

THE VIRTUAL AND THE PHYSICAL: A PHENOMENOLOGICAL APPROACH TO PERFORMANCE RESEARCH

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Artistic research is a convergence of materialities; sometimes a clash, other times a smooth flow, occasionally it is as if different rhythms play in counterpoint pulling the researcher in different directions. Vision is material, as is the tactile engagement with objects; concepts have their own materiality, and movement provokes a dance of materiality and meaning. In contrast to many of the contributions to this book this chapter takes a kinaesthetic rather than a visual approach, addressing the convergence between the virtual and the physical in research in dance and movement improvisation. When working across bodies and digital technologies not only is the concept of knowledge restructured but, of necessity, our modes of perception and notions of materiality also shift. Further, the methodologies used need to be chosen in a way that is faithful to the research, and the voice and output may defy convention. This area of artistic research offers distinct challenges but is increasingly compelling as digital technologies become ever more ubiquitous, from tiny chips inserted in common objects to vast and interconnected networked applications impacting how we communicate, create and socialize. Perhaps the most contentious claim in this chapter is that research is a form of performance, but this is a by-product of the primary focus which is an application of phenomenological method to performance with technologies revealing an alternate construction of knowledge. What emerges is a reciprocity between models of knowledge and research practices: the practices point to different models of knowledge, and the models offer up refinements of the practice.

This chapter begins by revisiting basic tensions between practice and theory, revealing a deep entanglement between the two. Instead of stitching these domains together in a unifying gesture that still preserves a fundamental antinomy, a shift of perspective is enacted: by viewing both theoretical and practical pursuits in terms of

motion and materiality it is possible to avoid reinforcing such an unhelpful distinction. Following this, the argument that research is reversible and performative leads to the heart of this chapter on methodology and constructions of knowledge. The methodology offered is a version of phenomenology drawn from Merleau-Ponty's late writings and refined over years of creating performances and installations with responsive computer systems. Basic instructions for doing a phenomenology will not be provided but a phenomenological description of improvising with a computer-based sensing system is inserted to support the argument for refiguring knowledge into four modes. This may satisfy readers who want to know what a phenomenology might look like and how it can be integrated into an academic discussion.¹ The modes of knowledge to emerge from the phenomenological account of improvising with a computer sensing system are deeply entwined, and together they allow a researcher to appreciate the complexity and richness of performative approaches to digital technologies. They are *concepts*, *affects*, *percepts* and *kinepts*.² As the chapter progresses, the discussion turns to a deeper consideration of Merleau-Ponty to suggest that it is almost impossible to avoid ontological questions, questions of being, when working with bodies and technologies, and that a material ontology is a viable and even pragmatic construction for the researcher.

The constraints and urgencies of practice

A pair of questions lie at the heart of artistic research. What can a studio provide that the simple act of reflection cannot? What does an academic environment provide that the exclusive act of making cannot? I'll let Pierre Bourdieu (1992: 27) answer the first question: 'the constraints and urgencies of practice' are provided by the studio. Many dancers who practise improvisation know that it is very hard to move in a complete void, but given something to work with (an idea, an object, music, a word) the movement gains focus and momentum. I always feel as if I can push against the structure (metaphorical or literal) and this enhances creative expression. This is called structured improvisation and is frequently the movement idiom used by dancers when they work within computer-mediated systems such as camera-based sensing systems or with intelligent devices such as wearable computers. The system provides a structure, or a set of constraints, and once a body improvises within that system a topology of meaning and movement is found that may not have been evident at the start. The second question, what the academy provides for artists, performers and musicians, can be answered in many ways but I prefer a simple response: the academy provides the opportunity to develop methodological rigour, conceptual depth, a refinement of practice, and community. A corpus of knowledge and a corps of colleagues.

Just by posing those questions it will seem as if I have fallen already into a theory-practice divide. I neither want to entrench a tension between concepts and practice, between the verbal and the non-verbal, or between the digital and the organic, nor do I want to imply these dualities simply do not exist, are not relevant, or should be side-stepped. This would be disingenuous. They need instead to be understood differently, with attention to the implications for knowledge, expression, and bias. Choreographers I have worked with expressed frustration with the conventions of academic research for imposing upon them the imperative to justify their work through the words of others

(Kozel 2008). Some philosophers I have known operate from an implicit assumption that the attention to explicit lived experience dilutes the richness of the extended web of ideas and the complexity of abstract thought. A digital artist pursuing her PhD whom I once supervised, exasperated by having to articulate herself in words, dismissed me as 'just a philosopher.' Value judgements abound. Bourdieu writes that our analyses of the 'logic of practice', what can be called the logic of handling, of moving, and of making, would 'no doubt have advanced further if the academic tradition had not always posed the question of the relations between theory and practice in terms of value' (Bourdieu 1992: 27).

I propose to mediate the problems of antagonism between theory and practice and bias based on perceived value by taking a phenomenological turn and focusing on materialities. Instead of digital versus physical, or ideas versus performance, I deal with materialities and motion. At first glance practice seems so heavy, and the theories so ephemeral. Yet in reality, ideas are felt, touched, lived, and breathed; practice is ephemeral, changeable, invisible, and disappearing. Writing and thinking are practices, just as moving and making are highly conceptually driven. By diluting the strong duality, changing the terms of the debate and making them fluid, it is possible to escape old value judgements and to appreciate the new terrain that opens. How do I propose to do this? By turning to Merleau-Ponty and by listening to the body in practice.

Research as reversible and performative

Reversibility is one of the key dynamic concepts of the late writing of Maurice Merleau-Ponty. Initially, it seems to be the same as the 'double articulation' sketched by Barbara Bolt in her consideration of studio practice 'whereby theory emerges from a reflexive practice at the same time that practice is informed by theory' (Bolt 2007: 29). The reversible, or 'chiasmic' (Merleau-Ponty 1968), structure that defines the perceptual structure of our engagement with the world can be seen as two positions reflecting upon one another. Yes, these positions might be 'I make and I write' coinciding with the academic paradigm of artistic practice but, more subtly, they can be 'I see and I am seen', 'I am both object and subject', and 'I observe myself as I create, I even observe myself observing'. A closer examination reveals how a Merleau-Pontian approach requires that we go deeper than simply a double articulation which still implies fundamental differences between the two positions. Practice making theory richer while theory challenges and deepens practice is, of course, the desired outcome but I want to move further than Bolt's well-articulated argument based on handling and material practices. The act of performing with responsive digital media in real time while reflecting on Merleau-Ponty has compelled me toward ontological and ethical dimensions. Subject and object do not just reflect upon each other. They are deeply entwined, as are practice and theory. It is impossible to pull them apart. Merleau-Ponty elaborates reversibility initially with respect to seeing, but immediately introduces the tactile: I touch and the world touches me, I touch my own act of touching and am subject and object both within myself. Things become appropriately sticky: I touch the world, certainly I do when I handle materials in the creative process, and these materials touch me back, challenging my autonomous role as creator of knowledge and bestower of meaning. I am quite literally caught up in the flesh of the world.

A kinetic dimension, too, can be elaborated: 'I dance and the forces I set in motion dance through me'.³ When Merleau-Ponty writes, 'my body moves itself; my movement deploys itself' (Merleau-Ponty 1964: 162) a small hiatus is created between the body and the movement, this is a small lapse of control that is crucial for the reversible relation to work. There is a small interruption, never a collapsing of the elements of a reversible relation onto one another, never a moment when they come to rest. A link can be made with Joan Mullin's chapter on rhetoric included in this volume. She calls into question the commonly held 'story' people know of rhetoric: that it entails a focus on argument, reason and truth primarily in written language. Her repositioning of the practice of rhetoric begins by calling attention to something akin to what I have just called the small hiatus. 'Effective communication included the ability to see that which 'is' before one (what one gazes upon)'; she goes on to say that one forms words or images 'as a result of that activity' (Chapter 9). There is a small moment of reflection upon sensory experience, almost like a breath, prior to articulation in words or images. She calls this an important visual step in rhetoric. Graeme Sullivan also captures a similar moment when he begins his chapter with an effective phenomenological snippet, positing that for him 'to see is to think' (Chapter 6). Mullin is concerned with the application of rhetoric to visual domains and Sullivan argues for a visual turn in cognition, if these are read alongside my account of live performance and embodied methodologies and Frisk's on aural modes of perception (Chapter 16) it is possible to construct a multi-sensory approach to artistic research based on the contributions in this book. Yet it is important to realize that in none of these chapters is there an argument for sensory exclusivity. The senses bleed across one another, in artistic research as in life. For example, near the end of Mullin's text, where her discussion addresses the analogue manipulation of visual elements such as the *Wunderkammer*, she provides an opening for her ideas to be taken into a more corporeal direction: 'Text and visual interact, movement draws the eye away from the words and vice versa, the hand participates in a tactile performance of rhetoric in the making' (Chapter 9). I choose to read in Mullin's instance of tactile rhetoric, and in Sullivan's recognition of the importance of the embodied mind, the existence of a bodily state that exists either as precursor to words or as a disruption in the flow of words with the potential for changing the direction of thought and action. This disruption, according to a Merleau-Pontian approach, exists in the hiatus of reversibility between the seeing and the seen, between the touching and the touched, between moving and being moved.

Reversibility is more about instability than stasis, and never comes to a point of rest or closure. It is an exhausting process. In an earlier, shorter reflection on artistic research I suggested that this small hiatus, between performing a task and attending to this performance, is where research takes root and the rest is an articulation based on this moment of perception. 'The first task of a scientist is to learn to perceive, as it is with a child, or an artist. Once research is located in perception, with the scope for conceptualization and knowledge-building to follow, fears over the compatibility between artistic research and scientific research can be released' (Kozel 2008: 111). Returning to this, I realize that I only grazed the surface. Reversibility is a dynamic ontological state, by which I simply mean that it characterizes our being in the world. If we choose to do a phenomenology inspired by Merleau-Ponty, we choose to notice the constant, minute foldings of one thing onto the other, or of one state onto another

(within oneself, across oneself and another, oneself and the world, immanently between one's vision and movement). There is infinite scope for sliding across the objective and subjective positions, for disrupting oneself in micro-movements of perception. This instability is profoundly creative, but profoundly unsettling. It is for this reason that some regard phenomenology as 'necessarily a transformative practice' (Maitland 1995: 229).

Research is not just reversible; research is a form of performance. This takes the Merleau-Pontian argument concerning reversibility one stage further and provides an additional anchor in performance as an art form, but not to the exclusion of other arts, for research in any domain can be viewed as performative. This is not to say that we are actors as we research, or to make the self-evident statement that all actions are performed, but to make a more subtle point that innate to performance is the ability to reflect on what we are doing while we are doing it. I practise, and I reflect upon practice in infinitesimal loops. This is the nature of my perception and my embeddedness in the world. It is not that the doing is the practice, and the mode of reflection is the theory. Both are reflective practice and, taken together, both make up research.

This means that writing and conceptualizing are also performative. Rosalyn Diprose's clear articulation of the argument that identity is performative can be used to put this into perspective. She writes, 'identity is actualized as it is performed, rather than being caused by an inner essence identity is open to disruption', as such identity becomes 'parody or imitation without an authentic original' (Diprose 2002: 67). When research is truly innovative, when new ground is opened, we are performing without reference to an original. One's actions and thought create the template of the new. This is not to diminish the community of people working on a growing body of knowledge; it is to say that we do so in relation to one another but from our own embodied, embedded contexts: hence the emphasis on original research or emerging knowledge in academia. The world is constructed on a moment-by-moment basis by multiple embodied selves.

Elsewhere I have written at greater length on performance and phenomenology (Kozel 2007a), for now it may be enough to extract from this argument symmetrical lines of thought: performance entails a reflective intentionality on the part of the performer to see/hear/feel herself or others *as* performing. Further, the performative moment is initiated by the intention to enact a reflective chiasmic loop (Kozel 2007a: 69). This is how one can see research *as* performance. The 'as' is important to this formulation. Performance theorist Richard Schechner indicates that from the perspective of performance theory, everything is a performance, but from the perspective of cultural practice some actions are performances and others not. His distinction relies on the pivot between *is* and *as*: there are limits to what is performance but anything can be studied, or framed, as performance (Schechner 2002). This is the same pivot that occurs when any action is taken *as* the basis of research – we decide to reflect upon what we have done as research, we decide to initiate the dynamic of reversibility and in doing so there is a witnessing of ourselves and others performing actions, in the most genuine and authentic way. When we perform, we mediate inner and outer. We translate, we regulate, we discover, we are surprised. Performance is attention, perception, and thought set in motion in such a way as to kindle, or ignite, the space for change (Kozel 2007a: 70–1). So too is research. This argument invites the question whether all performance is research, more explicitly stated, whether there is

a difference between professional practice and research. The same phenomenological logic applies: if we intentionally choose to regard our performance as research then this is the first step toward it being research. The reflexive moment is key. As a dancer I have performed in pieces that have not been the basis of research, not because they were not rich with potential for academic reflection but because I was simply performing them as part of my professional practice. Once the intention and desire are there to frame an element of practice (such as the process, the choreography, or the audience response) as research then a whole new level of engagement is required. The intention to approach practice as research is the initial moment, the reflexive turn; it then needs to be elaborated with sufficient depth, intellectual rigour, appropriate methodologies, an awareness of context and related work.

Articulate listening

Two additional perspectives on the performative can be drawn into this discussion, both from visual artists who are also highly skilled with words: Matt Mullican (2008) and Barbara Bolt (2004). The performative is enactive, which is not to say that it is free from contemplation, in fact drawing is an excellent example of multi-sensory contemplative engagement with the world. Mullican writes, 'you can't answer the question, you can only demonstrate it. You demonstrate that issue through the work itself. I was just trying to figure out what the reality was that I was drawing' (Mullican 2008: 7). The act of demonstrating is like the act of describing, which is the basis of phenomenology: we are embedded in the world and when we encounter the unknown (from the spectacular to the mundane) the first move is to describe it rather than attempt to contain it within an existing conceptual framework. First comes description from subjective, multi-sensory experience, then comes the transformation of this information into shared meaning and knowledge.

Research begins with a question or an ill defined inkling that there is something potentially interesting or troublesome in a certain domain. A motion capture performance I devised with collaborators Inka Juslin and Greg Corness can be used as an example. *Other Stories* (2007) began with the sense that when I improvised with digital data, represented as an array of points captured from my body's movement in real time, I was somehow, bizarrely yet intuitively, dancing with another being: with an 'other.' I received a sort of material information from the points of the animated figure or, to be more explicit, I received a kinaesthetic push, a force almost, from the spaces between the points. How could this be? And could I base a performance on this phenomenological moment? This was my starting point, not the attempt to prove substantially that I was, in fact, improvising with another being or to measure the material force, but an attempt to bring to life the question itself. Performing before an audience was the same as Mullican's act of demonstrating. His words regarding his own practice of drawing bear tremendous resonance for more than one reason: 'I believe,' he writes, 'that drawing is more involved with the 'how' question than the 'what' (Mullican 2008: 6–7). The motivating question for research can sometimes be crystal clear, but in my experience it is an affectively tinged pull or push, only traces of a question, invisible strings that propel me into motion. I refer explicitly to affect here because the refiguring of knowledge I offer in the second half of this chapter has affect

as one of the elements (along with percepts, concepts, and kinepts) but it is important to make clear that affect permeates the research process; it is not just an end result. Research is not affectively neutral. The affective state that drives us to research can be euphoria, desire, repulsion, outrage or a sort of discomfort similar to an itch. It can be akin to the creepy compulsion to turn over a rock, the stubborn drive to ‘misuse’ a piece of software,⁴ or the patient intent to experience kinaesthetically a cloud formation as it dissolves and reforms.

Methodologies are an essential part of research, for these are structures of or orientations towards knowledge indicating a disciplinary preference for the mode of knowledge to ensue. Is what comes out clear and irrefutable? Is it representative of a statistically reliable sector of the population? Is it enigmatic, suggestive and somehow more profound for leaving much unsaid? A different way of regarding the accumulation of knowledge is as an accumulation of questions, or the development of modes of questioning. Appreciating the reversible nature of our embodiment also implies an appreciation of the reversible nature of research, reminding us that modes of *questioning* also involve modes of *listening*. As researchers we need to become articulate listeners.

Implicit in this assertion is an ethical and philosophical world view that comes from the existential phenomenologists. Barbara Bolt (2004) also takes inspiration from this current of continental philosophy when she turns to Martin Heidegger in order to craft a new paradigm in visual aesthetics that challenges the dominance of representation. My Merleau-Pontian take on the performativity of research is consistent with her Heideggerian argument for the performativity of visual art inasmuch as both are grounded in concrete engagement with things and people in the world, escaping the subject-object divide that implies a dominant subject controlling objects. There is an implicit ethical and ontological foundation to both arguments according to which the performative is viewed in terms of artists, materials and processes bringing something into being, imbued with a profound responsibility or even responsivity to the world and all that dwells in it. The primary difference between her argument and the one presented here is that the embodied practice animating hers is the handling or ‘handlability’ associated with visual art while my argument is based on dance improvisation. Further, her goal is to dismantle representationalism in aesthetics, which is ‘a system of thought that fixes the world as an object and resource for human subjects’ (Bolt 2004: 12) while mine is to offer a version of phenomenology based on Merleau-Ponty’s dynamic of reversibility that is meaningful for corporeal exchanges with technologies. Bolt’s embrace of performativity is, in some ways, born from the intensity of her antipathy to the dominant view of art as representational and her desire to introduce an alternate visual aesthetic. ‘Movement,’ she writes, ‘is the key for overcoming the fixity of representationalism’ (Bolt 2004: 14). Both Mullican and Bolt, coming from visual arts, present arguments that resonate strongly with the corporeal arts of dance and theatre improvisation. An obvious point to be noted is that for dance and theatre performance is the product as well as the process. While I acknowledge this, I will not emphasize it unduly for two reasons. First, because as a phenomenologist my construction of research as performative is concerned with the embodied dynamic of reversibility, whether this animates the creative process or the live performance resulting at the end of the research is not significant. Second, because definitions based

simply on categorizing output risk collapsing in the face of increasing hybridity and interdisciplinarity of practice.

Before moving onto a specific consideration of knowledge as emerging from phenomenological reflections on the convergence between the digital and the physical, another seemingly simple but far-reaching observation from Mullican's discussion of drawing needs to be taken into account. In an interview he was asked to comment on the suggestion that it was possible to have 'an empathic response to something that isn't true or isn't real' (Mullican 2008: 7). He responded by describing his manipulation of the states of physicality in his drawings as a way of the metaphorical reference. This is another way of questioning the nature of knowledge which echoes Bolt's objection to representationalism as art reflecting the truth of reality. Artists know that our cultural fabric and the defining characteristics of people can be based on, and revealed by, reactions to the fictional. Artistic research lives across process, product, and reception; the research is received, evaluated or digested by those who encounter it, and responses are real. Once again, there is the necessity for articulate listening. We listen to the work but we also listen to those who listen. There can be a cacophony of reception or it can be quite still. The artists, the collaborators, the audience for the public showing, the PhD viva committee, friends, colleagues, family, those who access it in its documented and archived state, all will respond to the research either as real or as fiction. But how can we argue, in an academic context, that knowledge can be based on fiction?

Concepts, affects, percepts, kinepts

The phenomenological perspective on the convergence between the corporeal and the digital offered in this chapter provides a way to address the question of the fictional or real basis of knowledge. Becoming acquainted with a responsive computer system requires inserting oneself bodily into the environment; by spending time moving, breathing, and, indeed, listening to a system it is possible to create a relationship with both its interface and its outputs. This relationship is based on lived experience – it does not matter whether the digital data is real or false. The experience is material and the knowledge, instead of being deemed false or true, can be construed in terms faithful to experience. The expression 'material witness' is not entirely inappropriate, as it evokes a capacity for observing and being surprised by the process of creating an artwork. In some respects I witness the work as it emerges, responsive and receptive to it. Malcolm Quinn approaches the valuable notion of an altered position of the subject in his contribution to this book by proposing a psychoanalytic orientation to research that permits the emergence of unconscious knowledge. He objects to most applied psychoanalysis in art and design because 'it leaves the existing relations of subject, object and practice intact' (Chapter 14). Despite the tensions, and some might say incompatibilities between phenomenology and psychoanalysis, Quinn and I share the belief that disrupting subjectivity opens a space for creativity important to artistic research. He achieves this by exploiting the tension between identity and utterance and, to use his words, by 'putting the subject beyond his comfort zone' to clear some psychic space for artistic research. Quinn's psychoanalytic orientation seeks to achieve this by encouraging the eruption of the unconscious as a mechanism for interrupting the flow of self narrative. My own Merleau-Pontian approach plays at the edge of

subjectivity by working the relation of reversibility according to which I am both subject and object, and am able to be disrupted by attending closely to my embodied experience and impact that others (including digital others) have on me.⁵

Some approaches to phenomenology strengthen and reinforce a transcendental subjective position (Edmund Husserl) but other renditions of phenomenology (Merleau-Ponty's late writings, Francisco Varela *et al.*, Natalie Depraz) lead to a decentralized or fluid subject constantly disintegrating and being reformed by virtue of a reciprocal relation to the world and other beings in it. A specific example will be elaborated below, both to demonstrate a version of phenomenological method in action and to reveal how what emerged from this particular application of the method was an understanding of the knowledge produced by artistic research. A deep entwinement between methodology and knowledge is made clear. Instead of the pernicious divide between verbal and non-verbal knowledge forms, this performance experiment produced knowledge that could be expressed best as a combination of concepts, percepts, affects and kinepts. Functional definitions are provided in Table 12.1 below. They will be elaborated and made more complex as the discussion progresses.

The philosopher Gilles Deleuze spoke of three kinds of knowledge. Affects are the first kind of knowledge, concepts the second, and percepts are the third (Deleuze 1995: 165). He does not elaborate the reason for this ordering, but the motivation could be to prevent the prioritizing of concepts as some sort of primary and ideal form of knowledge. Concepts, he writes, do not just engage with other concepts, they 'move among things and within us: they bring us new percepts and affects that amount to philosophy's own non-philosophical understanding' (Deleuze 1995: 164). That concepts move within us is enormously significant. They become visceral. Further, the reference to the non-philosophical can also be seen as an implicit reference to practice. Philosophy, he says, requires the non-philosophical. And practice, in my experience, flourishes with the depth and exhilaration provided by philosophy.

In almost all collaborative research for performances and installations that draw together bodies and computers there is a stage of software development where the dancers and software engineers (both groups legitimately can be called artists) work together to create the responsive system. Deleuze indicates that affects, percepts, and concepts 'strain' against one another in a way that I find akin to the relational straining of different skills, languages, and value systems that occurs in interdisciplinary collaborations. An example of software development for 'Contours' (1999), quite an old performance by now, provides an enduring illustration of the relevance of Deleuze's concepts, percepts, affects pattern, and for the addition of kinepts. Here is some contextual information: I was an invited guest in artist Jeanne van Heeswijk's

Table 12.1 Functional definitions

Concept	pertaining to a philosophical or poetic construction that can exist across degrees of abstraction (matter, language, symbols, etc)
Affect	pertaining to bodily state encompassing emotion, spirit, vitality, imagination, and memory
Percept	pertaining to multi-sensory perception with an emphasis on the five senses (vision, touch, smell, hearing and taste) but the scope for embracing more than five. 6
Kinept	pertaining to corporeal movement, kinaesthesia, and proprioception

installation 'Hotel New York' at P.S.1. in New York in 1999 where I laid the groundwork for *Contours* (van Heeswijk 2000). Collaborating with digital artist Kirk Woolford, the devising process began with the creation of a piece of software. Woolford speaks with both precision and poetry about the computer code he writes:

The software breaks the incoming image into X and Y lines and looks for changes in the image across these lines. It calculates compound change, or movement, for each line, determines the 5 greatest regions of change on X and Y lines. If the changes are greater than the threshold set by the performer at the computer, the computer calculates a direction vector based on previous and current movement region, and projects a line between past and current movements. This allows a more fluid tracking, opening, closing, and drifting. The threshold sensitivity is continually changed to allow movements to be caught, followed, and released.

(van Heeswijk 2000: 26, footnote 2)

As I worked through a series of curls, extensions and inversions suspended in a harness, cameras observed my motion and conveyed this information to the computer; the computer then analysed the rates of change in bodily position and velocity and generated a visual response in real time. In this case, the imagery projected onto my body was a series of rapidly drawn lines that made a grid and tried to lock onto the part of my body that moved most quickly through space. The software tried to anticipate the movement by directing itself with the dominant flow (so if my arm rapidly travelled from left to right, the software would assume that the motion would continue along this linear path). This camera-based sensing system was not 'intelligent,' in that it neither made decisions nor adapted itself as would agents or bots in artificial intelligence, but it was sufficiently responsive and had enough 'fuzziness' in its system for me to feel as if I were engaging with a quasi-autonomous, and at times aggressive, being.

Despite not working with full or literal insertion into virtual space, the experience of entering into a responsive system of cameras, computers, and projected imagery was no less immersive, and was played out across physical, cognitive and perceptual dimensions. Bourdieu, in his defence of practice, laments that Plato associated practice or action with an inability to contemplate and that this attitude has persisted (Bourdieu 1992: 28); yet in stark contrast to Plato, and possibly of comfort to Bourdieu, the focused mode of sensing and, above all, listening that comes from being inserted corporeally in a computer-mediated system is a powerful and creative form of contemplation. Phenomenological reflection is a form of contemplation; like a moving meditation it requires deep levels of focus and the ability to pursue a train of thought or physical impulse as it unfolds and transforms. Contemplation is a form of immersion, of dwelling in a system. Several stages of this immersive process are sketched below. It is also clear that there is a sort of learning curve⁷ at play in obtaining a level of ease and pre-reflective exchange with the software.

The first stage of exploration within ~~this~~ ^{a system like this} system is very visually dependent and involves standing in front of the camera with a clear sightline to the computer monitor or projection to determine how the basics of movement are translated. It becomes a return to the building blocks of most dance techniques: orientation in space, speed,

rhythm, weight and absolute stillness are offered for the computer to respond. This stage of movement is physically limited but it is by no-means purely visual. Instead of the dancer needing to do great leaps, the movement is more effective when it is subtle: a qualitative 'touching' of the space and a witnessing of degrees of response works better than quantitative or formal explorations. The eyes act as a gateway for the knowledge to be embodied, and an understanding of the responsivity of the system filters through. Without visual reference at this stage the dance risks being an improvisation disconnected from the system. (Of course if the system was only producing haptic or audio outputs the sensory pattern would shift.) Once a basic visual patterning is established the sightlines can be relinquished in short bursts. The effect is one of severing a metaphorical umbilical cord to the computer; the effect is also to open the performance perimeter outward into the round; if the dancer's gaze is directed throughout the space the computer is no longer seen to be the 'front,' the ultimate audience or viewing subject. The perceptual relationship with the space is never narrowly visual, for the procedure is not simply one of information travelling in the eyes, followed by a decision to move, followed by a movement. Although vision is undeniably crucial, perception is mediated across all the senses and as such it happens simultaneously with physical response so that the receipt of information and the acting upon it converge.⁸

The process of learning by using visual perception and bodily motion just described supports the assertion that human cognition arises through embodied action. Varela *et al* (1999) draw upon experiments in cognitive sciences and the philosophy of Merleau-Ponty to present a compelling argument that perception and action are inseparably linked in lived cognition. They explain how there is no world outside to be recovered by the senses for cognition, nor is the world outside a projection of our internal cognitive processes; fundamental to their work is the refutation of both the realist and idealist philosophical stances. What they refer to as 'the enactive approach' has two tenets: '1. perception consists in perceptually guided action and 2. cognitive structures emerge from the recurrent sensorimotor patterns that enable action to be perceptually guided' (Varela *et al.* 1999: 173). The scientific experiments undertaken to explore these hypotheses often include animals (e.g. Held and Hein) or children (e.g. Piaget).⁹ Since most of us do not engage in controlled laboratory experiments on a regular basis, it is difficult to find an occasion to witness the link between perception, activity, and cognition once we are adults and our patterns of knowledge are well entrenched. The experience of navigating my body through space facilitated by computer systems generates a relatively fresh or 'naïve' context, affording me new insight into my perceptual and cognitive functions. Despite the validity of the argument that our use of mobile phones is an example of our navigating constantly through digital media, the ubiquity and embeddedness of the systems used in the collaborative performances I have worked on are of a different order, and the insight into perception and knowledge was at once more intense and less encumbered. The passage above describing the first stage, revealed the operation of percepts and, because the variation of perception was mediated by motion, kinepts. The second stage of the learning curve exemplified by the research process with the Contours software revealed the presence of affects by means of an inter-corporeal or social dynamic which is manifest through power relations of control, but also through intimacy and receptivity. Varela's notion of embodiment is

based on the lived experience of ‘a body with various sensorimotor capacities,’ but they also stress that ‘these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, and cultural context’ (Varela *et al.* 1999: 173). In other words, I am who I am because you exist. This is the implication of Merleau-Ponty’s notion of reversibility at its most basic but most profound level. When working in responsive systems, the I and the you can be digital as well as corporeal.¹⁰

The intercorporeal dimension of performing with a responsive piece of software emerges with deeper levels of habituation within the system. This can be called the second stage of the learning curve and it is distinguished from the first by being more affective. Once I understood the basic responsivity of the grid produced by the software, the dynamic became one of control. The imagery, when projected onto my body, seemed so aggressive at first that I immediately felt as if the software was controlling me: it was active and I was forced into a position of reacting. In Merleau-Pontian terms, it was the subject and I was the object and the relation was not one of reversibility. Once I was suspended in the harness, a device integral to the choreography and dramaturgy of the performance, my sensorimotor patterns were altered. Some movement was facilitated such as weightlessness, rapid dives, sustained inversions; but other movement was thwarted, such as prolonged immobility – there was always a slight sway to the rope – and travelling through space. The harness added the factor of effort: much harness work looks effortless but is physically very strenuous and the quality of weightlessness it can produce requires considerable exertion. The grid seemed to control my movement by carving me up; it responded so well to my slightest movement that I could not escape it. In an extreme sense, it was the aggressor and I was the victim, with my agency curtailed by being ‘trapped’ in the harness. This imbalanced dynamic, with its associated sense of vulnerability, was a by-product of an early stage of software/movement development. As Woolford adjusted the sensitivity of the system and I grew more accustomed to the behaviour of the imagery, the movement dialogue became more of an exchange, interspersed with moments where I felt as if I could control or outwit the computer. As rehearsals progressed I could play with the software, it felt much more like a duet where occasionally it would lead and occasionally I would make it run to catch up with me. The affective texture of my relationship with the software changed as we refined the system. Like any intimate relationship, this took time.

A spill across concepts, percepts and affects, mutually tinged, became clear across the stages of the phenomenological research process. The necessity for recognizing that each domain is influenced by the others has been stressed by many (Merleau-Ponty 1968; Deleuze 1995; Varela *et al.* 1999; Diprose 2002; Palasmaa 2005). Deleuze is concise on the topic:

Percepts aren’t perceptions, they’re packets of sensations and relations that live on independently of whoever experiences them. Affects aren’t feelings, they are becomings that spill over beyond whoever lives through them (thereby becoming someone else) ... Affects, percepts, and concepts are three inseparable forces, running from art into philosophy and from philosophy into art.

(Deleuze 1995: 137)

To this trio I would like to add *kinepts*, which allow for a physical and dynamic dimension to conceptual thought that maintains a resonance across individuals based on the fact that we negotiate our lives bodily through space.

A sense of play ensued. This is the third stage of the learning process, and this is where the dance really comes into being. It also coincides with a greater degree of balance across concepts, percepts, affects and kinepts. I could attain a degree of immobility sufficient to make the grid disappear, then tease it into response with my fingers or toes; I could draw it down my arm and shake it off, only for it to return somewhere else. I tried to throw it from a hand to a foot. Yet these moments of feeling like I was an orchestra conductor were always pierced by the grid evading my control and playing me: projecting on me, carving me, and flattening me from 3D into something slightly more than 2D. Yet for all its flattening, I was able to bend the projected grid around my body and sometimes cause it to pool in unexpected circles at my joints, this way I made it something more than 2D. Like any game, the exchange was rife with unanticipated frustrations and satisfactions. These affective qualities from the early stages of research, mediated by percepts and expanded conceptually, were integrated into the improvised choreography of the final piece.

It is clear that despite having distinct qualitative domains (emotion, perception, thought and motion) no clear boundaries exist between affect, percept, concept and kinept – they overflow into each other in a pattern of merging and disengaging that, in itself, is a sort of choreography. We speak of ubiquity and embeddedness when we describe computer systems but, corporeally, the real ubiquity is human motion. It underpins perception, action, and knowledge; it lends quality to human intimacy and play; it distinguishes the quick from the dead.

Expanding the kinept

An illustration of kinepts at work with concepts, percepts and affects can be drawn from my time in van Heeswijk's Hotel New York installation at PS1, the place where the Contours residency occurred. A group of students from France visited the room which we used as a studio. My attempts to explain what was happening between the physical space and the computers were failing due to inadequate shared vocabulary and the shuffling inattention which characterizes bored teenagers the world over. Noticing that they were standing within camera range, I instructed them all to stop. Then all to move. The computer screen went completely black, then with their synchronized movement the outlines of a crowd – themselves – became evident. The software running at the time was not the grid, but a different piece which registered the outlines of moving body parts. After a beat or two of silent comprehension, a murmur of delight was released from the crowd followed by sprays of random movement. A crossing was enacted: from a state of incomprehension, passively waiting to receive information aurally or visually, to the full impact of understanding based on embodied experience.

'Perception, when it's working, is an action'. Bonnie Bainbridge Cohen is eloquent on the topic of human motion and perception (Bainbridge Cohen 1993: 65). Her discussion of the various systems of the body (skeleton, eye, muscles, organs, glands, brain, blood, cerebrospinal fluid, etc.) through which information is always flowing can be used to refine further the understanding of kinepts in the research process just

described. The insights and techniques of Bainbridge Cohen's experiential anatomy of Body-Mind Centring are extensive, but my goal here is simply to introduce her distinction between sensing and feeling. There is a corporeal specificity behind her use of the two terms, as well as particular definitions of the terms. Sensing and feeling mean something quite different in philosophical terms, or in other schools of physical practice. I tend to avoid the word 'feeling' entirely because it skews reflections upon affect, but Bainbridge Cohen associates feeling quite precisely with fluid bodily systems and particular movement qualities. 'Sensing is related to the nervous system through the perceptions. Feeling and flow are related to the fluid system including the circulatory, lymphatic and cerebral-spinal fluids' (Bainbridge Cohen 1993: 64). She describes how a lot of dancers doing contact improvisation rely on sensing, rather than feeling/flow: this means that they initiate activity by shifting their location in space, by transferring weight both within and across bodies, and by moving limbs. An approach to bodily fluids, feeling rather than sensing, is different, 'The fluids,' she explains, 'are a counterbalance to the perceptions or the nervous system'. If the movement is initiated by the perceptual system, the fluids will act in the role of support. But there may come a time when you want to 'reverse that balance' when you want the perceptions 'to go quiet,' to become the support, so that the fluids become the mover. The fluids have a different movement quality and temporality, they are more subtle, less dramatic; because these anatomical systems are more deeply internal, or parasympathetic, they manifest a different rhythm and can be accessed by pausing, meditating and moving slowly. The more overt senses of the nervous system go quiet when the fluids take over. 'When I say forgetting them [the senses], I mean letting them go unconscious and letting the fluids become the control' (Bainbridge Cohen 1993: 64). Once again, the use of the word 'unconscious' can bring up a cluster of philosophical and psychological connotations that we may not want to visit just now, but listening to her point and accepting her terms I found myself better understanding my own phenomenology of the learning curve within a new responsive computer system. At first I worked across sensing (weight shifts, limb movement, travelling in space) but once I became more at ease in the system, once I understood on a tacit and corporeal level the way it behaved, I let the fluids take the initiative. Bainbridge Cohen makes it quite clear that moving from the fluids does not imply only moving slowly; when we move quickly with fluidity we move more efficiently and sense our surroundings more effectively. Her example is of moving quickly and fluidly in a crowd of people: if we let the fluid systems of the body lead we are less likely to bump into people. Sensitivity to the ebbs and flows of our environment is greater. Translated directly into a computer-sensing environment, activating fluid anatomical systems enhances my sensitivity to an environment that is designed to be sensitive to me. Kinepts contain both the overt sensing of the nervous system and the tacit sensing of the fluid systems.

Material ontology

It is almost impossible to avoid ontological questions when working with bodies and technologies. This has something to do with the material tension fundamental to the research experimentation: bodies can feel very organic when juxtaposed with ephemeral software and inorganic machinery. Ontological questions are questions into

the being of something: a person or a digital creature. What is it? How does it exist? The initial confrontation between the digital and the corporeal subsides quickly; with time, breath and motion in the responsive system the confrontation dissolves into a form of convergence between the two. Once again, a reversible relationship between digital and physical becomes clear: the dynamics of initiating and responding, folding and permeating, and a relinquishing of choreographic control shape the improvisation. Merleau-Ponty's words can be used to provide a perspective on this convergence, 'My body as a visible thing is contained within the full spectacle. But my seeing body subtends this visible body, and all the visibles with it. There is reciprocal insertion and intertwining of one in the other' (Merleau-Ponty 1968: 138). Following Merleau-Ponty's logic of the reversible, if the digital body is a visible thing then my body exists as visible along with it, but my act of seeing also shapes what is seen, both the digital body and my own. The result is a reciprocal intertwining; a motion that never ends. This is the ontology of the visible that takes shape in Merleau-Ponty's notion of flesh, this 'ultimate notion, that is not the union or compound of two substances,' it is a 'coiling over of the visible upon the visible' which can 'traverse and animate other bodies as well as my own' (Merleau-Ponty 1968: 140). 'Visible' in this context could be replaced with 'sonic' or 'tactile', also prevalent responsive modes in sensing systems.¹¹ This seemingly dense presentation of ideas is not intended to be anything but a pragmatic demonstration of two points pertaining to arts-based research:

- ontology is something we experience on a practical level in performance experimentation, meaning that questions of being are not the exclusive domain of abstract philosophy;
- ontology is contingent upon movement in the world made up of a plurality of beings, and these others can exist across a range of materialities along a continuum from corporeal to digital.

So where do we go from here, at the threshold of a discussion that could expand to fill the skies? Reflections upon materiality can take as many directions as art-based research chooses to offer, for artists are no strangers to materials. Materiality as I encounter it, is shaped by an embodied ontology appropriate to my fields of research, which are performance and philosophy. It is worth turning to two other contributions to the debate around practice-based research to see how materiality figures for them: Paul Carter (2004) reflects on material thinking, and Barbara Bolt (2007) upon material productivity. For Carter, material thinking occurs in the making, in a zone of plasticity and transformation imbued with affect but uneasy with accepted academic conventions of language. The materials selected for research display 'gifts of amalgamation and self-transformation analogous to the emotional environment characteristic of the human exchange,' while the act of theorizing in the present educational context is a 'vain, and often humiliating exercise'. He asserts that artists 'have little alternative but to master the rhetorical game of theorizing what they do,' while critics and theorists who are not directly involved in producing the art are 'outsiders, interpreters on the sidelines' incapable of making sense of a creative process. It is the artist who can address the material of thought, because material thinking occurs 'in the making of the work of art' (Carter 2004: xi–xiii), but the scope for this actually happening seems fraught with

failure because of the apparent gulf between thought and practice, which is belied by his own nuanced yet philosophically rigorous written text.

Bolt takes a more corporeal approach than Carter, distinguishing herself from him by asserting, with a satisfying corporeal metaphor suggestive of painting, sculpting or even knitting, that research in art occurs through ‘handling’ materials and ideas and not by theorizing what we do. ‘It is art as a mode of revealing and as a material productivity, not just the artwork that constitutes creative arts research’ (Bolt 2007: 34). She calls this ‘praxical knowledge’, and sees it as coming directly from the ideas tools and materials of practice. It is a fine distinction, the one she makes between practice and praxical knowledge, but it is a more generous assessment of the position of the artist in the academy than the one offered by Carter. Materials and processes are not to be used instrumentally in the service of an idea, but are to be respected as an emergent form of knowledge in their own right (Bolt 2007: 33).

Both Bolt’s defence of material productivity and Carter’s rigorous defence of material thinking, inspiring in its provocative way, fall short of the understanding of materiality necessitated by performative explorations across bodies and digital technologies. Bolt objects to a ‘Cultural Studies agenda’ that emphasizes social production and reception over material production (Bolt 2007: 34). I would say, from a phenomenological perspective, that social production and reception are materially grounded in the embodied experience of the bodies who make and those who encounter; I would not elevate the handling of artistic materials over corporeal engagement at all stages from creation to dissemination. Carter, however, operates with a different set of boundaries and distinctions. He describes collaboration as desire to ‘integrate text-based knowledge with the plastic wisdom of the craftsperson’ and while this may be an accurate description of some interdisciplinary artistic collaborations, the ones I have participated in cannot be described with such a rigid distinction between forms of knowledge. Text-based simply means ideas – but ideas are corporeal, they resonate and reverberate through our embodied existence. Plastic wisdom simply means intuitive corporeal handling, but such manipulation is conceptual as well as tactile and affective. In collaborations involving computer programming there is also the question of where to locate the computer code: according to Carter’s dichotomy, would creative software production be text-based, or plastic and material? Felix Guattari writes that, ‘with art, the finitude of the sensible material becomes a support for the production of affects and percepts’ (Guattari 1995: 100–1). And this explicit reference to materiality in conjunction with percepts and affects returns us to the focus of this chapter: a description of phenomenological method applied to performance with technologies that reveals knowledge structured as affects, percepts, kinepts and concepts. What this embodied knowledge then points to is a matter for the specific research project. If we are going to ask ‘What matters?’ it is best to do so without preconceptions about the incompatibility of sorts of knowledge, as Carter does when he distinguishes text-based from plastic knowledge, and implies that an outside critic cannot make sense of an artwork. Once the Merleau-Pontian turn is introduced it is impossible to separate corporeality from knowledge, and we might see that the critic also reads a material experience through her reversible corporeal exchange with it.

And with this, we come to the question that has been skirted throughout this chapter thus far: what is the virtual? In every creative project there is an invisible,

and the writing of this chapter is no exception. The virtual is the invisible of this writing, despite being the first word of the title. The virtual, when it is freed from an overly reductive association with immersive digital technologies, and that now anachronistic term ‘cyberspace’, refers to something that has not yet happened but exists as a raw potentiality (Kozel 2007b). This formulation is in contrast with the one provided by Frisk, ^{and Karlsson} because he associates the virtual and the aural with ‘non-space’ (Chapter 16). My phenomenological approach to virtuality will never coincide with a construction of it as a non-space: the corporeal experience of spatiality is multiple and subtle, but it is experientially valid and spatially exists. It invites re-figuration but not negation. The spaces of memory, imagination and, with a nod to Malcolm Quinn’s chapter, the unconscious are dimensionally and durationally different from standard constructions of spatial existence but they are not free from spatiality. The same is true of aurality – indicating that music occurs in non-space runs the risk of suggesting that it is disembodied. I have always sensed that the invisible in Merleau-Ponty has its own spatiality as well as materiality. It operates in Merleau-Ponty as the glue, or underpinning to the visible, and functions in the material ontology I offer here as a something perpetually unknown but excruciatingly intimate; it is that which spurs us onward, that which exists in the hiatus between breaths that meditation techniques seek to call to our attention. It is, in some ways, dark to us but is what motivates us as beings who crave to create, both something anew and ourselves once again. The invisible of this world ‘sustains it and renders it visible,’ it is ‘a certain hollow, a certain interior, a certain absence, a negativity that is not nothing’ (Merleau-Ponty 1968: 151). The invisible is an absence with materiality. It is dynamic; it is palpable but cannot be held. The virtual inhabits the invisible. It is not technological as such, but its intensity is felt particularly strongly when bodies converge with technologies.

Jean Luc Nancy writes: ‘a body’s material. It’s dense,’ ‘a body’s immaterial. It’s a drawing, a contour, an idea,’ and ‘the void itself is a subtle kind of body’ (2008: 150). I suggest that the virtual permeates this void, and that it is not a void in the standard conception of nothingness or emptiness. We have an uncanny ability to relate, physically, emotionally, and conceptually, to something that is not there, to something that is situated just beyond our present abilities to know or touch. From visual artists sketching the space between objects or between the limbs of a model’s body, to a dancer’s ability to improvise around notions of negative space or dark matter (Kozel 2008: 108–9), we are creatively disposed to respond to a void without necessarily filling it. This is why the virtual is so seductive, not because we can download a virtual body to our mobile device and carry it around with us as portable media, but because it contains within it the immense power of not-yet-materialized-materiality, and because this not-yet-materialized-materiality, this underdetermined materiality that is also invisibility, is with us at all times. It is incredibly intimate, because we pour into its spaces our hopes, fears and desires. And it is incredibly familiar, because our own bodies are not fully known to us either. We are made up of shadows and blind spots, the invisible is in our very fabric, ‘since evidently there is in the body only “shadows stuffed with organs”’ (Merleau-Ponty 1968: 138).

Returning this discussion of ontology to the matter at hand, reflections on artistic research; it is helpful to step back a little to consider one more manifestation of the presence of the invisible: uncertainty or liminality. It is helpful to recall that perception

‘includes our doubts, our confusions, our illusions, and our hallucinations. Perception is not a sheer normative positionality of the object but covers quite different experiences, from very common ones to more liminal ones’ (Varela and Depraz 2003: 209–10). All research begins in multi-sensory perception, of being in the world and wondering about it. Methods, knowledge, output, and innovation follow from this corporeal encounter: I touch the world with doubt, hope and desire and it touches me.

Notes

- 1 Two frequently asked questions regarding phenomenology are how it is actually done and what a phenomenology looks like. Both can be found in Kozel (2007a: 48–55), and a glimpse of what phenomenological writing can look like is provided in this chapter.
- 2 I have coined the term ‘kinepts’ but in no way say it is mine for I am certain others have come to see its relevance too. Many dancers working in interdisciplinary ways have had to extrapolate terms explicitly from human movement. In a similar vein my colleague Gretchen Schiller has written extensively about the kinesfield (Schiller 2003).
- 3 The dancing-danced was the basis of my PhD (Kozel 1994) whereas the recognition of forces operating through the dancer featured quite differently by Maxine Sheets-Johnstone in *Phenomenology of Dance* (Sheets-Johnstone 1966).
- 4 *Other Stories* was a research project in motion capture and ethics performed in the Interactivity Laboratory at Simon Fraser University (Canada) in 2007. We used a Vicon motion capture system in real time and wanted to drive an animation other than the preset wireframe humanoid. Both of these were deemed inappropriate use of the system by its designers and we had to struggle to get access to the source code that let us bypass the wireframe so we could generate more abstract imagery. This was our ‘misuse’ of the system.
- 5 Contrary to assumptions regarding their incompatibility, Merleau-Ponty sketched a mutual encounter for phenomenology and psychoanalysis. Together, phenomenology and psychoanalysis can acknowledge the lived reality of psychic activity in an intersubjective world shaped by history and culture. Phenomenology assists psychoanalysis by recognizing the embodied reality of psychic activity and fantasies. Psychoanalysis assists phenomenology by confirming that the psychic representations that make up consciousness are not merely a play of images or concepts, but are investments of desires and actions (Merleau-Ponty 1993).
- 6 Rudolf Steiner’s system proposes 12 senses: touch; life sense; self-movement sense; balance; smell; taste; vision; temperature sense; hearing; language sense; conceptual sense; and ego sense (Palasmaa 2005: 77).
- 7 This reference to learning curve brings to mind Hubert Dreyfus’s description of the stages of learning relevant both to distance learning and to driving a car. These are: novice, advanced beginner, competence, proficiency, expertise. His analysis is quite different but there is some resonance when he suggests that action becomes less stressful once we no longer use a calculative procedure to select alternatives (Dreyfus 2001: 40).
- 8 I italicize three passages and distinguish these words from the flow of the text because they are phenomenological passages taken from the moment of the performance experiment.
- 9 Varela and Depraz (1999) describe Held and Hein’s 1958 experiment. ‘In a classic study, Held and Hein raised kittens in the dark and exposed them to light only under controlled conditions. A first group of animals was allowed to move around normally, but each of them was harnessed to a simple carriage and basket that contained a member of the second group of animals. The two groups therefore shared the same visual experience, but the second group was entirely passive. When the animals were released after a few weeks of this treatment, the first group of kittens behaved normally, but those who had been carried around behaved as if they were blind: they bumped into objects and fell over edges’ (1999: 175). They describe Piaget’s discoveries: ‘Within Piaget’s system, the newborn infant is neither an objectivist nor an idealist; she has only her own activity, and even the simplest act of recognition of an object can be understood only in terms of her own activity. Out of this, she must construct the entire edifice of the phenomenal world with its laws and logic’ (1999: 176). Held and Hein’s experiment seems

particularly relevant to immersion in computer-mediated spaces, situating the crucial question concerning whether the 'audience' can benefit from watching an interactive performance or whether they need to individually, or as a group, experience the interactivity themselves in the same manner as the performers. Is it true that experience is shared and translatable, or do we ultimately need to get into the system and 'enact' to establish our own sensorimotor patterns for personal cognitive impact? This is a crucial factor motivating the shift on the part of dance and performance practitioners from performance in conventional theatres to installation. The connection between perception, enaction and cognitive structures is, I suggest, also at play in the state of dwelling.

- 10 The discussion of the digital other, or digital alterity, is made at greater length in Chapter 4 of (Kozel 2007a).
- 11 Merleau-Ponty's ideas are conveyed mainly through the visible, possibly because his artistic references were paintings by Cézanne and Klee and he was able to extrapolate their painterly visions into his own viewing of landscape, but touch is prominent in his thought and music makes a limited appearance.