rosen for some confirming observations along these lines.
10. Cf., for example, Blakemore et al. (2005).
11. "Living" needs to be stipulated here, because movements taken as merely a matter of physics are indifferent to the activity/passivity distinction.
12. Cf. Smolin and Unger (2015).
13. Note, this does not rule out the organism affectively experiencing its activity as having a valence reverse to the one that we would expect; it's just that we have to be able to grasp the organism as a locus of activity, to grasp it as an organism.
14. Husserl (2013).

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CHAPTER 7

Losing Social Space: Phenomenological Disruptions of Spatiality and Embodiment in Moebius Syndrome and Schizophrenia

Joel Krueger and Amanda Taylor Aiken

Introduction

Social cognition and interpersonal relatedness are currently much-discussed topics in philosophy and cognitive science. Many of the debates focus on the causal mechanisms purportedly responsible for our ability to relate to and understand one another. When emotions and affectivity enter into these debates, they are generally portrayed as *targets* of social cognitive processes (i.e., as perceived in another person's facial expressions, gestures, utterances, behavioural patterns, etc.) that must be interpreted or 'decoded' by the mechanisms in question. However, the role that emotions and affectivity play in *facilitating* interpersonal relatedness has not received the same level of attention. Nor has much thought been given to the *spatiality* of our interpersonal relations—that is, the common space in which we come together and engage with one another as social agents.

In this chapter, we argue that understanding the experiential role of social space, as well as its relation to embodiment and affectivity, is crucial for understanding how the social world shows up *as social* in the first place—that is, as affording different forms of sharing, connection, and relatedness. We explore this idea by considering two cases where one's ability to skilfully inhabit social space has been compromised: Moebius syndrome (MS) and schizophrenia. Drawing upon phenomenological approaches to the body and spatiality, we argue that this altered sense of

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social space emerges from subtle disruptions of embodiment characteristic of these conditions. These disruptions are instructive, we suggest, in that they highlight the foundational role that body and affect play in organizing social space—the lived context in which we first encounter one another as social agents.

Phenomenological Approaches to Embodiment, Affectivity, and Space

The Space of Embodiment

Phenomenology is an investigation of subjectivity. It develops a careful analysis of the structures of experience—phenomenal consciousness from the first-person perspective—as well as how these structures are shaped by the dynamics of the subject's bodily engagement with the world and others. Importantly, phenomenology is not an approach based on introspection or inner mental states. Rather, with its emphasis on embodiment and agency, phenomenology focuses on various ways subjects inhabit and relate to their world. This embodied and situated approach moves phenomenologists to argue that considerations of embodiment from the first-person perspective must simultaneously be considerations of *space*—namely, *lived* space. As Merleau-Ponty tells us, 'Insofar as I have a body and insofar as I act in the world through it, space and time are not for me a mere summation of juxtaposed points…I am not in space and in time, nor do I think space and time; rather, I am of space and of time; my body fits into them and embraces them' (2012, 141).

From a phenomenological perspective, lived space is distinct from objective or geometrical conceptions of space which see space as static (i.e., the 'container' in which objects and events are housed) and thus distinct from human contributions (Casey 1997). Lived space instead refers to egocentric space experienced from a body-centred frame of reference. It has several experiential dimensions, including (to use Merleau-Ponty's terminology) both the spatiality of *position*, that is, the immediate space of perception and action surrounding the subject's body, as well as the spatiality of *situation*, that is, 'the situation of the body confronted with its tasks' (Merleau-Ponty 2012, 103).

This latter form of lived space is more structurally complex than the former. It is established by the subject's responsiveness to environmental

affordances—possibilities for action (Gibson 1979)—that become present in light of the habits, skills, expectations, goals, and affects a subject brings to a given situation. In other words, the 'spatiality of situation' refers to the meaning or significance a situation has for the subject when experienced as a unified whole. Crucially, however, these situational meanings need not be apprehended explicitly or propositionally. Instead, they are disclosed via a tacitly felt *practical* apprehension of affordances specified by the different ways subjects inhabit their environment: in a familiar versus unfamiliar manner, for instance, or when gripped by a certain affective state such as fatigue or elation, or when possessing (or lacking) a particular set of habits or skills. For example, when looking under the hood at a car engine, a skilled mechanic will immediately perceive meanings of that situation (e.g., signs of wear and tear, parts that can be tweaked and manipulated, etc.) that elude the novice's grasp. Similarly, a veteran airline pilot will feel at home in the cockpit in a way the non-pilot cannot.

For phenomenologists, lived space can be actively structured and organized by the subject's environmental manipulations. For example, when I walk into my office for the first time after starting a new job, I enter unfamiliar space. I experience the lived space of this new environment as diminished or somehow *constricted*. Since I am unfamiliar with the practical configuration of this space and its affordances, it lacks 'homeliness'. Of course, I immediately recognize that space as office space and know what I'm supposed to do with the things in it. But it's organized around tools and aesthetic qualities—a new desktop computer and keyboard different than what I'm used to; empty bookshelves, filing cabinets, and containers waiting to be filled; a stubborn window that needs finessing before it will open; pale grey walls or dim lights I find vaguely depressing—that are simultaneously both familiar and alien, in that I've not yet adapted to their idiosyncratic qualities.

After a few weeks, however, I organize this space according to my needs; I come to fully *inhabit* it by arranging it to my liking and putting my things in it. And I now feel this once-constricted space has expanded to afford a range of tacitly apprehended *possibilities*. I know how things work (e.g., the stubborn window, the keyboard with the sticky 'P'), and I know where to reach when I need something. To put the point another way: I've actively tailored this portion of my ecological niche (Willi 1999), and thus, my spatial experience of that niche as well as the bodily practices I enact within it are altered to reflect this new mode of skilful inhabitation. From a phenomenological perspective, lived space is in this way a dynamic,

elastic dimension of experience connected with movement, action, and temporal development (Fuchs 2007, 426).

Important for our concerns is that lived space is also deeply imbued with *affectivity*, which we understand broadly to encompass moods, emotions, and other feeling states (Colombetti 2014). For phenomenologists, 'affectivity' does not refer to internal states hidden away inside brains and bodies (Colombetti and Krueger 2015; Krueger 2014). To the contrary, emotions and affects are robustly embodied, interactive, and world-directed processes that connect us to a shared world and guide our dealings with it.

This is evident, for instance, in how emotions saturate spaces and situations with value and significance. They disclose people and things as inviting, repulsive, scary, boring, enthralling, or welcoming; in this way they serve as the vehicle through which specific subsets of affordances stand out as experientially salient (or absent, as the case may be). This is affectivity's orienting or appraisal function (Colombetti 2014, 83–112). When I walk into a party full of strangers and they glance my way, I immediately feel the affective impact of their stiffened postures, quizzical looks, and the stark *absence* of social affordances. I feel increasingly awkward and self-conscious; I cannot comfortably settle into this shared space until someone smiles and introduces herself, or my host grabs my arm, makes a joke to diffuse my awkwardness, and playfully pulls me along to meet and mingle with her guests. Or, if I'm anticipating an important call at any moment, the mobile phone on my desk becomes unusually salient: I find it difficult to focus on my work as my eyes continually dart to the phone and I double check to make sure it's not muted, that it's sufficiently charged, has a strong signal, and so on.

Because emotions and affective states in this way involve both *appraisal* (i.e., bodily changes in response to situations) as well as *action tendencies* (Frijda 1987) (i.e., anticipations of how we will remake the situation, relative to our interests), phenomenologists insist that emotions are ongoing subject-world *transactions*. They are both in us *and* in the world, shaping the contours of lived space; it is through emotions that we continually remain in touch with our environment and respond to its possibilities (Johnson 2008, 66). Slaby and colleagues put the point well when they write:

> It is adequate to understand emotions as a complex *sense of possibility*: emotions disclose what a situation affords in terms of potential doings, and the

> specific efforts required in these doings, and potential happenings affecting me that I have to put up with or otherwise respond to adequately. These two aspects—*situational* (what is afforded by the environment) and *agentive* (what I can or cannot do)—are intimately linked to form a process of dynamic situation-access: an active, operative orientation towards the world. (Slaby et al. 2013, 42)

The critical role affect plays in framing experiences of the world and of lived space receives multiple lines of empirical support. For example, several studies indicate that subjects estimate the grade of an incline to be steeper when wearing a heavy backpack as opposed to not wearing one, or when they feel fatigued as opposed to feeling refreshed (Proffitt et al. 1995, 2001). Even the presence of a supportive friend—actually present or *merely imagined*—leads subjects to perceive the incline as less steep than when they are alone (Schnall et al. 2008). The psychosocial affective support we receive from others modulates how we perceive the world and its affordances. And a similar dynamic appears to be at work in the social world. There is evidence from cognitive neuroscience, for instance, that shared affect is a crucial component of empathy; it allows individuals to pick up on the ways another person is responsive to environmental affordances, and in so doing share and understand their perspective on the world (Kiverstein 2015). *Without* this orienting function of shared affect, however—such as in Autistic Spectrum Disorder (ASD)—individuals struggle to get grip on what others find important in a given situation and have difficulty relating to them. This absence of affective framing is one of the reasons people with ASD struggle to comfortably inhabit the shared spaces of the social world.

Dimensions of Embodiment

With their emphasis on the spatiality of embodiment and affectivity, phenomenologists also argue for the need to investigate how various dimensions of embodiment determine the way subjects inhabit and organize lived space. Just as space can be experienced (and conceptualized) in both objective and subjective terms, so, too, can the body. Clarifying the interplay between the objective and subjective dimensions of embodiment—as well as how this interplay relates to the negotiation of lived space—will help us better understand the spatial disruptions characteristic of MS and schizophrenia.

Phenomenologists famously distinguish two dimensions of embodiment (e.g., Husserl 2001; Merleau-Ponty 2012). On one hand, we can consider the body from an internal perspective, that is, the body-as-*subject* (*Leib*). On the other hand, we can also consider the body from the perspective of an external observer, that is, the body-as-*object* (*Körper*). The interplay of these two dimensions of embodiment constitutes our sense of self and worldly relatedness.

To begin with the body-as-*objec*t, my body clearly has a material dimension. It is a physical object in the world and shares properties with other physical objects: it is a certain size, colour, and shape, for instance, and it takes up geometrical space like other objects. Moreover, as a physical object, it causally interacts with other objects in the world. And although I live in and through my body from the first-person perspective, I can nevertheless relate to it *as* an object; I can adopt a third-person perspective on my body and consider it from the outside while looking in the mirror and thinking that I really need to spend more time in the gym, scrutinizing an injury or strange rash, or experiencing stage fright while lecturing and suddenly becoming hyper-aware of how I look to my students. I can also acquire conceptual understanding of my body via scientific or medical knowledge, for instance, or adopt an emotional attitude towards my body if I'm pleased with my new haircut, say, or self-conscious of a blemish (Gallagher 2005, 25). In these cases, I reflexively objectify my own body; it becomes a thematic *content* of my perception in a way that isn't normally the case as I move and act in the world.

For phenomenologists, the body-as-*subject* is meant to characterize the first-person intimacy we have with our own body from the inside, the body as experientially *inhabited*. From this perspective, the body is manifest not as an object or content of my perception, belief, or attitude, but rather, as the transparent vehicle through which I act on the world. The body-as-subject—at least when functioning optimally—operates as a pre-reflective structure that *organizes* experience. This simply means that the body is implicitly present as we perceive the world and act on it, dynamically shaping in subtle ways both what we experience and how we experience it. As Sartre puts the idea, 'the body is present in every action though invisible…The body is *lived* and not *known*' (Sartre 1956, 427).

Consider reaching for a cup. When we reach for a cup, we don't first have to locate different parts of our body and then reflectively think about the various movements and postural adjustments needed to carry out our intention in action. We simply reach for the cup spontaneously, without

thinking. And we can do this because of the background work of the body-as-subject. Due to ongoing information from proprioceptive and kinaesthetic processes (along with tactile and visual information), we have an immediate sense of where our limbs are in space and what sort of actions are possible *within* that space without having to monitor our body or actions. Moreover, we experience the cup not merely as a value-neutral object with a number of different properties (colour, shape, texture, etc.) but rather as *meaningful*: as a purpose-built artefact affording a range of different interactions (grasping, picking up, throwing, etc.) determined by the structure of the cup, the context in which we encounter it, and by our experience of bodily subjectivity.

The important point is that the first-person intimacy we enjoy with our body-as-subject functions as a constraint on our experience of self, space, and world. As Merleau-Ponty puts it, the body-as-subject 'projects a certain "milieu" round itself, insofar as its "parts" know each other dynamically and its receptors are arranged in such a way as to make the perception of the object possible though their synergy' (Merleau-Ponty 2012, 241).

Breakdowns in Embodiment, Affectivity, and Social Space: Moebius Syndrome and Schizophrenia as Case Studies

With these phenomenological concepts in place, we now consider breakdowns in embodiment, affectivity, and social space in MS and schizophrenia. We're particularly interested in how breakdowns of the former (embodiment and affectivity) modulate disruptions of the latter (social space). We argue that paying careful attention to the experiential character of these disruptions highlights the central role that body and affect plays in determining how we inhabit and negotiate the shared spaces of the social world.

Phenomenological Disruptions in Moebius Syndrome

MS is a rare form of congenital oculofacial paralysis, typically complete and bilateral, resulting from maldevelopment of the sixth and seventh cranial nerves. MS affects approximately 0.0002%–0.002% of births (Kuklík 2000). Along with oculofacial paralysis, individuals with MS also exhibit

other abnormalities: abnormal tongue, hypodontia (i.e., missing teeth due to developmental failure), difficulty sucking and eating, limb defects (such as club foot or syndactyly), and general problems with motor skills, coordination, and balance (Miller and Strömland 1999). In addition to these physical abnormalities, however, there also appear to be subtle *phenomenological* alterations of embodiment and affectivity that resist an exclusively neurophysiological characterization, and which impact the ability of people with MS to inhabit and negotiate social space (Krueger and Henriksen 2016).

We can begin by noting that people with MS often report feeling they don't wholly coincide with or feel at home in their body. This attenuated sense of bodily subjectivity—accompanied by a diminishment or flattening of affect—means that the body is primarily experienced in a markedly impersonal *object*-like way.

For example, James reports: 'I have a notion which has stayed with me over much of my life—that it is possible to live in your head; entirely in your head (…) I think there's a lot of dissociation. But I think I get trapped in my mind or my head' (Cole and Spalding 2009, 68, 72). Celia describes an even more articulated sense of disembodiment which she claims shaped her sense of self from an early age:

> I never thought I was a person; I used to think I was a collection of bits. I thought I had all these different doctors looking after all the different bits… 'Celia' was not there; that was a name people called the collection of bits… Even though I was a collection of bits I always knew there was something strong inside that I had a mental dialogue with, but it was not the physical body; it was very separate from the physical. (Cole and Spalding 2009, 42)

People with MS often report that the diminished affectivity they feel is coextensive with their diminished embodiment. To be clear about this point: it's not that people with MS lack emotions and feelings entirely. Their reports suggest not an absence of emotion but rather a restricted range of emotional sensitivity, responsivity, and expressivity impacting both their self-experience and social engagements (Krueger and Michael 2012). For instance, James tells us that, 'I sort of think happy or think sad, not really saying or recognizing actually feeling happy or feeling sad'; 'I've often thought of myself as a spectator [of his emotions] rather than a participant' (Cole and Spalding 2009, 72). Similarly, Celia claims, 'I did not express emotion. I am not sure I felt emotion, as a defined concept.

At my birthday parties I did not get excited. There were people around excited, but I followed what they did' (Cole 1999, 244). Another woman, Eleanor, writes:

> [I]f I go back to my late teen years, I was not very embodied as a person and the physical nature of attraction was some way away…At this state, I did not feel anything [romantic] physically; even though I had matured physically, I had no feeling. Like the other feelings it had not kicked in. (Cole and Spalding 2009, 169–170)

What is relevant for our considerations is that these subtle disruptions of embodiment and affectivity appear to significantly alter how the spaces of the social world show up for the person with MS. Many of their reports suggest that this diminished embodiment and affective flattening *constricts* their apprehension of social space. The social world, if not closed off entirely, is something experienced as alien and largely impenetrable.

Part of this has to do with the fact that, in virtue of their facial paralysis and other motor difficulties, people with MS have not developed the repertoire of bodily habits specific to the social world that the rest of us have. So, instead of smoothly interacting with others—spontaneously coordinating gestures, postures, vocalizations, and so on—people with MS assume a hyper-reflexive, excessively *objective* stance towards their body that disrupts the normally transparent interactional dynamics the rest of us take for granted (Chartrand and Bargh 1999). This is a consequence of their diminished embodiment and affectivity (i.e., disruptions of the body-as-subject).

For instance, Lydia reports that she feels detached from her bodily subjectivity and is unable to settle into and inhabit social space; that is, she cannot participate in the back-and forth interplay of social interaction without constantly reflecting on her gestures, postures, and other movements: 'Instead of facial expression I use my hands and shoulders, and my voice, both in its tone and what I say; I construct it all very carefully… I have to monitor these things all the time…None of this is automatic' (Cole and Spalding 2009, 152). Celia describes a similar experience:

> All my gestures are voluntary, even now aged 46. *Everything I do, I think about*…All the things I am doing, whether turning my head or moving my hands, is self-taught. I learnt from observation…When I was a child, I could not gesture, because I was a collection of bits. My body was not me, so

> expression in it, with it, would not be from me, either. It was not a joined-up feeling. There was a huge bit missing: *with the lack of balance, mobility, and problems with coordination, you don't get a sense of self.* (Cole and Spalding 2009, 190)

As a consequence, Celia tells us that, as a child, she was unable to enter into the fluid social spaces of collective *play* that are such an important part of childhood development. Due to her excessively objective orientation towards her body (i.e., experienced as a collection of relatively disconnected 'bits'), she felt 'cut off from immersion in action in the body and so cut off from much of what it is to be a child', as Jonathan Cole tells us; Celia eventually came to grasp 'the gap between herself, and her collection of body parts, and her peers' (Cole and Spalding 2009, 56). Others report this experience of constricted social space continuing into adulthood. Lydia, for instance, reports the following experience:

> I remember a frightening, startling moment when, at a disco, I saw a girlfriend exploring her sexuality and flirting. That was so utterly alien to me…I could not find its meaning. I could not work out what it was about. It had no relevance to me. My friend was fluttering her eyelids and was enjoying herself and you could see the boy and girl doing it. *I could not work out why.* (Cole and Spalding 2009, 168)

In sum, what these narratives appear to suggest is that individuals with MS often experience a diminished sense of embodiment and affectivity that goes beyond a mere description of their specific physiological or facial abnormalities. Their lack of bodily self-intimacy flows from a more general overall feeling of being *disconnected*, both from themselves (i.e., as bodily subjects) and others. And this latter sense of disconnectedness is apparent in the way that social space is often experienced as constricted or impenetrable, as lacking meaning and failing to offer up interactive affordances. In some people with MS, disruptions of embodiment and affectivity thus appear to modulate the apprehension of social space. As we'll now see, similar disruptions are also found in schizophrenic experience.

Phenomenological Disruptions in Schizophrenia

Schizophrenia is a psychiatric illness which involves disintegration of coherent thought and affectivity. Symptoms are divided into two main groups:

positive and negative symptoms (American Psychiatric Association 1994 (henceforth DSM-IV), 299). Positive symptoms include hallucinations, delusions, loss of contact with reality, and grossly disordered thought and behaviour. Negative symptoms, usually occurring in the onset of schizophrenia, involve a diminishment or loss of something normally present in healthy individuals. Examples include flattened or diminished affect, lack of motivation, alogia, anhedonia, neglect of routine self-care, poor memory and concentration, difficulty in completing tasks, and social isolation. The negative symptoms of schizophrenia adversely impact the quality and structuring of everyday life. In what follows, we focus on how interpersonal relations—and the apprehension of social space more generally—are affected in schizophrenia.

Through schizophrenia, an intuitive and taken-for-granted capacity to understand and engage with others is lessened and in some cases lost (Sass 1992a, 23; Stanghellini 2004). Instead, the experience of others is marked by feelings of distance and alienation, emerging from difficulties in affectively 'mak[ing] contact' with others, as one person puts it (Sechehaye 1970, 46, 54, 55). Changes to intersubjectivity occur alongside and are exacerbated by disruptions of embodiment and affectivity (Krueger and Henriksen 2016).

As with MS, individuals with schizophrenia spectrum disorders often report problems with their embodiment. Many of these reports indicate a diminishment or loss of bodily *self-intimacy*, which is often a consequence of *depersonalization*. Instead of living transparently *through* their body as a unified centre of agency and experience—that is, the body-as-subject—they describe feeling disconnected or alienated from their bodies.

For example, 'K', a 25-year-old patient, says:

> I have always had a difficult relation to my body (…) It's as if there is a distance between my body and my mind. It's like my mind is a little puppeteer, sitting far away, controlling my body. It's not like I see myself from above or something. But it's like I'm not in my body or not attached to it. It's like my body is an appendix that hangs below me. My body feels alien to me (…) I wish I could be free of it. (Henriksen and Nordgaard 2015)

'K' is not reporting an out-of-body experience but rather a persistent sense of not feeling perpetually at home in, or present to, her body. Her experience of bodily subjectivity is attenuated or somehow diminished.

These reports are common, although the nature of this diminished embodiment, as well as its qualitative intensity, can vary. For example: 'the body feels awkward as if it does not really fit' (Henriksen and Nordgaard 2014: 435–441), or 'I feel strange, I am no longer in my body, it is someone else; I sense my body but it is far away, some other place. Here are my legs, my hands, I can also feel my head, but cannot find it again' (Parnas 2003, 227).

As with MS, this diminished embodiment can also lead some people with schizophrenia to experience their bodies in excessively *objective* terms. The body-as-subject is no longer felt to move and act as a spontaneous fluidly integrated unity; rather, its movement and overall functioning takes on an alien or quasi-mechanical character: 'I'm blessed with a bladder-emptier that I can turn on and off, and an anal expeller' (Angyal 1936); 'I walk like a machine; it seems to me that it is not me who is walking, talking, or writing with this pencil. When I am walking, I look at my legs which are moving forward; I fear to fall by not moving them correctly' (Parnas 2003, 227).

In addition to disruptions of embodiment, schizophrenia also involves changes in affect (DSM-IV, 301; Parnas and Sass 2001; Sass 1992a, 2004; Stanghellini 2008). Flattening of affect and affective expression are key symptoms of schizophrenia, affecting both a capacity to feel emotion, and an ability to recognize the affectivity of others (DSM-IV, 30). Affective flattening is often linked to the experience of derealization. Whilst depersonalization involves a feeling of distance and unreality in self-experience (including bodily experience), derealization involves changes to the way in which the world and surroundings are apprehended. Instead of being homely, taken for granted, and inviting, the world appears unfamiliar and distant. People commonly report that the world feels 'unreal' (i.e., dream-like, stage-like). At the same time, people are also encountered as 'unfamiliar' and 'mechanical' (DSM-IV, 822; Hunter et al. 2004, 9) These affective alterations have profound consequences for intersubjectivity and for self. When felt connectedness to the world and an emotional resonance to others are lost, the way in which everyday life is structured and lived is radically different, as we shall now explore.

Losing Social Space

Given these disruptions of embodiment and affectivity, it's unsurprising that people with schizophrenia often report a severance in feeling connected to

others. It's important to note that with a loss of connectedness, we not only lose the capacity to feel related to others, but also to feel connected to a shared world—a common social space—within which meaning is made. Stanghellini and Ballerini describe this breakdown as a 'loss of primordial intersubjectivity' (2007, 140): an intuitive grasp of others as *people* who engage in meaningful activities, in meaningful situations, and who offer up interactive possibilities for us.

It is interesting to examine how these changes to intersubjectivity occur alongside an experiential fragmentation of lived social space. This fragmentation precludes experiencing oneself, others, and objects as *contextualized* within interpersonal space. In particular, a sense of space as shared, social, or even as 'relevant to me' is undone. Instead, space appears as *geometricized* and thus loses its quality of familiarity, that is, as space to be inhabited and settled into.

One person remarks: 'madness was definitely not a condition of illness; I did not believe that I was ill. It was rather a country, opposed to Reality [*sic*], where reigned an implacable light, blinding, leaving no place for shadow; an immense space without boundary, limitless, flat' (Sechehaye 1970, 44). Here, the experience of illness involves inherent changes to spatiality; note the parallel between the way in which space is described and the symptoms which mark depersonalization and derealization. Space is 'flat', 'limitless', and without nuance. Rather than operating as a contextualizing background for interaction, it instead appears as a neutral container for people, landscapes, objects, and self, which likewise are presented as divested of social affordances.

Returning to the previous report, the person continues:

> In this stretching emptiness, all is unchangeable, immobile, congealed, crystallised. Objects are stage trappings, placed here and there, geometric cubes without meaning. People turn weirdly about, they make gestures, movements without sense; they are phantoms whirling on an infinite plain, crushed by the pitiless electric light. And I—I am lost in it, isolated, cold, stripped, purposeless under the light. (Sechehaye 1970, 44–45)

We see here how depersonalization and derealization combine to present a world which is experienced as odd, lacking vitality and 'homeliness', and is one in which the person feels fundamentally isolated. There is a sense in which there is a spatial 'immobility' marked by a lack of openness or interactive possibilities.

'Immobility' and lack of possibility and change are features mirrored within interpersonal interaction in schizophrenia. In interactive situations, there is pronounced lessening of the dynamism and spontaneous fluidity of interaction. This is, in part, an effect of a growing immobility in bodily expressivity and disruptions of bodily subjectivity. We see in the quotation above that others' gestures are perceived oddly, as having no intuitive sense and thus as affording no immediate response. Recent work in social cognition stresses the transformative role which gestural attunement, appropriate mirroring and synchronization of bodily expressivity of others, plays in providing dynamism to interaction (Boker and Rotondo 2002; Rotondo and Boker 2002; Goldin-Meadow 1999). In the quote above, the person above loses a pre-reflective awareness of gestures as accompanying and substantively adding to communication.

The *production* of gestures in schizophrenia also often loses its fluidity and inherent meaning. There is an objective *spatialization* of movement instead of the production of a smooth, coherent whole; the schizophrenic person perceives gesturing not as part of a communicative *gestalt* but as individualized movements (reminiscent of Celia's experience of her body as a disconnected 'collection of bits'). They may experience difficulty in pre-reflective action and movement as their gaze turns inward upon themselves in an excessively self-objectifying way (Stanghellini 2007, 130). Fuchs refers to this as a 'disembodiment of the self'—a hyper-reflective stance in which one adopts an external perspective on one's body instead of living transparently through the body-as-subject's implicit habits and automatic performances onto the world (Fuchs 2005a, 101; see also Sass 2004; Stanghellini 2007, 2008, 312, 2009).

The effect of this disruption is that gesturing is hampered or, in severe cases, even ceases altogether (i.e., in catatonic forms of schizophrenia). The disruption of these interactional dynamics has a profound effect on interaction and feelings of relatedness, which are established and sustained by patterns of intercorporeality and the mutual negotiation of shared space. As participation in patterns of embodied interaction diminishes and loses its fluency, persons with schizophrenia must increasingly rely on more 'deliberative and ideational' (Sass 1992a, 23) methods to understand others. Stanghellini labels this 'the attunement crisis' (2004, 22):

> What's missing is the ability to attune with the current situation, to intuitively get a grasp on the thinking of the person you are talking to, and above

> all their emotional plane, and to match it. Obviously, we only realise the existence of this emotional medium when it's no longer there. (Stanghellini 2004, 6)

Instead of approaching others and one's lived environment in a pre-reflective second-person and interactional manner, persons with schizophrenia 'contemplate [their] own existence from outside—a third person perspective view, or a view from nowhere' (2004, 22). The person with schizophrenia stands outside interpersonal space and perception of space as 'lived'. In this way, the scaffolding of interaction, usually provided through a shared intersubjective space, is unavailable and must be reached through other means (e.g., algorithms, tactics). This coincides with feelings of distance, alienation, and in the cases above, a sense of desolation. Space becomes stretching, flat, limitless, and infinite in nature and there is an overriding sense of precision in the way the space appears as painfully light, smooth, and empty. Again, this experience appears to be common in schizophrenia. Another patient remarks: 'I still saw the room. Space seemed to stretch and go on into infinity, completely empty. I felt lost, abandoned to the infinities of space, which in spite of my insignificance somehow threatened me' (Jaspers 1997 [1959], 81).

With the loss of an apprehension of space as affording smooth interactions with others, there is also a loss of the proper place which things occupy in relation to myself, my expectations, and my projects. Sass has already comprehensively described the process of 'unworlding' in schizophrenia (1992a, 32–33) in which objects no longer offer affordances for personal use or meaning. However, in considering spatiality, we can go one step further to claim that lived space itself—and not only the things in it—also undergoes an 'unworlding'. That is, space and the things and people within it, lose social referentiality and coherence.

In this way, lived space loses its characteristic 'homeliness' and becomes infinite and detached from human activity and life. The dissociation of space from lived space causes a retreat from the world or environment being a meaningful context for action and interaction. Without being able to recognize and respond to the social, normative, and affective aspects which are inextricably bound with a sense of space as social, schizophrenic persons lose a frame of social reference which ordinarily feeds into our interactions with others, forming some of the presuppositions which we bring to our interpersonal exchanges.

Conclusion

We have examined various ways in which experiential dimensions of embodiment, affectivity, and lived space relate to reveal the world as social. Examining the disruptions which occur to these elements in MS and schizophrenia highlights the crucial structural role they play in orienting people in a world which shows up—first and foremost—as social, and also in shaping ongoing patterns of interpersonal interaction. We found similarities in changes to embodiment and spatiality in MS and schizophrenia, in which experience of the body and lived space are marked by hyper-objectivity and a loss of self-intimacy. We argued that these alterations negatively impact taken-for-granted and easeful understandings through which situations, spaces, and interactions are encountered as socially meaningful.

To be clear, there are also important differences in the experiential disruptions characteristic of these conditions, too; we are not suggesting that the underlying structural disruptions are identical in both cases. However, taken together, they appear to reinforce phenomenological arguments for the foundational role that body and affect play in organizing social space. Moreover, this analysis marks out considerations of spatiality and embodiment as important candidates for further attention in ongoing work on social cognition and interpersonal understanding.

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CHAPTER 8

Phenomenology of Language in a 4e World

Andrew Inkpin

The topic suggested by this chapter's title might seem an unlikely one. On the one hand, phenomenology of language is something of a neglected field. This is perhaps partly because historically phenomenologists have been reluctant to venture into the supposed linguistic territory of analytic philosophy, tending instead to focus either more broadly on consciousness, disclosure, or signs, or on the views of language in individual authors. On the other hand, cognitive science in the '4e' tradition—that highlighting the embodied, embedded, enactive, and extended nature of cognition—is generally understood to be defined by a turn away from language. More specifically, it distances itself from the earlier 'representationalist' approach in cognitive science, which took all human cognition to be essentially linguistic in form and in principle capable of being modelled algorithmically as a system of language-like 'rules and representations'.[1] Consequently, despite recognizing that the role of language ultimately needs to be understood, most work in the 4e tradition focuses on nonlinguistic phenomena to correct the earlier overemphasis on language. Thus it might seem that the title of this chapter gestures into a void.

My aim here will be to make some progress towards filling that void by setting out how a phenomenological approach to language might and should complement systematic empirical theories in the 4e tradition. The paper begins by outlining a specific view (my own) of the phenomenology of language to provide a basis for the subsequent discussion. Its second section highlights some differences between phenomenology of language

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and the phenomenology of nonextended mental states, suggesting that the relation of the former to 4e cognitive science should not be construed in terms of naturalization. The third section proposes a general argument to the effect that 4e cognitive science, by its own lights, needs a phenomenology of language due to the central role it attributes to 'scaffolds', while the fourth uses the view outlined in the first section 'What Is a Phenomenology of Language?' to highlight more specifically how 4e cognitive science stands to gain from a phenomenological conception of language. Finally, I briefly consider how the argument of the third section 'Against "Naturalization"' might be generalized to motivate a broader interface between 4e cognitive science and phenomenology.

What Is a Phenomenology of Language?

The first difficulty in assessing the relation between phenomenology of language and cognitive science is what is meant by the former. As hinted above, there is no established body of literature that could provide guidance in understanding what is meant generally by a 'phenomenological' approach to language. Underlying this is perhaps the more substantive difficulty that the label 'phenomenological' is commonly interpreted in different ways. In particular, it can refer to concepts and aims issuing either from a distinctive methodological commitment or from the tradition of discourse that began with Husserl. In view of these difficulties, I begin here by outlining a phenomenological conception of language that I have developed at greater length elsewhere (Inkpin 2016). For this phenomenological view—as I call it in the following—the term 'phenomenology' primarily marks a methodological commitment, but it also draws heavily on authors—particularly Heidegger and Merleau-Ponty—in the post-Husserlian tradition. However, for brevity, I will not set out its exegetic grounding here, but simply sketch some of its main contours to provide a basis for the discussion of the following sections.

In methodological terms a minimum requirement for a phenomenological approach to language is the aim to describe accurately the experience speakers have of language. This requirement might initially appear vacuous, as our prereflective experience of language is typically as something inconspicuously submerged in our broader experience of the world. Nonetheless, although we lack reflective awareness of them by default, there are many features of our prereflective experience—of language, as of the world more generally—that can be straightforwardly (i.e.

noninferentially) recognized as forming part of that experience once they are pointed out to us.[2] Moreover, experience of language—and hence its description—is not limited to a supposed lowest common denominator of prereflective experience, but encompasses different kinds of language-use situation.

This minimum requirement of accountability to experience also seems to me sufficient to qualify a conception of language as phenomenological. Saying this is to deny the need for any further methodological operation, such as Husserlian reduction, intended to secure a 'transcendental' or necessary a priori status for phenomenological claims. Instead, (minimally) phenomenological claims will describe how the target phenomena actually are, rather than suggesting that any necessity attaches to their constitution. This apparently modest theoretical ambition has the advantage that, although their mode of grounding in experience and specific contents remain different, phenomenological and empirical claims do not differ in their modality, thus removing one potential obstacle to productive dialogue between phenomenology and cognitive science.[3]

If it functions as a genuine constraint, this methodological commitment should lead a phenomenological conception of language to have a characteristic shape, which I suggest can be modelled on Heidegger's nondualist view of human agents as being-in-the-world to yield a very general picture of language as 'language-in-the-world'. This involves, first, rejecting any inside/outside opposition. Whether or not one thinks it is needed in philosophy of mind, an inside/outside topology should not be projected onto language. Rather than associating language with a closed 'internal' perspective, defined by one's concepts or conceptual scheme, and perhaps shared with a 'language community', a phenomenological view should reflect the fact that language use occurs in an open intersubjective (public) space, and is embedded in and distributed over the world. Second, a phenomenological conception of language will be antiformalist. That is, it will see any formal theory of language—such as a semiotic theory or a semantic theory based on the use of predicate calculus—as superficial or uninformative in failing to tell us about the lived processes in which language use is embedded and in virtue of which it is meaningful.[4]

Describing these processes, which is central to a phenomenological approach, generates the need to account for both the specificity of language use and its continuity with intelligent nonlinguistic behaviours. This leads Heidegger, on my reading, to recognize that his characterizations of tool use—their 'readiness-to-hand'—can be extended to basic language

use. On this view, basic language use involves a purposive and context-relative grasp of language, a linguistic form of knowing-how that is irreducible to propositional content or the contributions made by individual terms to such content. This contrasts sharply with the proposition-centred image of language considered standard in contemporary (analytic) philosophy of language.[5] Heidegger's view does not deny that some language use involves a context-independent grasp of terms, or an understanding of inferential links between propositions. But it has the highly distinctive feature of recognizing that not all language use is like this, and that the transition to these more abstract intellectual feats falls within language use rather than coinciding, say, with the difference between linguistic and nonlinguistic behaviours.[6]

In addition to the preceding very general claims about 'language-in-the-world', I also draw from Heidegger a more specific view of how linguistic signs function as instruments or tools in a dual sense. On the one hand, linguistic signs play a wide variety of roles in human life, in which respect they are like many other tools, a means—perhaps the only means—to the end of getting certain things done. I capture this thought by saying that linguistic signs have a *pragmatic sense*, and draw on the later Wittgenstein's conception of language-games to explicate how such sense can be thought of. This assimilation is made possible by what I call the later Wittgenstein's 'relaxed' view of rules, according to which linguistic rules play a more limited role than that suggested by his earlier analogy with chess, and are not sharply defined but exhibit a characteristic spread or distribution around centrally paradigmatic cases (analogous to the distribution characteristic of statistical rules). On the other hand, a generic feat common to linguistic signs on the Heideggerian picture is to present the world, or features of it, in a certain way due to the form of individual linguistic expressions and their interrelations with other linguistic forms. In view of this, I suggest that linguistic signs also have a *presentational sense*, and explicate the latter using Merleau-Ponty's notion of indirect sense, which integrates Saussure's conception of linguistic form with the schematic (re)presentational feats of partly abstract but still figurative early twentieth-century painting.

The phenomenological view thus provides a conception of language from the speaker's perspective. As outlined here, it comprises both a general view of language as language-in-the-world and the more specific view of linguistic signs as compound instruments bearing two kinds of sense, each of which is required to be compatible with the idea of linguistic

knowing-how. This brief outline of course invites many challenges. I have made no attempt here to argue, either exegetically or philosophically, for these claims. Nor am I suggesting that this is all there is to a phenomenology of language. The aim has been solely to facilitate the following discussion by identifying some basic features that a phenomenological conception of language might—indeed I believe should—have.

Against 'Naturalization'

Debates about the relationship between phenomenology and science are standardly framed in terms of whether or not phenomenology can or should be 'naturalized'. This way of formulating matters goes back to Husserl, who took naturalism, particularly empirical psychology, to be 'naive' in presupposing some conception of the various states and processes it sought to explain.[7] Phenomenology was to overcome this naivety by describing experience from the subjective or first-personal perspective, thereby determining the subject matter for empirical investigation. Those of a scientific outlook often view the phenomenologist's project with suspicion, fuelled perhaps by a conviction that phenomenology is concerned merely with how things 'appear' to us and science with how things 'really' are. Nevertheless, in debates of this standard form, various attitudes are possible: phenomenology and science might be thought of as complementary or in competition, as independent or mutually constraining, the former as reducible or irreducible to the latter, and so on.

This is not, however, the right way to think about the relation between phenomenology of language and recent cognitive science, because standard debates about naturalization are based on assumptions about the kind of subject matter under consideration that do not hold in this case. Thus it is usually assumed that the concern is with mental states occurring within an agent's body/mind, hence as something realized (a) in a private subjective space and (b) on the basis of biological 'hardware'. When understood in this 'nonextended' way, it seems inevitable that anything an agent experiences—hence anything phenomenologically describable—will have a neural/biological correlate. On these assumptions ((a) and (b)), it therefore not only makes sense, but is highly tempting, to ask whether descriptions of experienced phenomena can be 'naturalized' in the strict sense of being understood reductively in terms of natural entities and processes.

Yet the case of language differs in several ways from that of nonextended mental states. First of all, as most famously argued by Wittgenstein,

it differs because the phenomenology of language plays out in a public or intersubjective space rather than a private subjective space.[8] A second difference is that linguistic entities are not purely natural, but have the ontological character of useful artefacts. This means that, like other artefacts, they are human made rather than naturally occurring. Further, like other useful artefacts (e.g. tools), they have defining features—such as their purpose and their role in human activities—that depend on being experienced by agents in the right ways and which natural entities are standardly taken to lack. Given this ontological character, it is hard to make sense of the idea that linguistic entities could lie beyond the human experiential perspective, as natural entities clearly can, or that the phenomenology of language is to be understood reductively in terms of 'natural' processes.

Conversely, because 4e cognitive science does not limit itself to nonextended mental states, it might be thought well suited to accommodate the differences between these and language. After all, its central feature is to take account of processes and factors beyond the brain, such as the cognitive agent's body and surroundings. In doing this, it relies on an ontology that includes all manner of tools and artefacts, including language, with the result that 4e cognitive science is itself not a natural science in the strict sense of a science that is concerned solely or even primarily with naturally occurring entities and processes.

Recognizing these facts suggests a need to reformulate the question of the relationship between phenomenology and 4e cognitive science. For this will not involve the possibility of naturalization in the strict sense of accounting for phenomenology in terms of natural entities and processes. However, it might still be thought that cognitive science has no need of phenomenology, on the grounds that it is an empirical science that yields controlled, systematic, and experimentally verified results rather than relying on pretheoretical description of experiences (or mere 'intuitions'). The relevant question then becomes whether or not language, particularly its functional character, can be properly understood by such a science without a conceptualization of how language is experienced by speakers.

Why Cognitive Science Needs Phenomenology of Language

In response to this reformulated question I want to argue that 4e cognitive science needs phenomenological description of our experience of language

due to the central role it attributes to so-called 'scaffolds'. Scaffolds are features of the external (physical or social) environment that play some constitutive role in an agent's cognitive functioning.[9] Perhaps the simplest example of this is a notepad used to keep track of things we need to remember or the steps involved in solving a complex problem.[10] But the idea extends to many other features of our surroundings that ease our cognitive load by preventing us having to remember everything or solve problems from scratch in real time, such as various forms of representation (e.g. maps, diagrams), intelligently designed environments (e.g. road systems), computer hardware and software, or social systems that divide up and share cognitive labour.[11]

In order to make use of something as a scaffold, an agent needs to be aware of it in the right way. This requires first an awareness of which features of the environment or which entities are to serve as the scaffold. Such 'scaffolds' are clearly not individuated naturally. Even where something natural—such as landscape features or a constellation of stars used for navigation—is exploited, in order to be used as a scaffold, it must be picked out by an agent specifically for that use. This means, on the one hand, that individuation of the cognitively relevant ontology is already constitutively dependent on the experience of agents. On the other hand, because scaffolds must be visible in the experience of agents, phenomenological description of that experience will at least be able to play a role in identifying the constituent parts of embedded/enactive/extended cognitive systems. Further, second, the use of something as a scaffold requires an awareness of its function. For an inherent peculiarity of scaffolds is that a given feature of the environment will be able to perform a particular function only if agents experience and understand it as having that function. At the very least, an agent must have some idea of what the scaffold is for, which task(s) it is simplifying. To put it negatively, if we don't know what task a given scaffold is supposed to perform, we will be unable to integrate and exploit it in our actions and thinking, with the consequence that it will fail to perform its supposed function.

It is thus implicit in the use of some environmental feature as a scaffold that it will show up in an agent's experience *which features* are doing work and *what work* they are doing—they will have an irreducible experiential side that *can* become the object of phenomenological description. But why is phenomenological description *needed*? Why not think—as advocates of dynamic systems theory might—that everything of importance

about the human-scaffold-world system can be captured by a mathematically formulated theory that models its behaviour using a set of variables and parameters independently of speakers' experience? One answer to this is that phenomenology is needed on methodological or practical grounds. The challenge for a theory of this kind is to identify which factors govern the system's behaviour and so need to be included in the theory's variable space. Given that we have experiential access to the identity and function of scaffolds (as argued above), phenomenological description is likely, even if some other method is possible, to be the most straightforward way to go about identifying the right set of system variables.

A second answer is that phenomenology is needed on conceptual grounds, in order to conceptualize adequately the role of scaffolds in our cognitive lives. In attempting to identify precisely the function of a scaffold, a mathematical theory will be prone to a problem paralleling the 'inscrutability' and 'indeterminacy' of reference faced by Quine's (1969, 35) radical translator. Suppose, for example, I am hiking and decide to head towards a tree on a nearby hilltop. I might do this because I know the area well and know that the tree lies in the direction I want to go in; or because I am lost and simply aiming to get to the higher ground in the hope of gaining orientation from a better vantage point. From the systems theory standpoint, however, my use of the tree as a landmark or anchor towards which I am moving will appear indistinguishable. Unless, of course, it takes account of which variables present themselves to the in situ agent, that is, the phenomenological side of scaffold use. An obvious objection to this claim is that a sufficiently sophisticated or ideal theory *would* be able to distinguish the two cases by identifying them with different system states (say, S_1 and S_2). However, such states could make this distinction only if they have been antecedently correlated with (a description of) the relevant cognitive functions, and it is to do this that phenomenology is conceptually required. To put it another way, even where an explanatory theory is available, phenomenology is needed to conceptualize what is being explained. It is part of an adequate conceptual understanding because an explanation only makes sense in relation to an explanandum.[12]

The upshot of the preceding argument is that phenomenological description is not merely possible, but necessary in understanding the cognitive function of scaffolds such as language. This is not to suggest that phenomenology of language is philosophically more important or prior to its study by 4e cognitive science. The point is rather that the cognitive

function of scaffolds can be studied in two different, and complementary, ways: while the development of systematic, empirically corroborated theories about the relevant causal processes falls to cognitive science, those processes will open up an experiential window that requires conceptualization through phenomenological description. Nor am I suggesting that existing 4e cognitive science methodologically excludes phenomenological observations, or even denying that it makes occasional use of these. The suggestion is rather that the above argument implies a systematic connection such that phenomenology should have a more general role and be seen as an integral part of the study of 4e cognition.

Before looking more specifically at what 4e cognitive science gains from phenomenology of language, I want to consider a couple of possible objections to the above argument which suggest that it sets the bar too high. Thus it might be objected that this argument is wrong on phenomenological grounds. For our experience of many tools, including language, often has an effortless and transparent feel that might be thought to show we lack an 'explicit' awareness of what is being picked out as a scaffold and its function. Further, it might be suggested that this fact can be explained by thinking of the function of scaffolds as analogous to that of subpersonal systems in our body, as contributing to our cognitive functioning but having no phenomenal presence to the agent.

To begin with the latter thought, the appeal of a comparison with subpersonal systems lies in that we not only do not, but cannot, identify these within experience, as they are a presupposed background condition for any phenomenal presence. Scaffolds differ, however, significantly from subpersonal systems in that they are not presupposed in this way and first require integration into an agent's cognitive functioning—they are add-ons, so to speak, not biological hardware. I want to suggest, however, that this need for integration makes it incoherent to claim we could use scaffolds without being aware of them in the way I have suggested.

To see why, it will help to consider three ways that external features might play a role in enhancing or modifying cognition. The first is when an agent makes use of some external feature as a cognitive tool, that is, as something with a specific cognitive function, such as storing information or simplifying a complex problem. The second is when an agent makes use of some external feature as a tool that does not have a specific cognitive function, such as a screwdriver or a snowboard. In this case too, the use of the tool may be linked with a certain kind of cognitive feat, but in contrast to the first case, this feat is incidental, as the tool in question serves a different purpose.

Despite this difference, both these cases involve *making use* of the entity in question, an intentional act that can be made sense of only if—as argued above—the agent is aware of what they are using and what its function is. The third possibility is that an agent is augmented or materially modified in some way, say by having a prosthesis or aid (e.g. glasses) fitted, that enhances their cognitive abilities. This could occur through the agent's own action, in which case it would not differ from the preceding case of tool use. However, the change could also conceivably occur in some way unknown to the agent (being made while the agent is asleep or under anaesthetic). In this case, the external feature would plausibly be integrated into the agent's experience in a way analogous to subpersonal systems, that is, without requiring the agent to be aware of the entity in question or its function. But the cost of making this suggestion appear plausible is to give up the idea that the agent is carrying out an intentional act (as the change is made to, not by, the agent). In other words, the limited circumstances in which it might make sense to say an agent lacks awareness of the scaffold's constitution exclude the claim that the scaffold is something the agent *makes use* of.

What about the objection that the above argument is wrong on phenomenological grounds? The thought here—one sometimes attributed to Heidegger—is that our attention is usually focused on the tasks we are performing in a holistic, prereflective manner that does not involve an awareness of the specific tool we are using.[13] If this were the case, it would appear to rule out the need to be aware of scaffolds in the way I have been claiming. Although agents sometimes report their experience in this way, the tendency to do this should be understood as an overassimilation of prereflective to reflective awareness. To see this, note first that even prereflective use of a tool requires an awareness of it *as* that tool. To use a hammer, for example, it is necessary to recognize, pick up, and thus pick out, the right entity. Admittedly, we do this in an awareness of the overall task, but that is because being able to relate it to the relevant task is part of correctly identifying a tool. The reason we might report lacking 'explicit' awareness of a given tool in use is presumably that post hoc questioning elicits answers at the level of reflective awareness, something we realize we lacked in our prereflective practice. Nonetheless, any tendency we might have to misrepresent prereflective experience should be offset by asking pertinent questions: a hammer user, for example, would no doubt reject as absurd any suggestion that he was using, or was unaware of not using, a screwdriver, saw, and so on. The claim that scaffold use involves awareness of the identity and function of scaffolds requires only that an agent is

prereflectively aware of these—which is precisely not to lack any awareness at all of them.

What 4e Cognitive Science Gains from a Phenomenology of Language

Even if the argument of the preceding section is accepted, it might be wondered how 4e cognitive science stands to benefit from a phenomenological conception of language. After all, interest in the 4e's of cognition marked a deliberate shift away from the earlier tendency to view language as a general model of human cognition, and its principal findings plausibly lie elsewhere, say in its more pluralistic approach to cognitive phenomena or its focus on the modified and simplified cognitive tasks faced by situated agents in real time.

Nevertheless, there are two parallels that suggest the possibility of a productive dialogue between the two. The first is that both contrast with the study of what I have called nonextended mental states, such that the use both of language and of various features of the 'external' environment takes place in a public or intersubjective space. The second is that both are characterized by a corresponding development. For the phenomenological view's shift away from a focus on propositional content and assimilation of basic language use to the purposive and contextualized awareness of tools parallels that made by 4e cognitive science away from the linguaform 'rules and representations' to concentrate on nonlinguistic behaviours and phenomena. In view of these parallels, I want to suggest that phenomenology of language can contribute to reconceiving language in a way better suited to the overall outlook of 4e cognitive science than the image of language as a system of rules and representations that it rejects.

To see how it does this, it will be helpful to consider briefly how Andy Clark, one of the main figures in the field of 4e cognitive science, approaches the topic of language. Clark conceives language—as assumed by my discussion here—as a scaffold and as a kind of 'tool that alters the nature of the computational tasks involved in various kinds of problem solving' (Clark 1997, 193). In addition to facilitating the storage of information, the cognitive functions of language he identifies can be helpfully summed up as falling under two main heads.[14] The first is the use of linguistic 'labels' as a means to organize cognitive tasks. Such labels are to simplify the environment by serving as a kind of shorthand for a large set

of perceptual experiences, allowing us to focus our recognitional abilities, record information efficiently, and coordinate our own actions with those of others. It is worth noting how Clark describes such uses. Words, he says, can be thought of as 'filters on the search space': 'learning to associate concepts with discrete arbitrary labels (words) somehow makes it easier to use those concepts to constrain computational search and hence enables the acquisition of a cascade of more complex and increasingly abstract ideas. […] associating a perceptually simple, stable, external item (such as a word) with an idea, concept or piece of knowledge effectively freezes the concept into a sort of cognitive building block' (Clark 1998, 174).

The second main head is the role of language in 'second-order cognition' or 'thinking about thinking', the reflective use of language for purposes such as 'self-evaluation, self-reflection' (Clark 1998, 177). Such cognition relies on the fact that once a thought is formulated in language it becomes an 'object' that can itself be referred to and reflected on by ourselves or others.[15] In such uses, public language becomes a 'type of code which minimizes contextuality': 'By "freezing" our own thoughts in the memorable, context-resistant and [sensory] modality-transcending format of a sentence we thus create a special kind of mental object' (Clark 1998, 178).

One conspicuous feature of Clark's discussions of language is that they preserve the traditional tendency to link language with high-level reflective and abstract cognitive feats. Thus, despite its tool-like quality, language is described—as in the above quote—as involving the use of 'arbitrary' signs, concepts, and 'abstract' ideas so as to realize context-independent forms of cognition. Further, as Clark (1997, 209) himself recognizes, and presumably intends, the second-order uses of language he emphasizes resonate with traditional views of language as the vehicle of characteristically human rational and reflective abilities. This continued emphasis on the high level of linguistic cognitive feats is somewhat surprising, as it suggests an image of language that remains largely unaffected by the characteristic insights of 4e cognitive science. While I do not want to deny that language can play the kinds of role Clark identifies, it seems to me that we might expect this somewhat abstract image of language to be challenged by his own broader outlook on cognition.

Against this background, I want to highlight two features of the phenomenological view that contribute to reconceiving language in the requisite way. The first is that it resists overintellectualizing the cognitive

feats linked with the use of language. It does this by recognizing that language use is often no more intellectual than the use of many paradigmatic nonlinguistic instruments, and hinges on its application to practical contexts rather than abstract or higher order reasoning skills. In addition, it proposes a relaxed view of rules that conceives language-use patterns in a more forgiving and realistic form than the strict intellectual rules of a mathematical calculus. The phenomenological view thus keeps language grounded, so to speak, in the concrete mundane reality of practice, rather than being swept away by the dream of abstract rationality. Such a conception of language seems well suited to Clark's general approach, as it suggests that language use can be treated as continuous with the use of nonlinguistic tools and scaffolds, and thus integrated within Clark's overall picture of cognition as situated (context-relative), partial, embedded in practice, and underwritten by Action Oriented Representations (AORs).[16] This is not to deny that language can be a vehicle of the kinds of decontextualized awareness Clark highlights. It is simply, to recall, that the phenomenological view connects the transition from contextual to context-free understanding with different ways of using language (different 'language-games') and so occurring 'within' language use.

The phenomenological view not only recognizes the continuity between the linguistic and the nonlinguistic, however, but is arguably better able to accommodate the specificity of language. Notice that if words are thought of simply as arbitrary labels, it might be objected that nonlinguistic signs or symbols should be capable of playing the same roles in organizing and objectifying cognition, in which case we would presumably have failed to understand what is specific to linguistically scaffolded cognition. By contrast, the phenomenological view takes linguistic signs also to be bearers of presentational sense, that is, as belonging to a system of signs characterized by similarities and differences in form that constrain and mediate the way those signs direct our attention to the world. This recognizes that many non-arbitrary features are built into the linguistic signs we use, a characteristic of linguistic signs that simplifies their acquisition, anchors some of their associative and expressive powers, and distinguishes them from unstructured—fully arbitrary—signs.[17] Although the presentational sense of linguistic signs is often irrelevant for practical purposes (when we rely on their pragmatic sense), it can nonetheless be exploited in some uses (e.g. literary) of language and is built-in to historically evolved natural languages. By conceiving linguistic signs as the bearers of both pragmatic

and presentational sense, the phenomenological view is able to articulate plausibly how language is both continuous with and distinct from nonlinguistic scaffolds.

Following on from this, a second way the phenomenological view contributes to reconceiving language is in taking linguistic signs to be multifunctional tools. One aspect of this is that linguistic signs have a multitude of specific functions in the various practices in which they are used, as captured in the claim that they have pragmatic sense. A second is that it conceives linguistic signs as the bearers of, and conjoining, two kinds of sense—pragmatic and presentational—that can come into play in different situations. It is further implicit in the thought that linguistic signs can be linked with both context-relative and context-independent cognition. Conceiving linguistic signs as multifunctional, as the locus and vehicle of different kinds of use, in these ways not only highlights the futility of 'formalist' or reductive approaches to language, but lends itself naturally to an extension to high-level or more abstract functions of the kind Clark emphasizes. It also lends itself more specifically to the kind of story Clark wants to tell about how small evolutionary advantages might allow these high-level functions to be 'bootstrapped' via scaffold use rather than being presupposed by the latter (Clark 2001, 150–153). In particular, it supports the idea that our ability to produce abstract or context-free thoughts is rooted in more basic context-relative recognitional abilities. For if our use of language in many practical contexts can be understood in terms of the latter, as the phenomenological view suggests, then apparently abstract abilities, abstract abilities can be understood as a redirection of those same abilities to a new context, the domain (or context) of 'objects' constituted by first-order sign use, without any need to invoke the ability to think abstractly ab initio. Viewed in this way, even apparently abstract cognitive feats would be less abstract than they initially appear.

The two features just highlighted—the resistance to overintellectualization, and linguistic signs' multifunctionality—are examples of how the phenomenological view can augment 4e cognitive science while simultaneously fulfilling the traditional mission of phenomenology in two ways. First, it serves as an experiential corrective and counterbalance to theory-driven approaches.[18] Clark's discussions of language, for example, typically rely on terminology drawn from existing theoretical frameworks in either analytic philosophy of language (and mind) or computer science.[19] By providing a more detailed conception of the disclosive and cognitive functions of language from the experiential perspective of language users,

a phenomenological approach can help in assessing the plausibility and limits of these theoretical frameworks. In doing this, second, phenomenology of language serves to articulate constraints on empirical enquiry in a manner that is close in spirit to the task Husserl originally identified for phenomenology of determining the subject matter for investigation by empirical science. In the present case, however, this task is not performed in the name of a competing a priori or transcendental methodology that claims philosophical primacy. Rather, I have argued, the need to articulate such a phenomenological conception of language is an integral part of understanding the function of scaffolds, such that there is a natural complementarity between phenomenology and 4e cognitive science.

Towards a Phenomenology of Cognitive Artefacts

To conclude, I want to say something about the scope of the argument of the third section above 'Why Cognitive Science Needs Phenomenology of Language'. Given the differences between the case of language and what I called nonextended phenomenology, and the attendant need to reformulate the question, it cannot be seen—and was not presented—as a generic defence of phenomenology against 'naturalization' in all cases. Instead, it grounds a need for phenomenology in the specific claims made by 4e cognitive science about the function of scaffolds. Nonetheless, this argument will apply in many cases beyond that of language, such that a more general need for phenomenology in 4e cognitive science arises wherever scaffolds are in play. However, the concept of a scaffold is—albeit deliberately—somewhat vague, encompassing any kind of external entity or feature that has some (any) role in our cognitive lives. It therefore seems worth asking what interest might attach to phenomenological studies of scaffolds in general.

In the second section above 'Against "Naturalization"' I suggested that one defining feature of language is that it has the character of useful artefacts (tools), entities produced and used by humans for specific purposes. This implies a distinction from natural entities functioning as scaffolds. While the latter no doubt differ ontologically from tools, and are arguably individuated as entities independently of agents, they are not naturally picked out as scaffolds. In other words, in contrast to useful artefacts, which are essentially purposive, naturally occurring entities that serve as scaffolds do so only accidentally or derivatively, as a result of being appropriated by agents to perform some function.

However, to say simply that language is a useful artefact masks an important ambiguity, hinted at in the third section 'Why Cognitive Science Needs Phenomenology of Language', between cognitive and 'noncognitive' tools. Cognitive tools are artefacts produced specifically in order to facilitate or realize specific cognitive feats. These are to be distinguished from many other 'noncognitive' tools such as screwdrivers, snowboards, bicycles, and cars. Although using the latter often requires cognitive feats of some kind, it is not their specific function to bring about those feats, which occur indirectly, so to speak, in realizing the tool's intended or proper use. In other words, whereas in general tools are artefacts with a specific purpose, cognitive tools are artefacts with a specific cognitive purpose. The question of how to delimit cognitive tools from tools in general is likely to be complex and may not admit a precise or general answer. However, what makes language particularly interesting is that it could arguably fall into either class, depending on how it is being used in a given situation. In some uses of language the fact we are using words (rather than nonlinguistic signs or gesture), and our particular choice of words, might be of secondary importance in getting some 'noncognitive' task done. In other uses words allow us to attain specifically cognitive feats—formulating thoughts, theories, literature, and so on—that would be impossible without them. This is perhaps to be expected in view of the multifunctionality of linguistic signs highlighted in the previous section 'What 4e Cognitive Science Gains from a Phenomenology of Language'. Accordingly, part of the interest of and the need for phenomenology of scaffolds lies in understanding the distinctions and interplay between such functions, which—as pointed out above would remain 'inscrutable' in the absence of an agent-side conceptualization.

What I want to highlight in conclusion, however, is not merely that language (at least in some of its uses) provides a clear example of a cognitive tool, but that there will be many other objects in everyday use, or in technical or cultural contexts, with specifically cognitive purposes. Moreover, artefacts made for the express purpose of realizing some cognitive feat are likely to be particularly informative about how human cognition functions, particularly deliberate or reflective cognitive functions, and to bring into focus both its limitations and possibilities. In view of this, the argument about scaffolds relied on here for the case of language hints at the possibility of a far broader interface and productive dialogue between 4e cognitive science and phenomenological studies of cognitive artefacts.[20]

Notes

1. On these 'classical', 'standard', or 'orthodox' positions with which 4e cognitive science contrasts see, for example, Shapiro (2011, 7–27) and Clark (2001, 28–42).
2. This is the 'formal sense' of phenomenology as defined in §7 of *Being and Time*.
3. I argue elsewhere (Inkpin 2017) that Merleau-Ponty should be seen as a model for this non-transcendental phenomenological approach.
4. See, for example, Heidegger (1993, 78, 88).
5. I discuss the relation between these two approaches in Chaps. 2 and 9 of Inkpin (2016).
6. In Heidegger's discussion, the transition comes with the use of judgements in propositional form (see §33 of *Being and Time* on 'statements' or 'assertions' [*Aussagen*]). See also Inkpin (2016, 39–45).
7. See, for example, Husserl (1965).
8. The corollary of assimilating the phenomenology of language to nonextended mental states would be to think of language as essentially a matter of internal representation. In Chomsky's (1986, 26) extreme view: 'The technical concept of E[external]-languages is a dubious one […] languages in this sense are not real-world objects but are artificial, somewhat arbitrary, and perhaps not very interesting constructs'.
9. These features include 'the use of tools' and 'the exploitation of the knowledge and skills of others': 'scaffolding […] denotes a broad class of physical, cognitive, and social augmentations […] that allow us to achieve some goal that would otherwise be beyond us' (Clark 1997, 194f., cf. 45–47).
10. This was the basic example used by Clark and Chalmers (1998).
11. For the ingeniously mundane road-system example see Haugeland (1998, 233–235). The classic discussion of cognitive division of labour is Hutchins (1995).
12. This, I suggest, highlights what is so odd about Chomsky's dismissal of external languages as theoretically unimportant (see note 8). His insistence that languages are essentially something internal loses sight of what a theory of language is supposed to be explaining.
13. This idea of 'smooth coping' has long been defended by Dreyfus based on both his reading of Heidegger (Dreyfus 1991) and his view of the nature of embodied expertise (e.g. Dreyfus and Dreyfus 1986). See in particular the suggestions that when used equipment is 'transparent', we 'are not aware of it as having any characteristics at all' (Dreyfus 1991, 64) and that 'basic experience has no as-structure' (Dreyfus 2012, 71). As I read him, equipment is, for Heidegger, inseparable from interpretation (*Auslegung*) and hence an 'as-structure' (see Heidegger 1993, 149).

14. These themes are common to the discussions of language in Clark (1997, 1998, 2001, 2008).
15. For example, Clark (1997, 209). This idea is far from new, and goes back at least to Humboldt (1995, 47–49).
16. On the latter, see Clark (2007, 149–153).
17. In Saussure's terms, many features of linguistic signs are 'relatively motivated' and effect a 'limitation of the arbitrary' (Saussure 1972, 180, 182). See Inkpin (2016, 128–131).
18. Or 'free floating constructions', as Heidegger (1993, 28) puts it.
19. The latter in particular often generates descriptions of human cognition in terms of catchy computing metaphors—such as 'online' or 'offline' 'processing', 'routines', language being a 'code' and so on.
20. I would like to thank Ricky Sebold and Jack Reynolds for their comments on an earlier version of this paper, and Marilyn Stendera for many illuminating discussions of the connections between Heideggerian phenomenology and enactivism.

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CHAPTER 9

Intercorporeity: Enaction, Simulation, and the Science of Social Cognition

Shaun Gallagher

In this chapter, I want to address two issues. The first one is a local issue within current debates about social cognition pertaining to differences between simulation theory (ST) and interaction theory (IT) in the understanding of intercorporeity. I then want to use this issue to address a larger, less local one concerning science. More specifically, depending on what one concludes about the debate between ST and IT, the implication is that either one can continue to do science as we have been doing it, or one has to do it differently. This distinction between ways of doing science is not the same as the distinction between normal and revolutionary science described by Thomas Kuhn (1962). Something different is at stake. It's not simply a paradigm shift that would change our conception of nature (or in this case, the nature of human behavior) in a way that would allow us to do science as usual, but rather a change in our conception of nature that would suggest a different way of doing science. This change, I'll argue, is prefigured in the thinking of Merleau-Ponty (1967, 2012) concerning the notion of form or structure in his early works.

Intercorporeity

The notion of intercorporeity comes from Merleau-Ponty, and it has been recently resurrected on both sides of the debate between ST and IT concerning social cognition. Indeed, one might conceive of the debate as a debate about how to interpret intercorporeity. I'll take Vittorio Gallese

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as a good representative of the relevant version of ST for purposes of this discussion. As one of the team of scientists in Rizzolatti's neuroscience lab in Parma who discovered mirror neurons (MNs) he not only has been consistent in advocating for the role of MNs in social cognition, in addition, he is one of the few scientists working in that area familiar with the phenomenological tradition, and he frequently cites the work of Husserl and Merleau-Ponty, especially with regard to the notion of intercorporeity (e.g., Gallese 2009, 2010, 2011). In contrast to Gallese, I've been a proponent of IT, along with a number of others (e.g., De Jaegher et al. 2010; Gallagher and Hutto 2008; Gallagher and Zahavi 2012). It's important to note that ST and IT do not disagree about everything, and perhaps for that reason it's difficult to get at the heart of the difference between these theories. For example, both ST and IT agree that MNs can play an important role in social cognition, and they both take Merleau-Ponty's notion of intercorporeity seriously. They disagree, however, on precisely how to interpret these things.

To get a good grasp on the notion of intercorporeity, we should start with Merleau-Ponty's characterization. Merleau-Ponty considers intercorporeity to be a pre-reflective, relational phenomenon that may be even more basic than intersubjectivity. He sketches this notion in his early work, *The Phenomenology of Perception*. "There is, between … [my] phenomenal body, and the other person's phenomenal body such as I see it from the outside, an internal relation that makes the other person appear as the completion of the system" (2012, 368). This is not the presence of two objects—one object (my body) and another object (your body); it's rather a relation that involves what he calls "reversibility," and his favorite example of reversibility, taken from Husserl (1989), is actually found in one single body. This is the example of one person's two hands touching each other. If I use my right hand to touch my left hand, there is the immediate possibility of a reversibility—that my right hand touching can immediately become the touched; and my left hand touched can immediately become the touching. If the touching-touched is in some sense simultaneous, in terms of our single-minded attention it is not, but involves a dynamic sequential reversibility, not unlike the reversing of the Necker cube in vision, but one that can be done at will (Merleau-Ponty 1968, 141). My attention can go back and forth between touching and being touched, attempting to capture a structure that is pre-reflectively already established at the sensory level.

Merleau-Ponty's enigmatic example, "Reversibility: the finger of the glove that is turned inside out" (1968, 317), suggests another handy example—the reversibility implied by the fact that hands are incongruent counterparts or what geometers call enantiomorphs (Kant 1992; see Morris 2010; Gallagher 2006), which is easily demonstrated with gloves. One cannot put a left-hand glove on one's right hand, for example. But if one turns the left-hand glove inside out, it takes the shape of a right-hand glove. The reversibility, in this case with respect to shape, is clearly sequential; although the glove simultaneously has incongruent shapes in its structure, they can only manifest themselves (as the touching-touched phenomenon manifests itself in experience) in sequence.

With some modification, Merleau-Ponty extends this notion to the case when I touch your hand, and/or you touch mine: "when touching the hand of another, would I not touch in it the same power to espouse the things that I have touched in my own?" (1968, 141)—with some modification, however. He suggests that in the case of my own two hands touching "there exists a very peculiar relation from one to the other, across the corporeal space—like that holding between my two eyes—making of my hands one sole organ of experience" (1968, 141). Yet he wants to maintain that something like this can exist between two bodies.

> The handshake too is reversible; I can feel myself touched as well and at the same time as touching … Why would not the synergy exist among different organisms, if it is possible within each? Their landscapes interweave, their actions and their passions fit together exactly: this is possible as soon as we no longer make belongingness to one same "consciousness" the primordial definition of sensibility, and as soon as we rather understand it as the return of the visible upon itself, a carnal adherence of the sentient to the sensed and of the sensed to the sentient. (1968, 142)

While touch may be the primary model, vision too has a "play" in this process. I can see you looking at me, and vice versa, so that a joint visual attention to each other suggests this reversibility of seeing and being seen at the same time. This is a dynamic irreducible structure that cannot exist if I am alone. I certainly cannot achieve it on my own. For this experience, I require the other person, and she requires me, in the same way that I require two hands to establish the reversibility. "What is open to us, therefore, with the reversibility of the visible and the tangible, is … an intercorporeal being, a presumptive domain of the visible and the tangible,

which extends further than the things I touch and see at present" (1968, 142–143).

Merleau-Ponty associates intercorporeity with what he calls the "aesthesiological *Ineinander*" (1968, 172)—drawing the German term for an "intertwining" from Husserl—one body intertwined with the other, and specifically in the (kin)aesthetic order of our senses. Husserl, as far back as 1907, had suggested that perception always involves a kinaesthetic (i.e., a motor) resonance (1997)—which today is easily cashed out neurologically in terms of two kinds of neurons: canonical neurons, activated both when I grasp a tool, for example, and when I simply perceive the tool; and MNs, activated both when I engage in intentional action and when I see someone else act intentionally (see Fadiga et al. 2000). Merleau-Ponty also associates intercorporeity with *Einfühlung* (1968, 172)—a term that means "projecting," but is often translated as "empathy."

Merleau-Ponty emphasizes that intercorporeity is reflected in embodied communicative processes and interactions.

> Communication or the understanding of gestures […] achieved through the reciprocity between my intentions and the other person's gestures, and between my gestures and the intentions which can be read in the other person's behavior. Everything happens as if the other person's intention inhabited my body, or as if my intentions inhabited his body. (Merleau-Ponty 2012, 190–191)

In this regard, the reversibility of intercorporeity produces something new, something that goes beyond the two perceiving subjects. As David Morris (2010) suggests, emphasizing the reversibility of activity and passivity in this phenomenon, it generates new meaning—it is sense-making in an operation that goes beyond the perceivers involved.

Simulation Modes and Models

The association with the notion of motor resonance and empathy makes the concept of intercorporeity an easy link to Gallese's notion of simulation, which, in his view, involves MN activation, and therefore, motor resonance, and on the phenomenological level, empathy. He outlines a three-tiered explanation that posits a complex structure within the individual. The first tier is a basic sub-personal level of neural circuits—specifically the mirror system that has an expressive (action) mode and a receptive (observation)

mode. This level, he acknowledges, is "tightly coupled with multi-level changes within body-states" (2001, 45). The latter idea, however, is not developed in any further detail, and in fact Gallese subsequently mentions only those theories that focus on neural "*as if* body loops" (Damasio 1999), "by-passing the body proper through the internal activation of sensory body maps" (p. 46). One may be reminded of Merleau-Ponty when Gallese suggests that we in some way share body schemas with others (p. 44), but here he references, not Merleau-Ponty (2012), who argues for a non-representationalist conception of body schema, but Berlucchi and Aglioti (1997), who argue that the body schema is best thought of as neurally instantiated—that is, as a representation in the brain (also see Berlucchi and Aglioti 2010; and Gallagher 2012 for critique).

The second tier is a functionalist level—MNs basically run simulation routines—"as if processes enabling models of others to be created" (Gallese 2001, 45). Finally, the third tier of the explanation is phenomenological. MN-activated simulations manifest themselves in the form of empathy based on shared similarity or "like us" experiences. This is a consistent line of thought connecting MNs, simulation, and empathy, and is found throughout Gallese's work, and more generally in ST. The core idea is that MN activation is a simulation process.

In ST, however, the notion of simulation undergoes some modification. Gallese was first influenced by Goldman (Gallese and Goldman 1998) who begins with the original notion of simulation, understood as involving conscious pretense and instrumental control. Simulation is defined as involving "pretend states" where, "by pretend state I mean some sort of surrogate state, which is *deliberately adopted* for the sake of the attributor's task … In simulating practical reasoning, the attributor *feeds* pretend desires and beliefs into her own practical reasoning system" (Goldman 2002, 7). Both Goldman and Gallese, however, move away from this original notion to embrace the notion of simulation as equivalent to a neural or motor-system matching. Goldman explains this most clearly. Concerned that the notion of unmediated resonance or neural simulation doesn't really fit the form of simulation "in which pretend states are created and then operated upon by the attributor's own cognitive equipment," Goldman shifts the definition so that "the creation of pretend states, or the deployment of cognitive equipment to process such states" is not essential.

> [Rather,] the general idea of simulation is that the simulating process should be similar, in relevant respects, to the simulated process. Applied to mindreading, a

> minimally necessary condition is that the state ascribed to the target is ascribed as a result of the attributor's instantiating, undergoing, or experiencing, that very state. In the case of successful simulation, the experienced state matches that of the target. This minimal condition for simulation is satisfied [in the neural model]. (Goldman and Sripada 2005, 208)

Rizzolatti calls this the matching hypothesis. Matching means "mapping the visual representation of the observed action onto the motor representation of the same action" in the observer's brain (Rizzolatti et al. 2001, 661).

Most recently, Gallese (2014) has offered a phylogenetic explanation that builds on the reuse hypothesis (Anderson 2010)—the idea that social-cognitive functions involve a re-tooling of motor neurons originally involved in motor control, adding a new mirror function. According to this idea, MNs are adaptations of motor-control neurons to a new social cognitive function. Although this exaptation is an important evolutionary explanation, it doesn't offer an alternative explanation of how MNs involve simulation, or how MNs do what they do; accordingly, it still presupposes the matching hypothesis (Gallagher 2015).

Throughout his analysis, Gallese, as any good neuroscientist should, continues to focus on brain processes as the locus of explanation. In this respect, however, his explanations suffer from two common faults: (1) a general exclusion of extra-neural bodily processes, and (2) methodological individualism. First, despite Gallese's claim that simulation is embodied, and his constant reference to "embodied simulation"—the simulation process he describes is centered in the brain's MN system. The body that he refers to is almost exclusively the "body in the brain,"[1] and it is never clear how this body representation relates to the actual body—the lived body, or the body schema that Merleau-Ponty discusses—a non-representational structure that involves not just the cortex, not just the central nervous system, but the peripheral nervous system and a body–environment coupling. This becomes very clear when Gallese (as well as Goldman and others—e.g., Goldman 2012; Goldman and Vignemont 2010) adopts the notion of B-formatted representations. B- or *body*-formatted representations are brain representations that involve motor processes or body-specific (affective and autonomic) processes, in contrast to the traditional notion of propositional representations modeled on linguistic structure. Goldman argues that a focus on B-formatted representations offers the best way to develop a theory of embodied cognition. But, as he and Goldman and

Vignemont (2010) make clear, the focus on B-formatted representations in the brain excludes any role for the actual body (understood physiologically or phenomenologically) or the environment. Gallese readily adopts this perspective.

Second, this focus on brain processes or mechanisms located within the individual, as an *explanans* of social cognition, not only excludes any explanatory role for the body and environment, but also suggests, almost paradoxically, that intersubjective factors, including embodied interactions with others in rich pragmatic and social contexts are irrelevant, or at best, are minor elements that belong to the *explanandum*. All the real explanatory "action" is located within the individual brain.

Interaction Theory: The Enactivist View

IT does not deny the importance of brain processes for social cognition, but proposes an alternative interpretation to the way they are represented in ST. Specifically, IT adopts the enactivist view of cognition. The enactivist view is an embodied approach that emphasizes non-representational, action-oriented processes that involve brain, body, and environment. Rather than simulating (creating pretend mental states, or generating matching states in the brain), IT argues that most of our everyday encounters with others depend on embodied interactions. Processes of primary intersubjectivity (Trevarthen 1979), active from birth onward, including our perceptions of the other's bodily movements, gestures, facial expressions, vocal intonations, etc., as well as the temporally and emotionally attuned responses, on both sides, as we interact with others, give us a good, practical grasp of the other person's intentions and emotions. Secondary intersubjective processes starting around nine months of age, involving joint attention to the world, joint action, shared intentions, and more normative factors connected with cultural practices and social roles provide a rich context that allows us to understand the other's actions in the pragmatic and social situations of everyday life. According to IT, we rarely require mindreading of the sort proposed by ST. Most of what we need for our everyday understandings of others exists in their contextualized behaviors as they enter into our intersubjective interactions.

Drawing on phenomenological roots in the work of Husserl, Scheler, Merleau-Ponty, and Gibson, enactivist IT suggests that an important contributor to primary and secondary intersubjective processes is our capacity for directly perceiving the other's intentions and emotions, and the social

affordances generated in intersubjective interaction (Gallagher 2008, 2015; Gallagher and Varga 2014). With respect to perceiving emotions, Merleau-Ponty writes:

> I do not perceive the anger … as a psychological fact hidden behind the gesture …. The gesture does not make me think of anger, it is anger itself …. I perceive the other's grief or anger in his behavior, on his face and in his hands, without any borrowing from an 'inner' experience … because grief and anger are variations of being in the world, undivided between body and consciousness. (Merleau-Ponty 2012 190, 372)
>
> Anger, shame, hate, and love are not psychic facts hidden at the bottom of another's consciousness: they are types of behavior or styles of conduct which are visible from the outside. They exist on this face or in those gestures, not hidden behind them. (Merleau-Ponty 1964, 52–53)

Our perceptions of the others' intentions and emotions are direct in the sense that they do not require theoretical inferences or simulations or representations that stand in for the other person's mental states. Moreover, our perceptions of the other's behaviors are enactive, which means that we perceive others in an action-oriented way—we perceive them in terms of how we can respond to them or in terms of our ongoing interaction possibilities. Our everyday transactions are conducted in the dynamic currencies of interaction and communication, cashed out in bodily processes of movement, gesture, expression, etc. We don't have to bank on hidden mental states.

In this context, intercorporeity signifies the way that we are dynamically coupled to the other person in our intersubjective interactions, most of which take place in highly contextualized pragmatic and social situations. In such contexts, as both Husserl (1989) and Merleau-Ponty suggest, we see others in terms of the "I can" or the "we can"—that is, in terms of social affordances. We understand others through embodied anticipatory processes that are either fulfilled or quickly corrected, or that in some cases lead to a breakdown in the interaction that would then need to be restored. The analyses of social interactions in shared activities, in working together, in communicative practices, and so on, show that agents unconsciously coordinate their movements, gestures, and speech acts (Issartel et al. 2007; Kendon 1990; Lindblom 2015). In communication, we coordinate our perception–action sequences; our movements are coupled with changes in velocity, direction, and intonation of the movements and utterances of the

speaker. Our movements are often synchronized in resonance with others, following either in-phase or phase-delayed behavior, and in rhythmic co-variation of gestures, facial or vocal expressions (Fuchs and De Jaegher 2009). Thus, as Merleau-Ponty suggested, our systems enter into a coupling that advances toward a completion. On a dynamic model, the two systems form a new system or a new form. "We will say that there is form whenever the properties of a system are modified by every change brought about in a single one of its parts and, on the contrary, are conserved when they all change while maintaining the same relationship among themselves" (1967, 47).

This enactivist interpretation does not deny that MN activation is involved in social cognition. The issue is how to interpret this activation. There is some agreement that MN activation does not involve the original sense of simulation understood as pretense and instrumental control, since it is questionable whether pretense, as a personal-level phenomenon, can be performed fully in sub-personal processes, and also questionable as to how instrumental control can be predicated on automatic processes (see Gallagher 2007; Goldman 2006). Yet, for ST the mirror system is seemingly defined by the function of simulation understood as *matching* (an *intra*cranial match between observation mode and action mode, as suggested by Rizzolatti, Fogassi, and Gallese 2001).[2] This interpretation, however, can be questioned in light of a number of empirical studies that suggest that intracranial matching is not (or not always) what is taking place in the mirror system (e.g., Dinstein et al. 2008; Catmur et al. 2007)

An alternative interpretation of MN activation is more consistent with the enactivist view. This interpretation takes MN activation to be involved primarily in action preparation, and only secondarily in action understanding. That is, MN activation is forward looking, preparing the system to respond to perceived action rather than to mimic just perceived action. As Pierre Jacob (2008) points out, ST, by emphasizing matching or replication, and a backward-looking retrodictive grasping of the other's prior intentions (i.e., intentions formed prior to the observed action), blinds the theorist to the anticipatory function of MNs. Jacob suggests that MN activation anticipates the other agent's next action. The enactivist view, however, argues that the other's action affords the interacting subject action- or response-opportunities that may be complementary, or cooperative, or oppositional. In that case, MN activation is forward-looking and predictive, as Jacob rightly argues. They are anticipatory, however, not just of the other person's next action, but are also preparatory for one's

own response to the other's action. On the enactivist view, I understand the meaning of your actions, and what Merleau-Ponty calls the motor intentionality that is intrinsic to them, precisely in terms of what I can do in response to your actions.

Indeed, this enactivist interpretation is more consistent with the reuse hypothesis that Gallese wants to defend. According to the reuse hypothesis, as Gallese understands it, these neuronal mechanisms originally served only motor control for action, not for mirroring, matching, or simulation. The primacy of action in this regard arguably carries through to the reuse of our motor systems in contexts of social cognition. When I see your action, I see it not primarily as something I could copy; I see it as an affordance that motivates my own possible response, and this is a good part of precisely how I understand your action. The original motor-control purpose for action preparation now serves an enactive understanding of the other's action and motor intentionality as something to which I can respond.

This enactivist explanation of MN activation is part of a larger, holistic explanation of social cognition; MN activation is only one element of a fuller explanation. That's because an agent's brain is just one element in a larger system that includes body and environment. It's not just the brain; not just the body; and not just the (physical, social, and cultural) environment that includes other agents, but the dynamic coupling of brain–body–environment that forms the explanatory unit in regard to social cognition. The type of embodiment that one finds in Merleau-Ponty and the enactivists includes the fully fleshed out neural plus extra-neural body, inclusive of autonomic and peripheral nervous systems. On this view, the body schema is not a representation in the brain; it includes peripheral and ecological processes that couple to the demands of the physical and social environment. For example, it extends into the tools we use (as Merleau-Ponty indicates by citing Henry Head's example of the blind man's cane, and as numerous more recent studies have shown, e.g., Maravita and Iriki 2004; Maravita et al. 2002). Indeed, in our interactions with others we may form "joint body schemas" precisely structured by the dynamics of joint actions and in turn restructuring our experienced peripersonal space (Soliman and Glenberg 2014).

Con-Founding Variables and the Science of Social Cognition

The enactivist emphasis on holistic, dynamic, and relational aspects that are not reducible to individual brain processes or behaviors, but extend

beyond the individual to include interactions with other agents in rich physical, pragmatic, social, and cultural environments is a challenge for the science of social cognition. As this science is usually conducted, following, in some cases, ST's emphasis on MN activation, experiments are designed to ascertain the neural correlates of various tasks that can be operationalized and tested in, for example, fMRI scanners. If ST or some other ToM approach locates the key processes entirely in the brain, then the task of neuroscience is clear; identify the precise neural correlates—the mechanisms internal to the individual, which can account for the capacity for mindreading. Two candidate networks seem to stand out: a ToM network that includes the temporo-parietal junction, medial parietal cortex, and medial prefrontal cortex (e.g., Saxe et al. 2009), and the mirror areas in premotor and parietal cortexes. Taken together, the neuroscientific findings may justify a hybrid of theory theory (TT) and ST, or suggest a two-system approach of online perspective taking and offline social reasoning (Apperly and Butterfill 2009).

Much depends, however, on the nature of the experimental probe. Scientists have been successful in identifying these regions as important ones involved in specific mindreading and ToM tasks. And yet, as recently acknowledged, there are some methodological limitations involved in this type of science (Schilbach et al. 2013). In almost every case, reflecting the problem of methodological individualism, we gain information about only a single subject performing something predefined as a theory-of-mind task, such as recognizing facial expressions from still photographs. What we don't get, and what we can't understand from such experiments, are embodied intersubjective interactions which, according to the enactivist approach, lie at the heart of social cognition.

Whether one fully accepts the enactivist-interactionist account or not, there is growing acknowledgment that social cognition depends on more than theoretical inference or simulation. This can be seen in the recent moves toward pluralist models of social cognition that argue for both higher-order simulation and lower-order embodied aspects of primary and secondary intersubjectivity working together, or constituting different viable processes activated or enacted depending on differing circumstances (Bohl and van den Bos 2012; Wiltshire et al. 2015; also see Andrews 2008; Fiebich and Coltheart 2015). Such approaches imply, or at least are consistent with a holism similar to the one indicated in the enactivist view. It's not just the brain; not just the body; not just the physical or social or cultural environment; and not just the other person, but all of

these that contribute to what Merleau-Ponty called a form or structure or Gestalt—an integration of variables that are indeed confounded (and confounding), not in the order of the *explanans* because of mistakes in scientific or statistical methodology, but in (and not extraneous to) the order of the *explanandum*; in the real, everyday social encounters that we study. A multiplicity of variables that are dynamically interrelated—what I can perceive (consciously or non-consciously) of the other person's facial expression, movement, gesture, vocal intonation, and so on; what we experience together in our interactions and joint actions in highly contextualized situations; what I may know of the other person's history or current situation, fitted in a narrative framework; what I might be able to infer about what I don't see; and/or what I may be able to anticipate (or simulate) about advances in our ongoing interactions—many or all of which may be working together, or some of which, in some instances, may be working in opposition to each other, contribute to and constitute the phenomenon to be explained. To tear any one of these variables away from the Gestalt (or, as in good experimental protocol, to control for a whole set of such factors, in order to test for just one such factor) is to change the dynamical form or structure of the phenomenon that we are attempting to explain.

This, of course, is what science must do, and not just because of the limitations of our technologies. Experimental science is always piecemeal; it has to control for variables. The question is how does one put the pieces back together; and the problem is that it's not at all like a jigsaw puzzle that one can piece together. One of the important factors is not simply an elemental piece, but the dynamical relations that exists among the pieces—the couplings that define the relations among one piece and another and that may reverberate throughout the entire interactive system. Imagine a jigsaw puzzle piece that once put in place changes the shape of all the other pieces.

The challenge for science is a problem similar to what has been called the "clunky robot" problem (Gallagher et al. 2015; see Dominey et al. in press). When teams of engineers set out to design a robot, they divide the work up according to their specialized area of knowledge. The computer vision team goes to work on the visual system; the control engineers start designing the motor control mechanisms; the communication software team builds that system, and so on. Then they put all the pieces together and find that although each sub-system works well on its own, there are problems getting them to work together. The result is a clunky robot that is far from a smoothly acting agent. They then try to correct the problem by introducing patches and corrections to try to get the different systems

to work together in a way that approaches a smoothly operating robot. Seemingly, no team focused on the dynamical interrelations that need to be established between the different systems. This problem generalizes far beyond robot design. It can be found in the design of institutions, for example.

This kind of problem is reflected and slightly shifted in the case of a cognitive science that attempts to build, not a robot, but an explanation. The starting point is already a non-clunky brain-body-environment system that, except in some pathological conditions, generally tends to work smoothly. Experiments, brain scans, scientific modeling, etc. tend to pull the system apart, disrupting the dynamical connections, in order to study and understand one piece at a time. When science then attempts to reintegrate all the explanatory parts (assuming that it does not simply get fascinated with just one part, which sometimes happens), it creates a clunky explanation because it has not adequately studied the dynamic couplings of the holistic system with which it started. One might appeal to statistical methods of analysis to regain a form of integration; but it's not clear that all of the data is of a quantitative nature. Nor is it clear that a factor analysis of mixed (quantitative and qualitative) data has been successfully tried in this area. The challenge is that one cannot understand neurons in exactly the same terms as experiential processes or cultural factors or the material constraints and affordances of things and environments. The strategy of identifying different levels of explanation—the neural, the functionalist, the phenomenological—acknowledges this problem, but at best it attempts to solve it through correlations which do not capture the dynamical interactions that constitute the form or structure of the system.

One approach consistent with the idea that the phenomenon is a complete form or structure is to start with the typically functioning system involved in a particular task and then probe the system by subtracting or knocking out one factor to see what modulations occur (Wilson and Golonka 2013). One might also find a selective pathology that instantiates this kind of situation. This approach assumes an interventionist view of causality (Woodward 2007), and can often provide interesting results that reveal the importance of the factor that is subtracted or missing, and sometimes the adjustments made to the system as a whole as a result. Yet things are not always straightforward when it comes to understanding those adjustments. One has to be careful to not mistake compensatory changes in the system for something that is normally functioning [cf. Marcel (2003) who makes this point in reference to studying pathologies; also Jensen (2009) discusses it in reference

to Merleau-Ponty's analysis of the case of Schneider]. Merleau-Ponty points to one telling example that shows how the nature of the probe can itself complicate the results. Remove one leg from a six-legged insect and the insect will reconfigure its behavior to attain a new smooth way of moving. One can study the dynamical modulations in the system that result in a new form of motoric behavior. If, rather than removing the leg, one simply ties it so that it cannot move, the insect fails to adjust to a new movement form; it attempts to move in the already established way and can only hobble around (Merleau-Ponty 2012). Understanding why, what seems to be an equivalent change to one element (removal of leg function) in a relatively simple system leads to diverse behaviors, is not so simple, and is a more complex challenge in a more complex system like the human, although to be sure, there are less legs involved, and likely more psychology.

The form or structure is what Merleau-Ponty regarded as the phenomenon to be explained. He showed, in great detail, the inadequacies of both empiricist-behavioral reductionist strategies and intellectualist-cognitivist strategies in trying to explain such structures. Both approaches are tied (and are still tied) to a conception of nature (and therefore to a particular conception of naturalism) that is overly mechanistic [nature as "a multiplicity of events external to each other and bound together by relations of causality" (1967, 1)], or a conception of mind dominated by top-down conceptions of representation, "a second world parallel and analogous to the 'physical world,'" where the mind is equated with mental states related in causal fashion (today's functionalism). The alternative, Merleau-Ponty suggests, is to rethink nature and the nature of mind and to find what he called "the truth in naturalism," in terms of form or Gestalt, that is, in terms of a more holistic relational conception.

Given (1) the requirement of experimental controls which tend to break up the Gestalt for examination; (2) the limitations of current technology that cannot deal with the interactional nature of social relations; and (3) the continuing tendency to divide both *explanandum* and *explanans* into levels that always ends in privileging one level (the neural, the functional, or the phenomenological), we should expect that if we continue to do science, (1) will remain necessary; (2) will gradually (and already is starting to) change with new more portable or wearable technology that may allow us to measure processes in brains and bodies

in subjects who are interacting in typical ways in environments that we can easily adjust. The most important adjustment, however, will have to be on the theoretical side of science with respect to (3). Given the limitations of (1) and (2), it may be difficult to think holistically in terms of dynamically interrelated dimensions. This calls for what Sandra Mitchell (2002) has called an "integrative pluralism"—the development of multiscale explanations involving factors at various scales (neuroscientific, psychological, phenomenological, social, and so on) all contributing to an integrated explanation (McGivern 2008), in contrast to unconnected, multiple explanations that might run in parallel. Triangulation (Flanagan 1992) may not be enough if each discipline begins from a different set of assumptions and we ignore the dynamical intertwinings in which neurons, bodies, environments, cultures are all plastic, relative to each other (a condition which Malafouris (2013) calls "metaplasticity"). Change one element in the system, and the whole system readjusts or recalibrates. That is a starting point already supported by empirical evidence, including evidence from the kind of pathological cases that Merleau-Ponty considered. Taking this as a starting point, it won't be enough to say that the explanation of social cognition is to be found in the activation of MNs, or in the activation of the ToM network, or in brain-bound representations or codings, or in whatever preferred mechanism is found inside the individual isolated inside the fMRI machine. We have to consider the role of cultural and institutional factors and what they do to bodies and brains and people engaged in intersubjective interactions in order to identify the principles that explain how all of these factors work together or sometimes fail to work together.

Notes

1. One exception to this is a recent paper (Gallese and Cuccio 2015) where Gallese puts emphasis on the body itself, considered as *Leib*, that is, the phenomenological lived body.
2. Goldman interprets matching as an *inter*-cranial observer's brain matching other another agent's brain. It would seem, however, that intracranial matching is a prerequisite for inter-cranial matching, and the more intrinsic sort of matching that supposedly belongs to the MN mechanism per se.

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CHAPTER 10

Multiperspectival Imagery: Sartre and Cognitive Theory on Point of View in Remembering and Imagining

Christopher Jude McCarroll and John Sutton

> A familiar but remarkable fact about the psychology of memory is that the visual phenomenology of a memory of performing an activity like swimming across a lake will often be presented from a point of view above or behind the figure doing the swimming (that is *oneself*).
>
> ——Richard Moran (1994, 91)

Introduction

When remembering events from one's life, one often visualises the remembered scene as one originally experienced it: from an 'internal', 'own-eyes', 'first-person', or 'field' perspective. Sometimes, however, one sees oneself in the remembered scene: from an 'external', 'third-person', or 'observer' perspective (Nigro and Neisser 1983).

Study of this phenomenon has a long past but a (relatively) short history in psychology (Eich et al. 2011). Observer perspectives in autobiographical memory were noted by Freud, for example, in his essay *Screen*

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Memories (1899/2001), and were thought to be the product of psychodynamic reconstruction. Yet it was not until Nigro and Neisser's (1983) pivotal paper on the distinction that psychological interest in point of view in memory ignited.

Since then empirical research has produced a number of consistent findings related to the differing points of view: the field perspective is more common, although there are important individual and cultural differences; observer perspectives, however, are more common when remembering more temporally remote events, such as memories of childhood; field perspectives are more likely to include information on emotion and feelings, while observer perspectives tend to have less affective detail but contain more objective information; observer perspectives are also more common when there is a high degree of emotional self-awareness either at the time of the past event or at the time it is recalled (Nigro and Neisser 1983; Robinson and Swanson 1993; McIsaac and Eich 2002; Eich et al. 2011).

One particularly puzzling piece of evidence is that the perspective within a single retrieval of memory can shift from one point of view to the other: for example, 'when remembering a childhood beach vacation, a third-person perspective image may initially come to mind followed by a first-person perspective' (Rice and Rubin 2009, 878). This ability to switch between perspectives affords the possibility that a single memory need not involve *either* one perspective *or* the other, but may in fact involve *both* field and observer perspectives. How would one make sense of this multiperspectival imagery? Phenomenology can help elucidate this puzzling plurality of perspective.

In this chapter, we apply the insights of phenomenological analysis of mental imagery to the puzzles of point of view in personal memory. Indeed, it seems hard to see how one would make sense of multiperspectival memory imagery without using a phenomenological approach. Thinking about perspectives in imagery is complicated by the difficulty of accessing these aspects of one's psychology, and for this reason, phenomenology is a particularly insightful way of tapping into such nebulous phenomena.

We draw upon two key features of Sartre's remarks on imagery as a way of making sense of some of the empirical evidence on visual perspective in memory.[1] Sartre applies the phenomenological method to imagery and argues that, firstly, the mental image is not an *object in* consciousness but is rather an *act* of consciousness.[2] Secondly, the image only admits of *quasi-observation*.

In other words, there is an *essential poverty* to the image: the image teaches us nothing, but, rather, it presents in such a way that 'it is complete at the very moment of its appearance' (Sartre 1940a/1972, 7).[3]

These insights offer a way of understanding a specific live topic in contemporary cognitive science: the multiperspectival nature of memory imagery.[4] The key phenomenological idea that the image is an act of consciousness, or a way of thinking about an object or event, provides a way of elucidating some of the empirical findings on point of view in personal memory, and can help account for what we will describe as the self-presence of observer perspectives in personal memory.

The Image as an Act of Consciousness

Consider the following example of an observer perspective memory; an image of a remembered scene from one of the present authors' own childhoods:

> I am seated on a rope swing, dangling from the branches of a large but anonymous tree. My father is pushing me from behind, and I see myself swinging back and forth. Suddenly I lose my grip just as the swing reaches its forward apex. I fall off, landing on my back. I feel that horrible sensation of being winded, the tightening of the chest, the anxiety of being unable to breathe. I see myself, as if from behind, run down the hill in panic.

Such a description naturally invites the thought that one is inspecting the memory image before the mind's eye: the image is somehow *in* consciousness, inspected *by* consciousness. This way of thinking is so natural that Sartre tells us that 'Psychologists and philosophers have in the main adopted this point of view. It is also the point of view of common sense' (1940a/1972, 3).[5] For Sartre, this view reflects a 'naïve ontology' (1936/1962) of the image: it is to move the image too close to perception. That is, it is to think of the image as a 'reborn perception' (Sartre 1940b/2004, 10)—a weak and degraded copy of a previously vivid percept. For Sartre, phenomenological reflection shows this view to be misguided:

> At the first reflective glance, we see that we have so far committed a double error. We thought, without justifying it to ourselves, that the image was *in* consciousness and that the object of the image was *in* the image. We

> depicted consciousness as a place peopled with small imitations and these imitations were the images. (Sartre 1940b/2004, 5 emphasis original)

To hold this mistaken view—that is to think of the image as a type of picture or thing in consciousness, to believe 'that images possess the same basic properties as externally perceived objects' (Casey 1981, 143)—is to succumb to what Sartre calls, the *illusion of immanence* (1940a/1972, 2).[6] Although Sartre himself does not provide many arguments to dispel the illusion of immanence, being 'more concerned to grasp the source of its attraction than to argue against it' (Hopkins 1998, 161), there are a number of problems with such a simple picture theory.

One problem relates to the notion of optimal viewing conditions. When one perceives a picture or photograph, a range of viewing conditions affect how one actually sees the images: lighting, distance, other objects in one's field of view, etc. One's view of the picture will be more or less optimal. In the case of mental imagery, however, there are no such optimal viewing conditions[7]: 'there is no mental analogue of turning up the light on a dimly lit inner picture' (McGinn 2004, 64).[8]

A related problem concerns the medium of the image. Pictures are made from certain materials. If the image is an object in consciousness, a type of picture say, then it will be constructed of certain (physical) materials. Just as a photographic paper is the medium of the photographic image, then if the image is an object in consciousness it, too, will be constructed out of certain materials which act as a medium. Furthermore, these materials provide a picture with 'certain intrinsic non-intentional properties' (McGinn 2004, 63), properties which can themselves become the object of one's attention. In the case of the image, however, one cannot turn one's attention to the medium of the image, to 'the materials of the image independently of what it is an image of' (McGinn 2004, 63).[9] This leads to the conclusion that 'if there are no such intrinsic properties, then I cannot be said to see a picture in my mind's eye, since it is constitutive of being a picture that there be this partition into intentional and non-intentional properties' (McGinn 2004, 63).

By taking the image as an act of consciousness that only admits of quasi-observation, Sartre distances imagery from perception.[10] Theories of imagery which fall prey to the illusion of immanence view the image as a reified copy of an original percept, such that 'images exist strictly atomistically and thus as incapable of becoming parts of genuine synthetic wholes' (Casey 1981, 142). Yet for Sartre, consciousness is synthetic or holistic

through and through: so 'the atomistic view of images, by regarding them as isolated units, disrupts the continuity of consciousness and spoils its spontaneity' (Casey 1981, 142).

Sartre tells us that it would be

> impossible to slip these material portraits into a conscious synthetic structure without destroying the structure, cutting the contacts, stopping the current, breaking the continuity. Consciousness would cease to be transparent to itself; everywhere its unity would be broken by the inassimilable, opaque screens. (1940b/2004, 6)[11]

We want to invoke the important phenomenological insight that the image 'is not a content in consciousness; rather it is a dynamic and relational act of consciousness' (Thompson 2007, 301). In Sartre's words:

> The word 'image' could only indicate therefore the relation of consciousness to the object; in other words, it is a certain way in which the object appears to consciousness, or, if one prefers, a certain way in which consciousness presents to itself an object … to avoid all ambiguity, I repeat here that an image is nothing other than a relation. The imaging consciousness that I have of Pierre is not a consciousness of an image of Pierre: Pierre is directly reached, my attention is not directed at an image, but at an object. (Sartre 1940b/2004, 7)

> There are not, and never could be, images *in* consciousness. Rather, an image is *a certain type of consciousness*. An image is an act, not some thing. An image is a consciousness *of* some thing. (1936/1962, 146 emphasis original)

We think that understanding the image as an act of consciousness, as a mode of presentation, has explanatory value in relation to the problems of memory imagery. In the next section, we invoke another of Sartre's key characteristics of mental imagery, one which is related to the idea of the image as an act of consciousness: the notion of *quasi-observation*. And then we can apply these phenomenological insights to the puzzles of point of view in personal memory.

The Image and Quasi-observation

To explain the notion of quasi-observation, Sartre examines the relation between the mental image, the percept, and the concept. According to Sartre, in perception one observes objects. Perception is perspectival, and

objects are presented from a particular point of view. In perception, in order to fully know an object, one must *make a tour* of it and synthesise the various aspects of the perceptual object (Sartre 1940b/2004, 8). In other words, the objects of perception are presented

> only in a series of profiles, of projections. The cube is indeed present to me, I can touch it, see it; but I can never see it except in a certain way, which calls for and excludes at the same time an infinity of other points of view. One must *learn* objects, which is to say, multiply the possible points of view on them. (Sartre 1940b/2004, 8 emphasis original)

In contrast, when one thinks of a cube by means of the concrete concept, one conceives of it (six sides and eight angles) all at once: one can think of 'the concrete essences in a single act of consciousness' (Sartre 1940a/1972, 6). Sartre tells us that when I am thinking conceptually 'I am at the centre of my idea, I seize it in its entirety at one glance' (Sartre 1940a/1972, 6).

How then are we to understand the image? Sartre, initially at least, places the image as somewhat intermediate between the percept and the concept. For Sartre, 'mental imagery, unlike conceptual thought, makes its object seem in some way *present*, not merely indicated' (Webber 2004, xxii emphasis original). The imagined object is, just like the perceived object, 'presented in profiles, in projections' (Sartre 1940a/1972, 7), although this is a claim we return to in the next section. Unlike the perceived object, however, one cannot discover anything new about the object as imaged. According to Sartre, 'No matter how long I may look at an image, I shall never find anything but what I put there. It is in this fact that we find the distinction between an image and a perception' (1940a/1972, 7). This is why he describes the image as suffering from an *essential poverty*: 'nothing can be learned from an image that is not already known' (Sartre 1940a/1972, 8). Sartre's position on impoverished imagery may be summarised as follows:

> There is always more to the perceived object than we can see, but imagination shares with conceptual thought the trait of its object having all and only the properties that it is presented as having. In perception, knowledge of the object is consequent upon the experience of it, whereas in imagination knowledge is prior to experience. (Webber 2004, xxi)

It may be that Sartre overstates the point about the essential poverty of the image. He recognises that 'it can … happen that a memory image presents

itself suddenly and presents some new aspects' (Sartre 1940a/1972, 8). But Sartre responds that even in such cases the image 'presents itself in one piece to intuition, it reveals immediately what it is' (1940a/1972, 8). Even in instances in which a memory image of a place, a dreary garden say, remains unidentified, Sartre tells us that no amount of observation will yield the name of the place: 'If I later discover the name of the garden it is by means of processes which have nothing to do with pure and simple observation: the image gave everything it possessed all at once' (Sartre 1940a/1972, 9).

In what can be construed as a further challenge to Sartre's thesis of quasi-observation of the image, Stephen Kosslyn and his colleagues show that mental imagery can be informative and provides answers to such questions as 'do frogs have stubby green tails?'. In answering such queries, subjects often report that they form an image and inspect it (Kosslyn 1980, 1). McGinn argues that this challenge can be met. He suggests that the Sartrean point of quasi-observation relates to 'the *flow* of information from the object to the belief system and the associated attitude of observation—and this contrast still holds once we concede the way that images *can* inform us' (McGinn 2004, 20 emphasis original). In cases in which the image is informative, the stored information is transformed from an implicit to an explicit form. For McGinn, Sartre's thesis is untouched: the conversion of information from memory images to explicit knowledge does not involve a flow of information from the object and observation of that object (McGinn 2004, 20).

We use Sartre's thesis that the mental image is infused with and constituted by knowledge to help make sense of plural perspectives in personal memory.

Multiperspectival Imagery: Cognitive Science and Phenomenology

The relation between visual perspective and memory is complex. As we saw earlier, the visual perspective involved in a single episode of memory retrieval need not be fixed. One's perspective on the past may flit or flutter between internal and external (visual) points of view. Or, it may be the case that one's perspective on the past may be blended and embrace both field and observer perspectives. Perspectives in memory may be protean.

We see a nice example of this switching (from observer to field), in an excerpt from a diary study by Dorthe Berntsen and David Rubin:

> I see myself dancing at a party at the university. I remember my clothes and my legs (the way they moved). Suddenly, I am 'inside my own body' looking out. A guy I know a little walks by me and says as he passes: 'You look good today'.[12]

This ability to switch between perspectives opens the possibility that a single memory need not involve *either* one perspective *or* the other, but may in fact involve *both* field and observer perspectives.

Examining the variability of visual point of view in remembering, Heather Rice and David Rubin suggest that there are a number of possible ways in which visual perspective may manifest within a particular mnemonic episode:

> First, memories can be either first-person or third-person, but not both; only one perspective can be experienced during a particular retrieval attempt. This will be referred to as the 'mutually exclusive framework.' Second, the two perspectives are two ends of a continuum and are complementary. An individual may be able to experience both perspectives during a single retrieval episode, but the experience of more of one necessitates the experience of less of the other. This will be referred to as the 'complementary framework.' Third, individuals can experience both a first- and third-person perspective during recall and they are not dependent on one another; individuals can experience a strong first-person perspective and strong third-person perspective during the same retrieval attempt. This will be referred to as the 'independent framework'. (2009, 879)

Rice and Rubin conducted a number of studies to test the three frameworks, concluding that 'the preponderance of evidence supported the independent framework over the complementary and mutually exclusive frameworks' (2009, 887). The visual perspective experienced during a single memory retrieval need not be *either* field perspective *or* observer perspective— it can be *both*.[13] This raises the question: how do individuals experience multiple perspectives? Rice and Rubin tell us that 'One possibility is that individuals switch from one distinct perspective to another distinct perspective. However, it may be that they experience multiple perspectives simultaneously' (Rice and Rubin 2009, 887). Rice and Rubin, following informal conversations with their participants, cautiously adopt the former hypothesis, but they do not rule out the possibility of simultaneous perspectives and advocate that future investigations should examine both alternatives. We argue that it is easier to make sense of both alternatives—switching

and blending of perspectives—by considering the image as a mode of presentation of a particular past event.

If mental imagery, and particularly memory imagery, is thought of as a reborn percept, then it becomes hard to make sense of the notion that one can switch between field and observer perspectives in a single episode of remembering.[14] On such a view, there should be a single atomistic copy of the past event, perpetually preserved in memory and pictured before the mind's eye. In essence, the possibility of switching never arises because there is a unique unitary object that is visualised.

Further, according to the copy theories that Sartre challenges, mnemonic observer perspectives would not be genuine instances of episodic memory. According to such theories, mental imagery, especially memory imagery, involves reproductions of previous perceptions. Given that one did not see oneself from-the-outside at the time of the original experience, one cannot have a memory in which one sees oneself from-the-outside: one cannot recall from an observer perspective.[15]

Yet there is now a wealth of evidence to suggest that personal or episodic memory is *essentially* reconstructive rather than reproductive (Schacter and Addis 2007). This means that *both* field and observer perspectives are (re)constructed rather than reproduced. Further, reconstruction in memory does not entail distortion or error: genuine or veridical memories are reconstructed too (Barnier et al. 2008; Campbell 2014). This is a point John Campbell insists on:

> memory images are not simple copies of past perceptions; they are reconstructed from compilations of past perceptions. This is immediately apparent when you reflect even on the contrast between the course of your perceptions as you enter a room——jerky, rapidly switching from shot to shot, disorganized——and your imagistic memory a few moments later of your entry to the room, which is a smooth, carefully edited, coherent sequence. The constructed character of memory imagery——the fact that we cannot view the memory image as a simple copy of an earlier perception——also shows up in the fact that many people, reporting the contents of their memories of scenes in which they played a part, report that they have a third-person image of themselves as one among the people in the scene, rather than remembering the scene from their own past point of view. (2001, 182)

In fact, Nigro and Neisser posit the possibility of genuine observer perspective *experiences*.[16] Although they do not clarify how these observer perspective experiences arise, Nigro and Neisser propose two possible

interpretations of these detached, from-the-outside, experiences: firstly, that they are nonegocentric forms of direct perception; alternatively, they may be products of instantaneous reconstruction (1983, 467–468).

Rather than thinking of observer perspective experiences as involving a visual perception of oneself from-the-outside, we argue that even at the time of the experience, at the time of memory encoding, one may adopt an external perspective on oneself. This external perspective need not be, and perhaps cannot be, genuinely perceptual. But, nonetheless, the context of encoding may encourage the selection of information based on an external perspective.[17]

Both the contexts of encoding and retrieval have an effect on the content of memory (Schacter 1996). Recall that memories in which one adopts an observer perspective are more common when there is a high degree of emotional self-awareness either at the time of the original experience or at the time of recall. If the memory image is thought of as a picture-like copy of an original perceptual experience, it becomes difficult to explain the possibility of genuine memories recalled from an observer perspective.

Sartre's notion of the image as a way of thinking about an event, a mode of presentation of that past event, helps make sense of, firstly, the notion of observer perspective experiences giving rise to observer perspective memories. Secondly, it elucidates the idea that the visual perspective of memory is not fixed, that there may be switching between field and observer perspectives. During encoding, the information available to memory may be richer than mere perceptual input: one may adopt an external perspective on oneself, thinking of how one looks to the audience as one is engaged in public speaking, or perhaps being more attentive to the objective features of the situation.

Using Sartre's framework to think about memory imagery, we can say that field and observer perspectives are simply different modes of presentation of the same past event. Observer perspective experiences involve the encoding of information in which one adopts an external perspective on oneself, and memories in which one adopts an observer perspective may involve thinking about those aspects of the past event. Switching between perspectives then is a matter of thinking about the same past event in different ways or thinking about different aspects of the same past event. As we shall see in the last section, this Sartrean understanding of the imagery of memory also coheres with an influential cognitive theory of visual perspective in imagery.

What of the possibility of blended imagery? How would one make sense of the claim that a memory may be recalled from *both* a field perspective and an observer perspective simultaneously? We suggest that invoking Sartre's conception of mental imagery can help elucidate this intriguing possibility.

For Sartre, the mental image is not an object *in* consciousness, but rather an *act* of consciousness. In Sartre's view, the objects of perception are observable: one can discover new things about the object by moving position, say, and gaining knowledge of the object. However, unlike perception, the objects presented by mental imagery involve quasi-observation. The objects of imagery may present from a particular perspective, but one's knowledge of the object is complete: unlike perception, in imaging the object 'we no longer need to make a tour of it' (Sartre 1940b/2004, 9).

Indeed, for Sartre, because the image is intermediate between the concept and the perception: 'the object of the image appears in a form which it could not possibly have in perception' (Sartre 1940a/1972, 105). The image, like the concept, may present multiple aspects of the object:

> The image is directed to the object most of the time in its entirety, all at once. What we try to recover in the image is not this or that aspect of a person but the person himself, as a synthesis of all his aspects. (Sartre 1940a/1972, 105–106)

Expanding upon the idea that the objects of imagination are already fully known, Sartre presents us with a picture of the multiperspectival nature of mental imagery. Sartre tells us that imagery need not present an object from a particular point of view, but like Cubist art may show an object from multiple points of view simultaneously: 'these objects do not appear, as they do in perception, from a particular angle; they do not occur *from a point of view*; I attempt to bring them to birth as they are in themselves' (1940a/1972, 141 emphasis original).

Recall that for Sartre the image is a form of consciousness, a way of thinking (imagistically) about an object or event: 'The fact is that there is no opposition between image and thought but only the relation of a species to a genus which subsumes it' (Sartre 1940a/1972, 140). The image is not something from which one can learn; one's knowledge precedes the image, and the image reflects one's knowledge (implicit and explicit). This means that unlike percepts, which are experienced from a particular point

of view, imaged objects may be visualised as if from multiple points of view simultaneously. Sartre informs us that

> imagined objects are seen from several sides at the same time: or better – for this multiplication of points of view, of sides, does not give an exact account of the imaginative intention – they are 'presentable' under an all-inclusive aspect. It is something like a rough draft of a point of view on them which vanishes, becomes diluted. (1940a/1972, 141)

It may be that one switches rapidly between field and observer perspectives in personal memory, but adopting a version of Sartre's framework for thinking about mental imagery can at least start to make sense of the notion of blended perspectives.[18] Indeed, without this theory of the image, the possibility of blending does not make any sense: appealing to a simple picture theory of imagery cannot account for the synthetic multiperspectival nature of memory imagery.

This blending of perspectives is not exclusively tied to the domain of memory and imagination. The notion of multiple and blended spatial perspectives comes to the fore when we consider how spatial information is communicated. Barbara Tversky first alludes to the distinction between egocentric (embedded or 'route') points of view and allocentric (extrinsic or 'survey') perspectives before stating:

> just as spontaneous descriptions of space mix perspectives, using route and survey expressions in the same clause … maps (as well as pictorial and other external representations) often show mixed perspectives; for example, many ancient and modern maps of towns and cities show the network of roads from an overhead view and key buildings from a frontal view … Like Cubist and post-Cubist art, maps can show different views simultaneously in ways that violate the rules of perspective, but that *may promote understanding of what is portrayed*. (2011, 507 emphasis added)[19]

This way of thinking of blurred perspectives echoes Sartre's claim above, and the analogy with Cubist art is mirrored in this further claim from Sartre: 'the objects of our imaginative consciousness are like the silhouettes drawn by children; the face is seen in profile, but both eyes are nevertheless drawn in' (1940a/1972, 141). For such an image, just think of Picasso's Cubist homage to the atrocity at Guernica, 'Weeping Woman', 1937. And the reciprocity of these positions may also indicate a *function* of such multiperspectival imagery: it *may promote understanding*

of what is portrayed. Multiperspectival memory imagery may be a way of thinking about the past which reflects the multiplicity of information available both from the moment of encoding and at retrieval: 'images *particularize* remembering by generating a *plethora* of details' (Wagoner 2012, 1043 emphasis original).

Indeed, as we show next, the idea that memory imagery is a way of thinking about a past event, and that field and observer perspectives *particularise* different aspects of that past event, accords not only with a phenomenological analysis of memory imagery but also contemporary cognitive theory.

Observer Perspectives as Modes of Presentation

Developing the idea of the image as an act of consciousness, we argue that observer perspectives involve a distinct mode of presentation of the past event. We use the work of Husserl and Mark Rowlands to expound the notion that intentional states involve a tripartite structure. This tripartite structure of intentionality can help capture the complexity and variability of remembering one's past. We provide support for this rich notion of a mode of presentation by drawing on work ranging from phenomenology to cognitive and social psychology.

Perceiving, remembering, and imagining are intentional states. This means that they are essentially *directed toward* an object, or are *about* an object. This intentional directedness can be thought to involve a threefold structure. Husserl distinguished between the intentional act, the intentional object, and the intentional content (Spear n.d.). The intentional act can be considered as the psychological mode, the particular kind of mental act one is engaged in: remembering, perceiving, or imagining say. Such mental acts are directed at a particular intentional object: a thing, event, or state of affairs. The intentional content relates to the *way* in which the subject thinks about the particular intentional object. One does not think of an intentional object *simpliciter*; one 'always thinks of the object or experiences it from a certain perspective and as being a certain way or as being a certain kind of thing' (Spear n.d., Sect. 1a). For example, one perceives or remembers (the intentional act) the ocean (the intentional object) as clear and inviting or as cold and menacing (intentional content). One does not simply perceive or remember the ocean, but one perceives or remembers the ocean in a particular way.

Importantly, Rowlands refers to this third element of intentionality——intentional content——as the *mode of presentation*.[20] Rowlands tells us:

> The intentional act is connected to the intentional object via a mode of presentation of that object. Thus, a subject, in virtue of its intentional act, is aware of an object, and the act makes the subject aware of this object because it is this object that satisfies the mode of presentation embodied in the act. The mode of presentation is what allows the intentional act to 'hook onto' the intentional object of that act. I shall refer to this as the *mediational* conception of intentionality. If we adopt this mediational conception of the intentional relation, then the relation between an experience as act, E_A, and an experience as object, E_O, is this: E_A presents E_O to subject S by way of a mode of presentation, P, of E_O. (Rowlands 2010a, 91 emphasis original)

This means that the *same* object can fall under *different* modes of presentation within the same act type: the explicit content of memory, say, can be presented in different forms to the subject. Not only can one perceive or remember or imagine the same content, that is, not only can one have the same (intentional) object intended by different (intentional) acts, but one can also remember (or perceive or imagine) the same content in *different ways*.[21]

This way of thinking of the mode of presentation allows for a fuller understanding of the different ways the past can be presented to a subject at different times. It acknowledges that intentional acts are 'in various ways informed by valences, feelings, past experiences, and frameworks of reference and interest, and that they shape the way I actually see [or remember] things' (Gallagher and Zahavi 2008, 115). On our understanding then, adopting an observer perspective is remembering the *same* past event under a particular mode of presentation.

This idea that the same object (explicit content) may be remembered (or perceived or imagined) in different ways, that is, it may fall under different modes of presentation, may be what grounds Peter Goldie's notion of the ironic gap——the idea that what one *now* knows, thinks, or feels about a past event can infuse the memory of that same past event. Goldie holds that when this triply ironic gap (epistemic, evaluative, emotional) opens up between the past and the present, one is more likely to adopt an observer perspective when remembering. Importantly though, Goldie also acknowledges that 'field episodic memories——memories of what happened "from the inside"——can also be infected with irony, with what

one now knows, and how one feels about what one now knows' (2012, 52).

In observer perspective memories, there has not been a change in the explicit content *per se*: the event remembered is still the same, the explicit content is still the same. Nonetheless, drawing on the work of Rowlands, we argue that this explicit content falls under a different mode of presentation, and that the self-presence of observer perspectives arises implicitly from this mode of presentation. The same content is remembered in different ways.

Dylan Trigg alludes to precisely this point. Discussing a memory of a visit to Alcatraz, Trigg writes:

> True, I can remember the feel of moistness inside Alcatraz, and to some extent relive that texture on recollection, but there is a surrounding detachment to this interior experience, as though looking at myself from above. I am, effectively, a player in the scene of my own memory. (2012, 59)

Trigg then informs us, in relation to this memory, that 'what is remembered can often concern less the affective experience of the subject and more the objective presentation of events in the world' (2012, 53). This is compatible with the empirical evidence on remembering from a field or an observer perspective. The field perspective is associated with the recall of affective detail and the observer perspective with the objective circumstances of the past event. In both cases——field and observer perspectives——the intentional object (the remembered event) is the same; it is simply thought about in different ways, under different modes of presentation.

The idea that field and observer perspectives in memory reflect different ways of thinking about the same past event is the central tenet of Lisa Libby and Richard Eibach's model of imagery perspective. According to this model:

> imagery perspective functions to determine whether people understand events bottom-up, in terms of the phenomenology evoked by concrete features of the pictured situation (first-person), or top-down, in terms of abstractions that integrate the pictured event with its broader context (third-person). (Libby and Eibach 2011, 186)

We can understand Libby and Eibach's claim as the idea that field and observer perspectives present the world, and help us understand the

world in different ways, by falling under different modes of presentation. If intentional activity is a *disclosing activity*, in that it discloses or reveals objects or events or parts of the world (Rowlands 2010b, Ch. 7), then field and observer perspectives will reveal or disclose different aspects of the same event.

It may be argued that the mode of presentation, understood as the intentional content, is as much a part of the intentional act as the intentional object. Husserl makes a distinction between two constituents of the intentional content: act *quality* and act *matter* (1900/2001 2, §20).[22] Act quality 'is that inner feature of an act that distinguishes it phenomenologically from acts of other *kinds*' (McIntyre and Woodruff Smith 1989, 156 emphasis original). The difference in *quality* of perceiving or remembering makes such states phenomenologically distinct. On the other hand, McIntyre and Woodruff Smith tell us that 'the matter in an act's content is that in the act which gives it its specific *representational character* (1989, 156 emphasis original). Moreover, the act's matter can vary either by representing different objects or by representing the *same* objects in *different* ways. In other words, the same object or event can be remembered in different ways. The mode of presentation relates to both the act (quality) and the object (matter) of intentionality. We argue that the mode of presentation may implicitly present aspects of the object through the activity of the act itself: aspects that are informed by *frameworks of reference and interest* (Gallagher and Zahavi 2008, 115).

The self-presence of observer perspective memories is transparent, in the sense that it is not usually an object of one's awareness. One sees through the self to the event (intentional object) itself: 'we are ordinarily not even aware of this content; rather, the content is what makes our act a representation of an object, and this object is what we are aware of' (McIntyre and Woodruff Smith 1989, 155). The reason for this transparency is, we take it, that the self-presence of observer perspectives in memory arises implicitly as part of the mode of presentation of the past event. The self-presence of observer perspectives is due to a change in the form or mode of presentation of such past events. Changes in the form or mode of presentation will affect *how* one perceives or remembers a certain object, not *what* one perceives or remembers. This is the reason why in remembering from an observer perspective one is *not* remembering having-seen-oneself at the time of the past event; one is, rather, simply remembering the event. Remembering from an observer perspective is simply remembering.

Conclusion

The visual imagery of personal memory involves points of view. One may recall a past event from a field perspective or an observer perspective. Even though the visual perspective one adopts may be fixed and steady, evidence suggests that we sometimes experience *both* field and observer perspectives in a single episode of remembering. When recalling a particular past event, one may often switch between the two points of view, or perhaps one may even blend perspectives. Memory imagery may be multiperspectival.

Appealing to Sartre's phenomenological analysis of the image provides a way of understanding this plurality of perspectives. Thinking of the mnemonic image as a mode of presentation of a particular past event, as an image that is infused with and incorporates one's knowledge of the past, provides a way of understanding such multiperspectival memory imagery.

By integrating the insights of phenomenology and empirical evidence, we develop a richer account of the nature of multiperspectival memory imagery. Where empirical evidence hints at the possibility of multiperspectival memory imagery, phenomenology elucidates how such imagery could arise. Uniting phenomenological and scientific perspectives on memory imagery offers us a way of elucidating the puzzles of point of view in personal memory.

Notes

1. In his analysis of mental imagery, Sartre acknowledges a debt to the phenomenology of Husserl. In this chapter, we draw mainly upon Sartre's theory of imagery. Wittgenstein is another theorist who offered a similar characterization of imagery to Sartre's. See, for example, Wittgenstein (1967/1990, 621).
2. This idea relates to what Mary Warnock describes as the "original doctrine of phenomenology," according to which imagination "like the rest of consciousness … is essentially directed towards an object" (Warnock 1976, 162). Warnock goes on to say of Sartre's first characteristic of the image that "apart from this direction towards something else, the image itself is nothing" (1976, 162).
3. In fact, Sartre outlines four characteristics of the image: the image is an act of consciousness; the phenomenon of quasi-observation; the imaginative consciousness posits its object as a nothingness; and spontaneity. It is the first two of these characteristics that we are concerned with in this chapter. For Sartre, the evidence of phenomenology is certain, whereas the hypoth-

eses of science are merely probable: "This relationship between first-person description and third-person experimentation is the 'phenomenological psychology' mentioned in [Sartre's] book's subtitle, and runs throughout the work" (Webber 2004, xxii). Even if Sartre overstates the incontrovertibility of his phenomenological analysis, we can still retain his insights.

4. It may be argued that Sartre's theory is a phenomenological analysis of the *imagination* not *memory* and therefore we cannot legitimately use Sartre's insights on imagination and apply them to memory. Sartre makes a distinction between memory (and anticipation) and imagination based on the different thetic or positional character of the two intentional acts (Sartre 1940b/2004, 181). However, Sartre's insights can still be utilized in relation to memory imagery: first, Sartre draws on many examples from memory to flesh out the ideas of his theory of imagery (Sartre 1940b/2004, 181; Warnock 1976, 176; Levy 2012, 143). Second, there is evidence that Sartre did not view the division between memory and imagination as so clear-cut. Discussing the Husserlian theory of imagery in which a sharp distinction is drawn between "memory-images" and "fiction-images," Sartre writes that "there are so many intermediate forms between memory-images and fiction images that this sharp separation is unacceptable" (1936/1962, 143). Finally, Sartre's separation of imaginative and mnemonic acts relates to their distinct thetic characters. Yet, even if Sartre is correct about the different positional characters of memory and imagination, it does not undermine our use of his imagery insights as a way of explaining the puzzles of perspective in memory imagery. We make use of only two of Sartre's essential characteristics of the image: that the image is an act of consciousness, and that the image only admits of quasi-observation. It seems highly improbable that Sartre would jettison the ideas that the memory image is an act of consciousness and is subject to only quasi-observation. Such a move would entail abandoning the thesis of the illusion of immanence, or at least modifying it to show that memory images are objects in consciousness while imagination images are acts of consciousness.
5. Sartre takes Hume to be one who held such a view (Sartre 1940b/2004, 5).
6. Immanence relates to "indwelling." The illusion of immanence involves thinking of the image in the mind as having the same status and reality as an external object: "The illusion relates to the sense that there is a reality embedded in the image as image" (Lechte 2003, 122). The image is rather *transcendent*: the image is not in consciousness, it is directed at an object beyond consciousness. In Sartre's words, "the illusion of immanence consists in transferring the externality, spatiality, and all the sensible qualities of the thing to the transcendent psychic content" (1940b/2004, 53).

7. Of course, there may be optimal conditions for accurately remembering, just as there may be optimal conditions for a range of cognitive processes such as solving a mathematical problem or navigating an unfamiliar terrain. But just because some capacity has optimal conditions does not mean it is like *viewing* a picture or has optimal *viewing* conditions. Indeed, we note that the conditions of recall (and encoding) can have an effect on the content of memory, but this is not the same as saying that mental images have similar viewing conditions to external pictures.
8. Furthermore, it is argued that if imagery is understood as an internal picture viewed by the mind's eye then this leads to a regress (McGinn 2004, 64; Pylyshyn 2004, 583). See also Thompson (2007, 207–302) for Husserlian arguments against the notion that the image is a picture in consciousness.
9. It could be argued that even though one cannot introspectively attend to it, the medium of the image will be a neural substrate that can be studied, just not through conscious reflection. This may be so, but this does not undermine our position. In point of fact, it seems to be an argument in favor of our Sartrean position that the image is a way of thinking or a mode of presentation. If mental images are similar to pictures then the medium of the mental image should be sufficiently similar to the medium of the picture. The medium of the picture can be seen or viewed and inspected in and of itself. Therefore, the medium of the image (if picture-like) should be able to be seen or viewed or inspected in and of itself. But this is not the case. Therefore, the image is not sufficiently like a picture. If we take *thinking* to be grounded in or realized in a neural substrate, then accepting that the image is similarly grounded in a neural substrate aligns the image with a way of thinking rather than viewing a picture before the mind's eye. Thanks to Richard Sebold for pushing us on this point.
10. There may be similarities between imaging and perceiving, and both should be understood as acts of consciousness. But this is not to say that one should treat the mental image as a reborn percept. The tendency with the theories Sartre attacks is to make imagination *too similar* to perception, to think of imagination as a type of internal perception of an inner mental object, that is, the image. On such views to imagine is to *see* an inner object with the mind's eye, just as in perception one sees an object. One can admit that perception and imagination manifest similarities, while also highlighting how they are fundamentally different (e.g., Hopkins 1998; Thompson 2007).
11. For Sartre, a range of disparate imaginative experiences—portraits, impersonators, caricatures—all belong to the same image family. These imaginings share the same function of depicting someone or something (real or imaginary), but they differ in the material—the representative matter or

analogon—through which they depict. According to Sartre, the material of the mental image, the analogon, comprises subjective feelings such as kinaesthetic sensations of bodily movement and affective responses. The material of the mental image is mental not physical (Sartre 1940b/2004, 17–93). It has been argued, however, that by holding the mental image to be composed of a material, albeit mental, Sartre too falls foul of the illusion of immanence (Hopkins 1998; Thompson 2007; Stawarska 2001). Even if this is the case, Sartre's point that the image is an act of consciousness can still be salvaged (Hopkins 1998; Thompson 2007).

12. Quoted in Berntsen and Rubin (2006, 1193). The original diary study is Berntsen (1996).
13. See also Huebner and Fredrickson (1999), who write that "Pilot data [from their study] indicated that 50% of participants reported some mixture of observer and field imagery within a single memory" (1999, 463, fn. 4).
14. McGinn attributes the view that the memory image is a revived percept to Sartre. He writes that "Sartre … denied that memory images are really images; he couldn't reconcile his radical distinction between image and percept with the idea that the memory image is merely a 'reborn percept' (as he put it)" (2004, 34). Unfortunately, McGinn does not provide a reference for this denial of mnemonic imagery on Sartre's part. The notion of the mental image being a type of *revived* or *reborn* perception or sensation is precisely the view that Sartre is attacking, and we come across no reference where Sartre describes memory images in this way.
15. For authors who deny the possibility of observer perspective memory imagery based on (broadly) preservationist grounds, see, for example, Vendler (1979), and Wollheim (1984). See also Sutton (2010) for a discussion of how Wollheim's analysis of memory imagery relates to observer perspective imagery in memory.
16. This line of thought is additional to Nigro and Neisser's principle hypothesis concerning the occurrence of observer perspective memories, that they are the products of reconstruction.
17. For a fuller exposition of the possible nature of observer perspective experiences, see McCarroll (2015).
18. Interestingly, in various cases in *Being and Nothingness*, Sartre seems to adopt a switching rather than a blending model. For example, discussing an instance of touching one's leg with one's finger, Sartre proposes that "To touch and to be touched, to feel that one is touching and to feel that one is touched—these are two species of phenomena which it is useless to try to reunite by the term 'double sensation.' In fact they are radically distinct, and they exist on two incommunicable levels" (1943/2003,

328). Sartre also suggests that two people cannot simultaneously look at one another, in the sense that looking involves the "rendering of a subject as object. [And] This means that Beings-in-the-world are necessarily separated into a dichotomy; we are either the looker, or the looked upon" (Reynolds 2006, 99). However, at other points, Sartre does seem to use the notion of blending. To follow up on the example of "the look" and the subsequent feeling of shame, Sartre writes: "In the structure which expresses the experience 'I am ashamed of myself,' shame supposes a me-as-object for the Other but also a selfness which is ashamed and which is imperfectly expressed by the 'I' of the formula. Thus shame is a unitary apprehension with three dimensions: 'I am ashamed of myself before the Other'" (1943/2003, 313). It is beyond the scope of this chapter to explore these issues fully, but they point the way to interesting further lines for Sartre scholarship. Thanks to Jack Reynolds for making us think about this possible tension in Sartre's work.

19. See also Sutton (2014, 143–144).
20. This is different from Frege's notion of mode of presentation in philosophy of language; see, for example, McGinn (2015, Ch. 1). For a discussion of Frege's influence on Rowlands's development of the notion of mode of presentation, see Rowlands (2010b, Ch. 7).
21. Rowlands makes a further distinction between empirical modes of presentation and transcendent modes of presentation (2010b, 185). Empirical modes of presentation relate to *aspects* of objects, they may present different aspects of the same object. Transcendental modes of presentation provide the "condition of possibility" of being aware of intentional objects: "A transcendental mode of presentation is what makes a given empirical mode of presentation *possible*" (Rowlands 2010b, 185; emphasis original). We are concerned in this section with empirical modes of presentation.
22. Husserl went on to develop these ideas into the two distinct but related aspects of a mental act: *noesis* and *noema*. These are complicated ideas and subject to different interpretations, which are beyond the scope of the present chapter. See, for example, Rowlands (2010b) and McIntyre and Woodruff Smith (1989).

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CHAPTER 11

Imaginative Dimensions of Reality: Pretense, Knowledge, and Sociality

Michela Summa

Pretense, and notably non-deceptive pretense like pretend play, is an important topic of research in developmental psychology. Notably, in the last decades, studies in this field have concentrated on how children become engaged in pretend play from very early on, generally around 18 months of age; on how they apparently understand others and their intentions in pretense contexts even before passing the false-belief task (Leslie 1987; Lillard 1993, 2004; Perner 1991; Perner et al. 2004); and on how social competences, including the awareness of normativity in social contexts (Rakoczy 2006, 2008; Rakoczy et al. 2006), develop in pretend play. In recent years, the analysis of pretense has also been addressed by philosophers coming from different traditions. Besides being interested in the cognitive underpinnings of pretense (Carruthers 2006; Currie 1990, 1998; Jarrold et al. 1994; Nichols and Stich 2000), in its creative nature (Carruthers 2007, 2011; Picciuto and Carruthers 2014), and in the role that different mental capacities play in pretense,[1] philosophers, like psychologists, have been focusing on how understanding pretense and consistently engaging in pretense activities relate to social cognition. Thus, it comes as no surprise that pretense has also progressively become one of the central topics in the interdisciplinary Theory of Mind (TOM) debate on mutual understanding and social cognition. Apart from some exceptions (e.g., Fuchs 2013), however, the inquiry into pretense seems to have been rather neglected by contemporary researchers in phenomenology,

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who are active in the debate on social cognition. This is probably due to the argumentative strategy in the controversy between current phenomenologists and simulationists: whereas the latter suggest that imagination is constitutive for our knowledge of others, and therefore, also pay attention to activities relying on imagination, like pretense,[2] the former tend to deny that imagination has such a constitutive role for mutual understanding,[3] and therefore, they also pay less attention to pretense. Yet, I believe that phenomenology has a strong methodological and conceptual potential for the investigation of pretense and may also shed new light on the relation between pretense and social cognition.

In this chapter, I wish to show how a phenomenological analysis of pretense can be particularly fruitful in order to address (1) the epistemic functions in the experience of fiction, which emerge in early pretense; (2) the social nature of pretense.

In order to more clearly state the questions I wish to address, let me begin with a brief discussion of Piaget's approach to pretend play, which we can find in his *La formation du symbole chez l'enfant* (Piaget 1978). Here, Piaget discusses several kinds of play (sensorimotor exercise, symbolic or pretend play, and rule play/game). He classifies them in relation to their relevant functions and to their emergence in different phases of children's development: the kind of play characteristic of the sensorimotor phase is clearly sensorimotor exercise; in the pre-operational phase, children begin to engage in pretend or symbolic play; and in the concrete operational phase, they participate in structured rule games. In such a classification, Piaget emphasizes the importance of imagination for pretend play: thereby, imagination is responsible for the 'symbolic evocation' (Piaget 1978, 117) of a structure that differs totally or in part from the actual one.

Three of Piaget's claims are particularly relevant to introduce the problems I wish to discuss here. First, Piaget considers pretend play as a clear expression of early childhood's egocentrism: it is nothing more than 'egocentric thinking in its purest state' (Piaget 1978, 175–176). Piaget's explanation of this claim relies on the lack of equilibrium between assimilation and accommodation. With the former concept, Piaget defines the process through which external reality is subjectively grasped by means of the system of inner notions. These refer to the knowledge and the forms of categorization an individual has already acquired and internal-

ized, or recognized. With the latter, he defines the more complex process by means of which the inner world of each individual is progressively adapted to the outer world and to the system of notions other individuals may have and share, that is, to public knowledge. Whereas the 'objectivity of thought' is based on the equilibrium between the processes described by means of these two concepts, imagination and symbolic representation are unbalanced in favor of egoic assimilation. The characteristic feature of pretense and symbolic play, thus, is the assimilation of reality to the ego with its acquired system of categorization, and such assimilation liberates the ego from the constraints of accommodation, which are characteristic of objective/intersubjective thinking about reality. Such assimilation has, for Piaget, the aim to incorporate, dominate, or compensate aspects of reality that do not fit one's own established system of notions (Piaget 1978, 162).

Secondly, the above-mentioned classification suggests that symbolic play for Piaget is not properly characterized by rules: rule-games/plays emerge in later phases of development and should be conceptually and developmentally distinguished from pretend play.

Thirdly, Piaget argues that pretend play almost disappears in later childhood (from seven years on, i.e., in the concrete operational phase) and only leaves some marginal residue, persisting in adulthood, for instance, in telling fictional stories, enjoying theatre, and so on. (Piaget 1978, 149).

Although I agree with some remarks made by Piaget with regard to the analysis of singular examples—like those concerning the importance of play in the attempt to dispose of unpleasant situations (Piaget 1978, 141), and those concerning collective symbolism in early role play (Piaget 1978, 145)—the just-mentioned three claims need to be critically revised. In part, such a revision has been accomplished in the developmental psychological research on pretend play. The focus of such a criticism has been either Piaget's neglecting of the role of pretense in mental state attribution—Harris' (2000) simulation view goes in this direction—or the underestimation of the genuinely social nature of pretense (Rakoczy 2008). Yet, I believe that a philosophical/phenomenological look at Piaget's claims allows us to provide a more systematic understanding of the epistemic value and the social nature of pretense. Moreover, the phenomenological inquiry into pretense can also establish the basis for a re-conceptualization of the relation between our consciousness of the real and the imaginary.

In part, what I will propose is inspired by Merleau-Ponty's critique of some of Piaget's claims concerning children's cognitive development and the formation of an objective point of view (Merleau-Ponty 1945, 407 f., 1997). Particularly, I agree with Merleau-Ponty's suggestion that development does not mean leaving behind instincts and drives that are characteristic of infancy, for the latter importantly continue to affect our experience even after our cognitive and emotional capacities have fully developed. However, and this is probably different from Merleau-Ponty (see, Dufourcq 2012), I would not focus my argument on the ontological claim that the real is constitutively permeated by imaginary elements and therefore that there is continuity between perception and imagination. Although in the end I will defend the idea that the imaginary acquires its own reality (and this might re-establish some convergence with Merleau-Ponty), my point of departure is rather a conceptual and phenomenological distinction between perceiving and imagining, or more generally, between positional experiencing and experiencing in the 'as-if' mode, which implies a kind of ontological neutrality.

Despite the mentioned criticism, some of Piaget's claims are still operative in contemporary research on pretense. This is particularly the case when, different from authors like Rakoczy who emphasize the genuine social nature of pretense and the sharing of a fictional world, the focus is rather on the function of pretense for the development of a theory of mind, particularly in relation to the problem of mental states attribution. The main question in this research seems to tacitly endorse the cognitive assumptions underlying the distinction between assimilation and accommodation: How is it possible that I come to understand the other's intentions, if these are related to a system of inner notions, or knowledge, that s/he does not share with me, since it derives from his/her private imaginative capacities? The problem, then, is that of clarifying how knowledge is established through the move from supposedly private to public knowledge.

My interest in this chapter, thus, is partly inspired by the abovementioned criticisms to Piaget's view, coming from different directions in philosophy and psychology. Yet, it is more directly focused on two main implications of the previously mentioned claims: first, that pretend play does not yield any knowledge of reality; second, that pretend play, notwithstanding some initial manifestation of sociality in the form of collective symbolism (Piaget 1978, 145–146), does not properly contribute to our experience of sociality. Indeed, Piaget points out that 'any progress

in socialization does not end in a reinforcement of symbolism, but rather in its more or less rapid transformation into the objective imitation of the real' (Piaget 1978, 146).

In what follows, I address these two points. The first claim I wish to defend is that, despite being grounded on imaginative experience (i.e., despite the 'as if' mode of experience), pretense also has an impact on our knowledge of reality, and such knowledge is constitutively related to the perspectival flexibility characteristic of pretense. Building on the arguments supporting this thesis, my second claim is that pretense is constitutively based on an at least basic consciousness of normativity and agreement with others. In conclusion, I argue that both theses allow us, without mixing up or fusing the real with the imaginary, to recognize the imaginary dimensions of reality.

Pretense: Perceptual Phantasy, Typological Recognition, and the Grasping of Possibilities

In this first section, I wish to argue that the epistemic value of pretense consists in making us aware of the perspectival basis of knowledge, related to a set of constrained possibilities in the apprehension of something as something, or in the 'seeing-as'. I wish to clarify this claim by referring to two main features of pretense: the double grasp on a given context and typological recognition.

One essential feature of pretense consists in the enactment of an imaginary scenario on the basis of what is perceptually given. Let's consider a rather simple example of object substitution, like using a banana as a phone, or a broomstick as a microphone. Both are pretense actions, or actions in the as-if mode, since the acting subject is aware that the banana is not a telephone and the broomstick is not a microphone. Moreover, s/he does not expect to have the same results from actions performed with a banana or a broomstick as those s/he would have from actions performed with real phones or microphones. Acting as-if in pretense is not merely behavioral mimicry of something seen before, without any understanding of the fictional nature and of the meaning of the as-if context.[4] Rather, it entails the consciousness of the as-if nature of the accomplished action, which on its part relies on a double grasp on the situation: a perceptual and an imaginative grasp (cf. Lillard 2004).

Taken apart from action, imagination (or, in Husserlian terms, phantasy) is a direct, intuitive consciousness of something absent, which is neutral with respect to the existence of its object: imaginary objects or situations are in this sense experienced in the 'as-if' mode. Phantasy, as Husserl observes, can be either pure—that is, free from factual constrains—or perceptual—that is, bound to and therefore constrained by some perceptually given objects (Husserl 1980, 490–524; 2009, 208–211). In pretense, the relevant imagination is the latter: what is enacted is not a free variation aiming to grasp pure possibilities, and eventually, universal laws of experience; rather, what is enacted is a specific experiential (possible) imaginative scenario, which, despite not coinciding with the one we are actually experiencing, takes as support some elements thereof. The characteristic feature of perceptual imagination, thus, is that a given object, or a given situation, becomes the associative basis for the presentification of something absent, and thus, potentially, for the constitution of an experiential context that differs from the one we are perceptually experiencing. The tie between imagination and perception in pretense, however, does not imply either a recursive higher-order consciousness of perception, as meta-representationalists would suggest (Friedman and Leslie 2007; Leslie 1987), or a mixture of the real world and the phantasy world. The perceptual context is rather modified, and the consciousness of reality, which is grounded on perception, is temporarily suspended in order to enact and live the phantasy through: the imagined is transposed into the real (Fink 1957, 1960; Husserl 1980, 515).

These remarks, which assume that pretense activities are based on imagination, are not inconsistent with Piaget's. The convergence ends, however, if we consider the consequences Piaget draws from the imaginative nature of pretense. I will challenge the idea of egocentrism later on. Here, I am rather concerned with Piaget's claim that, due to the imbalance between assimilation and accommodation, pretense does not possess any cognitive value. Being based on a double grasp on a given object or situation, pretense grounds the constitution of the meaning of such a situation, and it makes us at least implicitly aware that the same object/situation can be seen in this or that way, and that what we take to be the natural functions of objects, as well as the conventionally established meanings of contexts and situations, might not be the only ones at our disposal. In a larger sense, pretense can make us aware of what it actually means to attribute or to constitute status functions and conventional meanings (Rakoczy 2006, 2008). In order to better explain this claim while remaining within an

epistemic framework—that is, leaving aside, for the moment, the specific problems of sociality—we should now briefly consider pretense in relation to the genesis of empirical concepts.

One of the controversial issues in the above-mentioned philosophical/psychological debate is whether pretense presupposes the owning of concepts, whereby—and this is important—what is meant are mental concepts, that is, concepts of mental states, like believing, desiring, or pretending. The question of whether the owning of the mental concept PRETENCE is required in order to pretend and to understand others' pretending is particularly prominent within the framework of the meta-representational theory, and is notably defended by Leslie and his colleagues. Such a question is related to the problem of understanding how the decoupling and the quarantining of the pretense scenario with respect to the real are possible. The necessity of decoupling and quarantining is based on the double grasp of the given situation: the scenario of a pretense action needs to be decoupled and quarantined in order not to be confused with the real one. Leslie's (1987) idea is that all this can be maintained only if we assume that pretense is a second-order, recursive, representation. Within this framework, the owning of the concept PRETENSE is considered to be necessary in order to discriminate first-order representations from second-order representations, or, to use our terminology, the real from the imaginary. Accordingly, the owning of the concept PRETENSE is what allows us to be aware of such a distinction, and thus, also to discriminate serious actions, which are performed on the basis of perceptual seeing as from pretense actions, which are performed on the basis of imaginary seeing-as. Such an understanding of pretense as a second-order representation, however, is not unproblematic, even if one subscribes to a representational view of consciousness. Nichols and Stich (2000), for instance, argue that there is no need to postulate a higher-order, almost self-referential domain of representations. Rather, they claim that pretense shall be understood simply as a form of behaving as-if. And, for Perner (1991, 33 f.), who also adopts the concept of meta-representation, the prefix 'meta' simply refers to the fact that an original representation is transposed in another context and not to a higher-order level of representation.

If we consider Leslie's view from a phenomenological standpoint, further problems come to the fore. Indeed, the phenomenology of perception and imagination (phantasy) shows that both are simple [*schlicht*] intuitive acts (Husserl 1980). Phantasy is the intuitive and direct consciousness of an absent object, which is neutral with respect to the existence of

this object. Accordingly, it would be wrong to claim that imagination is a higher-order act, or an act of meta-representation, somehow referring to perception. If we endorse such a view, we can also reassess the problems generated by Leslie's claim concerning the necessity of owning the concept of pretense in order to successfully pretend and understand pretense. Before clarifying how, let us more closely consider these problems.

According to Leslie and colleagues, the capacity to pretend and to understand pretense in others shall be considered as correlated (Friedman and Leslie 2007; Leslie 1987). Both require a second-order representation of one's own and the other's attitude toward objects, mediated by the mental concept PRETENSE. Critics of such a view either define pretense as a form of behaving as-if, or in any case, suggest that no conceptual and recursive understanding of pretense actions is required. Pretense is then considered to be based on implicit or explicit counterfactual assumptions, which do not imply any proper understanding of pretending itself as intentional behavior in a fictional context. This lack of proper understanding fundamentally means that young children do not actually attribute mental states while they are pretending, but simply act as they feel it is appropriate in the situation (Lillard 1993, 2004; Nichols and Stich 2000; Perner et al. 2004). These researchers do not deny that young children engage in coordinated pretense scenarios with others. Yet, they substantially claim that children's understanding of pretense is rather superficial: they grasp pretense as a somehow deviant type of behavior, without however grasping that pretending is intentionally and non-seriously acting. Somehow, conflicting empirical evidence has been provided in support of both theories.

Perner et al. (2004), for instance, found that three-year-olds could not reliably distinguish between someone mistakenly feeding a carrot to a rabbit, thinking that there was one there, and someone pretending to feed an imaginary rabbit. Although they can successfully pretend, at this stage, children do not have the capacity to represent themselves as holding a particular attitude (e.g., a belief) concerning an object. According to Perner, thus, pretense involves a shift of representations, but not a second-order representation. This view partly converges with the one later developed by Nichols and Stich (2000). To indicate the state of mind in which children are not able to clearly discriminate belief from pretense, and yet are able to correctly interact in the relevant contexts, Perner et al. (2004) coined the concept of 'prelief'.

Notably referring to Nichols and Stich, defenders of the meta-representational view have emphasized some apparent inconsistencies in all such views. Among others, the 'behaving as-if theory' seems to understand pretense either too broadly (in such a way that all behaving under an assumption would be a kind of pretending) or too narrowly, as it becomes clear in the following passage:

> Suppose Sally engages in object substitution pretense by pretending that a pencil is a car: she may push the pencil along a table top to pretend that the pencil/car is driving along. She may also make engine noises, such as "vroom, vroom", to pretend that the pencil as car is making these noises. According to the Behavioral Theory, Sally is behaving in a way that would be appropriate if the pencil really were a car. But is she? No. If the pencil were a car then Sally would hardly push it across a table or make engine noises! Handling, pushing, and making "vroom" noises are not appropriate behaviors when dealing with a real car. For dealing with a real car include opening its doors, getting inside or, if one is very young, being placed inside, sitting still, and looking out the window. (Friedman and Leslie 2007, 115)

As the quote shows, in many cases, while pretending, it would be wrong to literally behave as if we would do if we believed that a counterfactual proposition or state of affairs were the case. Rather, we create a whole imaginary context in which something is seen as something else, and we act in a way that is appropriate to such a newly created context.[5] For Friedman and Leslie (2007), this implies that the only way to properly account for pretense and pretense recognition is to assume that pretenders, even young children, own the mental concept PRETENSE. The cognitive mechanism underlying pretense would then entail the following three-tier structure:

I – PRETEND – this banana "it is a telephone"

Another aspect that is not properly accounted for by the behavioral view of Nichols and Stich, and which might also be a problem in Perner's account of 'prelief', is the capacity to distinguish between pretending and trying. In this respect, and somehow different from Perner's results, Rakoczy et al. (2004) and Rakoczy and Tomasello (2006) tested the behaving-as-if theory and showed two- and three-year-olds perceived pretending and trying very differently: pretending to do an action was grasped as intentional or purposeful acting as-if, in contrast to trying as

behaving as-if accidentally. Furthermore, they emphasize that there is a rather clear transition between implicit grasping and explicit understanding of pretense (Rakoczy et al. 2006).

The question I wish to discuss now is whether assuming that we own the mental concept PRETENSE is the only, and the most appropriate, way to respond to these challenges. Indeed, critics of Leslie's account are correct in emphasizing that the owning of mental concepts implies either a higher cognitive capacity, which does not seem to be present in young children, or the postulation of some innate pattern, which would be difficult to demonstrate. In trying to answer this question, I concentrate on the conditions for pretense and pretense-recognition within the framework of the distinction between perceiving and imagining. I believe that phenomenology allows us to shed light on such conditions without being exposed to the problems I have briefly discussed.

First of all, a distinction should be made between the questions related to the conditions for pre-thematically discriminating serious from pretense actions; and those related to the conditions for providing a thematic account of this difference (see Currie 1998). Whereas the debate on the owning of the mental concept PRETENSE has principally focused on the latter, here I am rather concerned with the former. The capacities to pre-thematically pretend and to discriminate whether an action is a pretense action, whether it is accomplished out of a false belief, or whether it is only trying, require the apprehension of the given situation 'as' real/serious or 'as' fictional. Rather than to the conceptual understanding of mental states, I believe that this is related to two cognitive accomplishments: first, the recognition of 'types' of situations; secondly, a perspectival shift, which allows us to understand how others also have a double grasp on the situation, and thus to build expectations concerning others' behavior in such a situation. Postponing the remarks on the social aspects to the next section, I wish now to discuss how the process of typological apprehension is involved in pretense.

In perception, we recognize things as being of a certain kind, and even when we encounter unknown entities, we tend to trace them back to familiar patterns. In the same way, we grasp situations and actions of specific kinds in relation to the given circumstances. Seeing as, in this sense, is based on the typological apprehension of individual things (Husserl 1999, 32 f., 136 f.; Lohmar 2008; Summa 2012). Empirical concepts, conceived as *Typoi*, are the familiar patterns allowing us to recognize something as something.

A sensible type, according to Husserl, is a meaningful pattern or schema that we constitute, thanks to the synthetic connection of sensible data, characterized by internal regularity. Thus, for instance, the repeated presentation of certain visual and tactile sensations allows us not only to perceive this singular object, say a banana, but also to constitute the type 'banana'. Through repetition and habituation, we become implicitly aware of a common morphological core, independently of the particular size or ripening of each banana we see. By each new experience with similar objects, then, we implicitly recognize, on the basis of such a morphological core, the relevant thing as a banana. This entails not only a form of quasi-propositional knowledge (knowing *that* a banana is made so and so), but also of practical or dispositional knowledge, for in our habitualized experience we also become familiar with the way to handle bananas (knowing *how* to peel them, how not to get dirty, etc.).

In order to clarify why this is relevant to the questions concerning pretense and the pre-thematic recognition thereof, let us take again the banana–telephone object substitution.

As we have seen, in and through perceptual experience, the empirical schema, or type, 'banana' is constituted, thanks to our repeated perceptions of bananas, as something of a certain shape, color, size, and as something sweet and tasty, which we can eat to satisfy our hunger, and so on. Similarly, the type 'telephone' is constituted through our repeated perceptions of telephones as something of a certain shape, color, and size, and as something which is used in practical contexts to communicate with absent persons. In both cases, the regularity of the connection between different appearances and the perceptual and practical affordances that such objects have for the perceiver make typological apprehension in new contexts possible.

If we see someone playing banana-telephone, we have a situation in which the type of behavior does not fit the type of object we grasp. As long as the playful meaning of the action has not been grasped, this may be accompanied by irritation or puzzling: a signal that something doesn't properly fit with how we generally (i.e., typically) apprehend bananas and people dealing with bananas. Being also familiar with the actions we normally perform with telephones and noticing the similarity in shape between bananas and telephones, we recognize the type of action in a shifted context. Due to such connection, we imaginatively presentify the telephone 'in and through' the banana: the telephone (which is now concretely absent) becomes nevertheless intuitively 'present' for us (i.e., it is

presentified), and we can interact with our partner in a way that is consistent with the apprehension of the type 'telephone' in the banana.[6] This making an absent object present 'in and through' another object is an accomplishment of perceptual imagination. And our action is thus accomplished in accordance with what we imagine. In a similar way, if we are the initiators of the pretense scenario, we follow what we can call an associative affordance that, generally due to the similarity in shape between the two objects, allows us to see a telephone 'in' the banana. Consistently, we suspend the relevant know-how-fitting contexts in which the banana is simply taken as a banana, and privilege the one that would fit if we were dealing with a telephone, which again presupposes that an object belonging of the type 'telephone' is presentified in and through the banana.

Even what we might call the fictional type 'banana-telephone', then, can also 'sediment', or establish itself as specifically meaningful. On subsequent occasions, we may even immediately recognize the banana as a prop for playing telephone. The initial irritation and puzzling, thus, are transformed into a sign of playfulness and amusement.

Connected with the previous remarks on the awareness of perspectival flexibility in pretense, the phenomenological account of typological apprehension adds a second relevant aspect concerning the epistemic value of pretense. Typological apprehension allows us to understand how presentation (perception) and presentification (imagination), despite overlapping in a given situation, do not come to coincidence. Moreover, it shows how new types or morphological generalities can be constituted through perspectival shift and fictional experience. Such a constitution, however, cannot be fully understood apart from the social embeddedness of pretense, which I will address in the next section.

Pretense and Sociality

At the beginning, I observed how, for Piaget, pretend play is a clear expression of early childhood's egocentrism. This is related to the understanding of imagination as something that essentially concerns an individual subject (cf. Casey 2000). Although I agree with the idea that imagination has something inherently subjective, and that we can isolate or detach ourselves from reality through phantasy, I also contend that, when enacted in pretense, imagination is part of a genuinely social experience. In this sense, I agree with Fink's (1957, 30) remark that play is not only a constitutively intersubjective phenomenon but also the basis for social life. The reference

to the social nature of pretense is implicitly present in the previous remarks on its cognitive value and needs now to be made explicit. In this section, I wish to show, first, that due to perspectival flexibility, the understanding of pretense is not merely behavioral, and secondly, that the sociality of pretense is related to the awareness of shared rules.

My previous claim that mental states attribution (and thus the owning of mental concepts) is not what is primarily at stake in pretense should not be taken as signifying that the epistemic problem of grasping how others experience the as-if situation loses its relevance. Claiming this would bring us close to a behavioral understanding of pretense, on the basis of which it would be difficult to discriminate pretense from actions like trying or acting on the basis of a false belief. Thus, I do believe that the understanding of how others see the fictional context is constitutive for pretense. Yet, I would suggest that such an understanding is not primarily based on the owning of mental concepts, although these might well play a role on a higher explicative level. Primarily, the understanding of how others experience the pretend context is based on both the perceptual grasp of expressions (e.g., smiling signalizing that the action is not seriously meant), and a perspectival shift, on the basis of which we 'see' that others also have a double grasp on the situation. In a sense, we can say that the de-centering we experience in imagination and pretense from the first-person perspective (I am both the imagining subject and the subject involved in the imagined world) also grounds a specific kind of perspectival flexibility in which others are involved. Due to a complex actualization of perspectival flexibility, we recognize others as being both subjects collaborating with us in the constitution of the pretense-world and as subject acting within such a world. Pretense, thus, brings to the fore the contextual and situational relatedness of mutual understanding, so that mental states attribution cannot be conceived apart from a broader understanding of the real and the imagined situation.

Moreover, different from what Piaget claims, a basic form of normativity is constitutive for such a social situation, and I now want to discuss why. The link between the epistemic value of pretense, its social and rule-based nature is clearly present in Vygotskij (1967, 1974). What distinguishes pretend play from other childhood activities, he argues, is not pleasure or fun, but rather the creation of an imaginary situation, which allows some emancipation from the constraints of reality (Vygotskij 1974, 94, 97). This entails the perspectival flexibility mentioned above. Vygotskij's crucial claim thereby is that 'there is no such

thing as play without rules. The imaginary situation of any form of play already contains rules of behavior, although it may not be a game with formulated rules laid down in advance' (Vygotskij 1974, 94). Different from Piaget, Vygotskij argues that any meaningful fictional behavior, despite being emancipated from real constraints, is articulated by its own rules, which do not need to be explicitly formulated: 'The child imagines himself to be the mother and the doll to be the child, so he must obey the rules of maternal behavior' (Vygotskij 1974, 94). Such a view, I believe, converges with the one I have defended before by referring to typological apprehension of pretend situations and brings to the fore the normativity implied by the typological knowledge acquired through pretense.

To argue for this, Vygotskij mentions a rather interesting case of pretense, the case of playing at what is true, like sisters playing sisters or a child playing to go to sleep when actually brought to sleep (Vygotskij 1967). Although this might seem to contradict what I have said above concerning the relation between the real and the imaginary in pretense, Vygotskij argues that this is still an imaginary context since, despite the coincidence of the real and pretense role, some contextual aspects are changed and the constraints of reality are suspended, so that the as-if nature of the pretense situation is maintained. The difference between playing at what is true and simply living what is true is precisely related to the at least implicit awareness of contextual normativity:

> The child in playing tries to be what she thinks a sister should be. In life the child behaves without thinking that she is her sister's sister. In the game of sisters playing at 'sisters', however, they are both concerned with displaying their sisterhood; the fact that two sisters decided to play sisters induces them both to acquire rules of behavior. Only actions that fit these rules are acceptable to the play situation: they dress alike, talk alike, in short, they enact whatever emphasizes their relationship as sisters vis-à-vis adults and strangers. […] as a result of playing, the child comes to understand that sisters possess a different relationship to each other than to other people. What passes unnoticed by the child in real life becomes a rule of behavior in play. (Vygotskij 1974, 95–96)

Besides the recognition of the partner(s), the sociality of pretense is grounded on the recognition of the rules characteristic of types of objects

and behaviors and on the creation of a new, imaginary, and rule-based context. The rules defining such a context are certainly flexible, and do not coincide with a script written once and for all. Yet, not only are they in principle accessible to others, but they acquire their meaning only due to intersubjective recognition, so that all changes in the rules need to be negotiated with others (Rakoczy 2008). The banana that is used as a telephone in the playful situation cannot be eaten, except in the case in which the subjects involved in play negotiate on imagining a world in which telephones are also eatable. The appropriateness of behaviors to rules is also part of the social experience. Moreover, rules circumscribe the context of mutual recognition in which we understand and meaningfully act with others. Thus, as mentioned above, the problem of mental states attribution, for example, the understanding of intentions in actions (Rakoczy and Tomasello 2006; Rakoczy et al. 2004) shall also be considered as embedded in the socially constituted context.

A possible critique of this view could be based on the remark that there are cases in which others are de facto absent (Mercolli 2012). Yet, I do not believe that such a remark seriously challenges the just sketched account. Even when others are factually absent, the relation to at least a possible/imagined other subject and to a socially coded behavior belong to the constitutive aspects of pretense. There are two kinds of arguments in support to this claim. On the one hand, a developmental observation: children begin to engage in pretend play in and through interaction (Rakoczy 2006). On the other hand, a theoretical point: pretense actions and the pretense-world are meaningful only if they are in principle accessible to others and only if others can in principle participate in their constitution. The fact that, albeit one is playing alone, an imaginative partner, even only as addressee of our expressive behavior, is also part of the play confirms this view. Moreover, the implicit or explicit rules upon which pretense contexts are based are also necessarily public and social. Accordingly, mutual understanding and social interaction are in principle implied in the formation of pretense actions, even when the other is only potentially involved. And the meaningfulness of pretense actions is constitutively bound to such intersubjective prerequisite: such actions, in other words, can only be realized on the basis of (at least potential) reciprocal understanding among interacting subjects.

Conclusion: Pretense and the Imaginative Dimensions of Reality

While reading the title of this chapter, the idea must have been resonating that I consider pretense in relation to what I have there called 'imaginative dimensions of reality'. Although some of the arguments I developed should have already indicated what I mean by this, in these conclusive remarks I want to make this point more explicit. Indeed, talking about imaginative dimensions of reality might sound quasi-paradoxical if one considers that the main author I have referred to while talking about imagination is Husserl. And, although less radically than Sartre, Husserl, different from Merleau-Ponty, is quite clear in emphasizing the discontinuity between perception and imagination, that is, between what is real and what is not.

The idea of an imaginative dimension of reality, however, should become more understandable also in this framework if we recapitulate our discussion of the cognitive value of pretense, of the perspectival flexibility that underlies pretense actions, and of the social meaningfulness of such actions. The intersubjective enactment of imagination in accordance with rules, the possibility of constituting imaginative types of objects and actions (or empirical concepts), the fact that imagination is bound to perceptual objects and to socially meaningful, and recognizable, contexts, all this allows us to talk about pretense as having its own 'reality'. Since the meaningfulness of the pretense world is constituted through the cooperation of different subjects, who implicitly recognize the rules of such a context, and since such meaningfulness only exists insofar as the participants recognize it, I believe we can talk about a form of imaginative sharing and of a we-perspective in the formation and the enactment of pretense contexts (Rakoczy 2006). The pretense context is constituted together with others in such a way that none of us alone would be capable of such constitution. This kind of we-perspective based on imagination is not simply reducible to the sum of the singular intentions of the participants; on the contrary, it defines an autonomous field of sense-making, which, without abolishing the difference of each singular perspective, can only emerge on the basis of intersubjective cooperation.

The sharing of imaginative intentions in pretense contexts does certainly not abolish the difference between genuinely perceiving/acting and as-if perceiving/acting. Yet, I believe that social and rule-based recognition of the imaginary in concrete experiential contexts is what grounds the specific reality of the fictional. It is what makes, to rephrase Fink, of an 'appearance' an 'existing appearance' ['*ein "Schein" der ist, ein seiender Schein*'] (Fink 1960, 76).

Notes

1. For example, what is the role of imagination and belief, how shall we understand the emotional reactions to fictional contexts, etc.? See Currie and Ravenscroft (2002), Gendler (2010), Langland-Hassan (2012).
2. See, notably, Goldman (2006).
3. See, notably, Zahavi (2008, 2014), Gallagher (2007, 2012), Gallagher and Zahavi (2008).
4. To be true, this is a controversial point discussed in the debate between defenders of a meta-representationalist theory and defenders of a behaviorist theory, to which I will come back in the following.
5. According to Langland-Hassan (2012), the problems emphasized by Friedman and Leslie in their critique of the behavioral view can be easily bypassed by better specifying the behavioral heuristic of pretense: 'a person can be reliably recognized as pretending that *p* by recognizing that she is acting in some salient ways that would be appropriate if *p*, while offering some of a familiar cluster of manner cues, some of which involve acting as if not-p and draw attention to the subject matter of the pretense" (Langland-Hassan 2012, 175). In the case of pretending that a pencil is a car, one has to recognize the *salient* respect under which making particular noises like 'vroom' and movements fictionally reproduces with a different object some form of appearance that is typical of cars. In this sense, the emphasis recognizing a salient respect implies what I call typological recognition.
6. Somehow, this idea is not far from Perner's understanding of meta-representation, as referring to the contextual shift. However, Husserl's view is not so much concerned with the inner representation we have of singular objects (which Perner tends to conceive as an inner model and which would be problematic, considering Husserl's discussion of the concept of representation in the Fifth Logical Investigation [Husserl 1984, 520 f.] and his critique of the image-theory of perception), but rather with the shift of 'meaning' or type from the usual to the unusual context. <QC: Please check the style for parenthesis – brackets within brackets>

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