Earth(l)y pleasures and air-borne bodies: Elemental haptics in women’s cross-country running

Jacquelyn Allen-Collinson
University of Lincoln, UK

Patricia C Jackman
University of Lincoln, UK

Abstract
A rich and multi-stranded sociology of sporting embodiment has begun to emerge in recent years. Calls have been made to analyze more deeply not only the sensory dimensions of lived sporting bodies but also the values prevailing within particular physical-cultural worlds. This article contributes to a small, developing research corpus by employing theoretical perspectives drawn from phenomenological sociology to explore cross-country runners’ sensory encounters with the elemental, contoured by the values of the running lifeworlds they inhabit. Autoethnographic and autophenomenographic data were collected via three research projects. Senses of touch still remain under-researched within the sporting sensorium, and here we focus on the “elemental haptics” of earth and air on our cross-country training runs. We also explore the rich, complex somatic experiences afforded by various of these elemental combinations. For runners, as for many sports participants, the haptic emerges as a key aspect of our sensuous running lifeworld.

Keywords
phenomenology, sporting embodiment, cross-country running, the senses, touch, the elements

Introduction
With growing academic interest in the senses and sensory embodiment within the social sciences over the past 15–20 years, a rich and multi-stranded sociology of sensory...
sporting embodiment has begun to emerge in more recent years. Calls have been made to analyze more fully and deeply the sensory dimensions of lived sporting bodies and experiences (Hockey and Allen-Collinson, 2007; Pink, 2012; Sparkes, 2009, 2017). This article contributes to this developing research corpus by employing theoretical perspectives drawn from phenomenological sociology (Schütz, 1967) to explore distance runners’ sensory encounters with the elemental. With its search for the core structures of bodily grounded experience and “the here and now of bodily existence and presence” (Münch, 1994: 151), a “sociologized” form of phenomenology (portrayed below) provides a powerful theoretical combination. This theoretical nexus is particularly well suited to analyzing such bodily presence in sporting experience, while also acknowledging the social–structural and socio-cultural influences on bodily existence. Responding also to Shilling’s (2021) recent call for sociologists to investigate the incarnation of cultural values as an important (but currently missing) element of sociological analyses, we examine how, as distance runners, who undertake cross-country training (see below), our sensory experiences are strongly shaped by and lived through the values of that particular physical–cultural framework.

In response to other calls to move beyond the ocular-centrism so prevalent within much “Western” social–scientific writing on the senses (Ingold, 2011), here we consider the salience of the haptic (relating to the sense/s of touch) in the running body–mind–environment nexus. As senses of touch similarly remain under-researched within the sporting and physical–cultural sensorium (Allen-Collinson and Hockey, 2011; Brown, 2017; Sparkes, 2017), here we focus upon the “elemental haptics” (Allen-Collinson and Owton, 2015) of earth and air encounters when out on cross-country training runs, and the rich and complex somatic experiences afforded by these elemental combinations.

In pursuing our purpose, the article is structured as follows: first, a brief introduction to the theoretical framework of phenomenological sociology is provided, followed by a selective consideration of some of the extant socio-cultural research on the senses in sporting and physical–cultural contexts. We subsequently portray the three research projects from which our sensuous data are drawn, before presenting the findings under two elemental haptic domains relating to earth and air. Following Paterson (2007), we employ the term “haptic” in an inclusive manner, to encompass internal bodily sensations, rather than considering only those felt at the external surface of the skin. In concluding our discussion, we consider the particular insights and opportunities our form of phenomenological sociology can offer to sociologists of sport and physical culture more generally.

Turning our analytic eye to the sociological domain, we highlight how the values of our cross-country running lifeworld fundamentally shape our elemental encounters. As Shipway et al. (2013) portray, the notion of “social worlds” draws attention to the role of shared values in culturally distinct worlds, such as that of cross-country running. Here, we employ the UK term “cross-country” (often abbreviated to XC) to signify multi-terrain running in the countryside, the vast majority of which is off-road, and not necessarily on pathways or established trails, as would more usually be the case in “trail-running.” Cross-country traversal can involve “crossing” (via clambering, scrambling, sliding, stumbling, as well as running) a wide range of countryside landscapes, from hill- and mountainscapes (for example, in fell running: Atkinson, 2010;
Nettleton, 2015) with precipitous scree and slopes, to muddy plowed fields, and over almost any form of terrain, including river- and stream crossings. Inevitably, there is considerable overlap and boundary blurring in the worlds of cross-country, trail, and fell running, but they all share a valorization of being off-road, and subject to the vagaries of terrain and weather.

For many cross-country runners, as for other sportspeople, “enduring” (see Allen-Collinson et al., 2018a; Hockey and Allen-Collinson, 2016), and even embracing, the unpredictability of the elements, including earth (as terrain), is an integral component of being a member of this physical–cultural group. Stoicism and resilience are values deemed requisite for engagement in the activity of cross-country running and for being acknowledged and accepted as a “real” cross-country runner. As with many social groups, these runners often distinguish themselves by contrasting the specificity of their sporting forms and culture with that of others, for example road runners. As an example of such physical–cultural contrasting, a colleague, returning red-faced and mud-splattered from a lunch-hour run in the sodden, boggy Lancashire countryside, called out to Jacquelyn: “I don’t know how road-runners put up with the boredom of it!,” highlighting her celebration of “rough” cross-country ground against the “smooth” and thus “boring” surfaces of road (see also Barnfield (2020), Brown (2017), and Gross, (2021) on surface interactions). Relatedly, as one of Nettleton’s (2015: 773) fell runners noted of running on moor and mountain, this often requires us to “work with the land.” We must also “work with” air in our elemental encounters, as we describe below, and as has been so well highlighted in a special issue of the journal Body & Society on breath, breathing, and breath studies (e.g. Macnaughton, 2020; Oxley and Russell, 2020). First, we consider the theoretical framework utilized in conceptualizing our mind–body–world encounters.

Phenomenological sociology and sensuous sporting embodiment

Derived from Husserl’s (1983) philosophical oeuvre, modern phenomenology now spans a rich, diverse, and multi-stranded set of different traditions, such as transcendental, hermeneutic, and existential forms (see Allen-Collinson (2009) as particularly relevant to sport and physical cultures). In addressing what he perceived as the inadequacies of science, Husserl (1983) sought to question and unsettle every day as well as scientific habits of thought that left unproblematized and unthematized the tacit, extant assumptions and presuppositions regarding phenomena. To this end, he (1983: 6) advocated the adoption of the “phenomenological attitude” to identify the essence or *eidos* of a phenomenon, via engaging in the *epoche* (a form of bracketing). Such bracketing was considered to allow the researcher temporarily to step back from the phenomenon of interest, to identify and problematize the everyday thinking of the “natural attitude,” and consider the phenomenon afresh, with clarity of mind. While diverging somewhat from its philosophical roots, forms of more “sociologized” phenomenology and phenomenological sociology, derived from Schütz’s (1967) work, acknowledge and subject to analytic attention the fundamental and thorough-going effects of people’s social–structural positions and
other sociological variables (Allen-Collinson, 2011b) on even the most deep corporeal experiences. Germene to our discussion here, phenomenological sociology, not surprisingly, fundamentally problematizes any notion of complete bracketing, and in this respect follows philosophical phenomenologists such as Merleau-Ponty (2001), who similarly critiqued early Husserlian idealistic notions of full bracketing and transcendental reduction. Problematic though complete bracketing is, nevertheless, this approach encourages researchers to make best attempts at identifying their tacit presuppositions enveloping a phenomenon, better to identify and examine the phenomenon afresh, questioning their taken-for-granted assumptions. This is a challenging proposition but one that resonates with the sociological enterprise more generally. A further element of Husserlian phenomenology of relevance to the current article is that of intentionality. This concept emphasizes how consciousness is intentional, directed, or orientated toward something. Drawing on Gestalt psychology, the existentialist phenomenologist, Merleau-Ponty (2001) further developed Husserl’s notion of operative intentionality, as a form of pre-reflective intentionality.

Of particular relevance to the sociology of sport is existential phenomenology’s interest in the subject-body or Leib; the lived body present to us in consciousness, and linking mind, body, and world in an ongoing, dynamic relationship. The object-body or Körper, in contrast, is the material body as object of examination, for example, in biomedicine and also much of sports science. Merleau-Ponty (2001) argues for the inseparability of the human subject as a being-in-the-world. He emphasizes the carnality and “body-groundedness” of human existence, and highlights (as did Husserl) how our own body (le corps propre) is the standpoint for all sensory perception. In his unfinished work, Le Visible et l’Invisible (1969), he evocatively describes our existential unity and continuity with the very tissue or fabric of the world. To emphasize such elemental unity, Merleau-Ponty (1969) recasts the phenomenological notion of “being-in-the-world” as “la chair” or “flesh-of-the-world,” highlighting the interconnectedness of the sensing, perceiving body with the things sensed and perceived, in an ongoing reciprocal relationship.

This strongly cognitive–corporeal perspective, and analysis of embodiment and perception, has generated interest in Merleau-Ponty’s existentialist approach as applicable to phenomenologically inspired investigations into various sports and physical cultures. Here, we have scope only to give a flavor of such work. The “beautiful game” of soccer/football, for example, has been analyzed by Hughson and Inglis (2002) and then taken up by Hemphill (2005), both articles drawing on Merleau-Ponty’s insights into perception, movement, and spatial dynamics, as does research on parkour (Aggerholm and Larsen, 2017). Research on martial arts of various varieties has also fruitfully drawn upon this particular phenomenological perspective (e.g. Spencer, 2009; Telles et al., 2018). Distance running, marathon running, trail running, track running, and more “experimental” forms of running have also been investigated via this phenomenological lens (e.g. Allen-Collinson et al., 2019; Bluhm and Ravn, 2021; Gross, 2021; Rochat et al., 2018). Embracing aquatic environments, and employing Merleau-Pontian perspectives, McNarry et al. (2020) explore competitive swimming, while Liu (2021), also drawing on Sheets-Johnstone’s work, considers waka ama (Māori canoe) paddling. The phenomenological lens has been widened beyond sport to focus on physical cultures such as dance (Purser, 2018; Ravn and Hansen, 2013).
We also highlight the relevance of the phenomenologically inspired work of Leder (1990) to the current study, and in particular his conceptualization of the “dis-appearing” and “dys-appearing” body, respectively. In terms of the “disappearing” body, Leder (1990) describes how the body may be perceived as largely absent from our conscious mind during everyday life and routines, occupying a backgrounded position in consciousness. At such times, consciousness is free to be directed outward to the world; we thus experience an “ecstatic” body from which “rays of intentionality radiate outward” (Leder, 1990: 73). In contrast, when we find ourselves subject to pain, injury, illness, and other forms of suffering, our body seems to move from this backgrounded position to become a thematized object of our intentionality. At these times, a state of bodily “dys-appearance” prevails, when consciousness shifts from an outward-facing aspect toward the external world, to directedness to the site of bodily pain, discomfort, or suffering. This inward intentionality has also been demonstrated in more positive and pleasurable experiences of “intense embodiment” (Allen-Collinson and Owton, 2015) and “eu-appearance” (Gross, 2021; Zeiler, 2010).

Before proceeding to consider phenomenological perspectives on the sensory specifics of haptic encounters in our running lifeworld, we provide a brief consideration of recent socio-cultural analyses of the senses, and of the haptic in sporting contexts.

**Socio-cultural perspectives on the sensory**

Social anthropology was perhaps the first of the social sciences systematically to address sensory experience as mediated through a socio-cultural framework (e.g. Classen, 2005; Geurts, 2002; Howes, 1991). Other disciplines subsequently followed, eventually leading to what Howes (2006) has termed a “sensorial revolution” in the social sciences, and the acknowledgment of the ways in which the senses actually mediate the relationship between self and society, and mind and body (Bull et al., 2006). Senses beyond the “classic five”, traditionally conceptualized as constituting the “Western” sensorium, are also of interest to researchers within sports and physical cultural studies. These include senses such as kinesthesia, balance (the vestibular system), and proprioception, as “inner senses” (Paterson, 2007), and the senses of heat (Allen-Collinson and Owton, 2015; Allen-Collinson et al., 2018b; Hockey and Allen-Collinson, 2017). Furthermore, it has been shown how sensory experience and the sensorium itself vary, not just cross-culturally but also intraculturally and also intraculturally (Howes and Classen, 2014), including through particular sporting and physical cultures (see for example McNarry et al. (2020), Merchant (2011), and Straughan (2012) on the senses in aquatic environments), and for those with sensory impairments or differences, such as sight impairment (e.g. Bell et al., 2019; Powis, 2019). In the current article, we are particularly interested in the salience of “elemental haptics,” that is the touch of the elements in cross-country running, in relation not only to “ground-feel” (Brown, 2017) but also in relation to air, both of these domains being under-researched in the sociology of sport.

While in the “Western” hierarchy of the senses, touch has often been accorded low status, as one of the more physical and “base” of the senses, associated with women and the body (Classen, 2005); within phenomenology, touch is valorized as a crucial, complex, and multi-faceted sense. Merleau-Ponty’s concept of reversibility has been
considered within phenomenological analyses of touch in sporting experience (Hockey and Allen-Collinson, 2007), and describes how our sense perceptions are reversible: we both touch and are touched, in relation to people and objects. Of particular relevance to moving, running bodies, Rodaway (1994: 48) defines the haptic experience as constitutive of: “a combination of tactile and locomotive properties [which] provides information about the character of objects, surfaces and whole environments as well as our own bodies.” Drawing on Husserl’s and Merleau-Ponty’s insights, Sheets-Johnstone (2017) highlights the importance of the kinesthetic-haptic nexus in her discussion of the “tactile-kinesthetic felt and feeling body” in relation to social agency and meaningful movement.

In sporting contexts, in addition to intercorporeal haptics, the touch of surfaces has been addressed in relation to movement on/over paths, tracks, pavements, roads, playing fields, and pitches (e.g. Bamberg et al., 2018; Barnfield, 2020; Brown, 2017; Hockey, 2006; Hockey and Allen-Collinson, 2007; Hughson and Inglis, 2002; Lamont, 2020; Nettleton, 2015), and also vis-à-vis a diverse range of specialist kit and equipment from bikes (Brown, 2017; Lamont, 2020, Spinney, 2006), to canoe paddles (Hughes, 2018; Liu, 2021), and cricket balls (Sparkes, 2009), to give just some examples. Before considering the specifics of the elemental haptics that emerged so vividly in our findings, we first describe the research projects from which these data derive.

**Automethodological research**

Autoethnography, as Powis (2019) notes, has proved highly effective in exploring the multi-sensory experiences of sport by drawing on the researcher’s own first-hand, sensory accounts. Furthermore, autoethnography, and autophenomenography (described below) are advantageous in providing access to deeply embodied sensory experience, which can at times be challenging to elicit from others (Allen-Collinson, 2011a; Sparkes, 2009). The three research projects on running, from which our data are drawn, comprised: **Study 1**: a collaborative autoethnography of distance- and cross-country running undertaken by Jacquelyn and a co-runner/researcher, John Hockey (who has kindly given permission for data to be shared). Studies 2 and 3 were autoethnographic and autophenomenographic studies of cross-country and distance running by Jacquelyn and Patricia, respectively. Ethical approval was granted by the authors’ current university for the latter study, but for the earlier studies, ethical approval was not at that time required for autoethnographic research. At this juncture, we note that our form of running encompasses two of Bale’s (2004) categories: (1) welfare running, pursued for health and fitness aims and also (2) performance running, undertaken to improve and sustain performance, particularly in the case of Patricia, who at the time of writing was training for her first ultramarathon.

Autoethnography examines the nexus and dialectics of subjectivity and culture, by investigating the author researcher’s experiences as a member of a distinctive social group or *ethnos* (Allen-Collinson, 2013), for example, the cross-country running community. Now well established within the sociology of sport and physical cultures, autoethnographies span the full continuum of “analytic” to “evocative” genres in Anderson’s (2006) terms. During the 2-year period of data collection for Study 1, as autoethnographers, we recorded both individually and jointly via field notes and microtape-recorders.
our daily engagement with training and with a period of chronic injuries. Throughout this study, we made determined efforts to engage in what Burns (2003) terms “embodied reflexivity”; that is, subjecting to ongoing questioning and analysis the impact of our (running) bodies on the meanings, beliefs, and sets of knowledge on which we drew and which we also generated via our own bodily ways of knowing.

Studies 2 and 3 were both autoethnographic and autophenomenographic studies of women’s distance running and specifically cross-country training (rather than racing). Autophenomenography has been described as an approach analogous to autoethnography, but where the researcher analyse[s] her/his own lived experience of a phenomenon rather than primarily as a member of an ethnos or social group, as would be the case in autoethnography (Allen-Collinson, 2009; Lamont, 2020). Inevitably though, we encounter an overlap in these lived aspects. In Study 2, in order to document experiences of training for distance running, Jacquelyn maintained a research log, initially for a period of almost 3 years as a systematic data collection approach, detailing the subjective and corporeal experiences of daily training sessions, most of which were solo runs. Subsequently, in more recent times, data collection has continued more sporadically, on a less systematic basis, via both field notes and audio recordings on an Android phone usually made immediately post running.

In Study 3, Patricia created a research log to record her experiences while transitioning from other sports into distance running and commencing an ultramarathon training plan. Two approaches were employed to collect data. The first and principal strategy was via a reflective diary, with entries made as soon as possible after the completion of each run. A training plan was also maintained and assisted in the reflective process. The second strategy involved the collection of verbalized data during runs via audio recordings captured by a Dictaphone. This approach was important for her “long runs” (>15 miles, and over 2 h) to assist Patricia with recalling her experience after the activity. Rather than verbalizing during the activity itself, as would be the case when adopting the “think aloud method” (Eccles and Arsal, 2017), she chose to start and stop the recorder sporadically to record information about the experience at specific points in the run, so as to keep track of her in-the-moment emotions and sensations.

Writing from a geographical perspective, Seamon (1979) proposes that our engagements with the environment can be located on an “awareness continuum” between complete “person–environment separateness” and complete “person–environment mergence.” While, from a phenomenological and sociological perspective, such “completeness” would be highly problematic, nevertheless, Seamon’s perspective acknowledges the ways in which we can be more or less aware of, and engaged with, our surroundings. In all three research projects, engagement in heightened awareness of surroundings formed a core concern—when, that is, our bodies were in a state of relative running ease, allowing us to “feel outward” to the environment, and to sustain “sensory engagement with space” (Merchant, 2011).

Data analysis was inspired by Giorgi’s (1997) phenomenological method, as we sought to stimulate phenomenological sensitivity and insights1 and apply these to our empirical data. In this respect, we are in full agreement with Ravn (2021) that phenomenological insights can be employed highly effectively in the elucidation, analysis, and discussion of phenomena, including vis-à-vis data assembled by more traditional,
qualitative approaches. Our data analytic approach encompassed: (i) the collection of
detailed descriptions of phenomena from our “insider” perspective as runners; (ii) the
adoption of a questioning attitude; (iii) initial, impressionistic reading through our
descriptions, to gain a feel for each data set as a whole; (iv) subsequently, more
in-depth re-reading in order to engage in data immersion, and identifying key themes
and sub-themes; and (v) producing statements of the general structures of experience.
With Studies 1 and 2, long (amateur) careers in distance running generated some con-

fidence of fulfilling Garfinkel’s (2002: 175) phenomenologically derived requirement for
the researcher to be “competent to the local production” of the phenomenon.
Furthermore, in Study 1, while, as sociologists, we were cognizant of the impossibility
of complete epoche, we made all efforts to bracket (in terms of identifying, thematizing,
and acknowledging) as far as possible our preconceptions about running. This involved
engaging in mutual “consciousness-raising” sessions regarding our existing beliefs and
assumptions as long-standing members of the distance-running community. In the autopo-

henomenographic projects, we similarly strove to engage in heightened reflexivity via:
(1) discussions with insiders and outsiders to the distance-running community (for
example, with two experienced swimmers) and (2) reading a range of ethnographic
accounts of sporting and physical cultures, to compare and contrast the key elements
of these with our experiences of distance running. From all the automethodological pro-
jects, the importance of haptic encounters with the elements of earth and air was clearly
identifiable in the data. We should also note that aquatic encounters occurred, but to a
lesser extent than with earth and air, at least in a distinctive way, for water often combined
with earth (as mud) and with air (as mist), for example. We have thus chosen to focus on
the elements that most frequently and notably touched our running bodies.

Elemental haptics
As highlighted above, rarely are the senses experienced in singular mode, but rather in
complex, shifting synesthetic combinations. A similar interplay applies to our elemental
encounters, for rarely would we encounter the elements of ground or air in isolation, as
will be evident from the sensory data. The first of the elemental haptics we address relates
to the well-grounded pleasures—and sometimes displeasures—of footfall and the touch
of running feet (albeit usually trainer shod) on earth. As Brown (2017) points out, we
must consider the co-constitution of the moving body and the ground, and for runners,
this nexus provides a key structure of the running experience.

Earth(ly) pleasures
As Ingold (2011) notes, studies of haptic perception have most often focused on manual
touch, with a resultant need for research examining “footwork.” This is a key omission,
he argues, for it is through our feet that we are most fundamentally and continually “in
touch” with our surroundings, as Lee Vergunst (2008) further elaborates in relation to
urban walking (and tripping/slipping). This need for footwork analysis resonates strongly
in relation to a wide range of “grounded” sports and physical cultures, including running
of all forms and distances. Indeed, some sports demand highly developed footwork skills,
accomplishment, and dexterity (not just with the right foot, as ‘dexterity’ would connote). This interconnectedness and interplay between body and ground, sensed by and through the feet, is also critical to balance and bodily comportment in many sports and physical cultures, including in running, especially when traversing the challenging terrain often inherent in cross-country training, and in the following case when also night running:

Today I decided to go off road a little more, testing out my skills in darkness. There is an element of needing to trust the ground and hope for the best sometimes, although that might be me being a novice. The light I use is pretty dim, so that doesn’t help … I was navigating well until I came across a very muddy patch at the top of the 2nd ‘hill’ (more like a bump in comparison to what I will face!) … One thing about trail running is the need to sense the ground with your feet, knowing how much pressure to place on certain parts of the foot to retain some semblance of stability on each step. Each step is different once you’re off road. I try to look for patches of ground that are the least likely to inflict injury. A very different decisional balance to the norm! … One particular field with my night torch posed challenges today: the path was ‘rippled’ with bumps every 30–50 cm. Whilst I try to aim for the top of each of these bumps, this doesn’t always align with my stride length. This is part of the fun though, the challenge of terrain navigation. (Study 3)

Runners thus often develop a heightened form of “terrestrial tactility” (Brown, 2017: 311), required to navigate and move over (and sometimes through) the elemental terrain of the run. For cross-country runners, as well as other rough-ground specialists such as trail runners and fell runners, terrain is much more than mere earth or ground. For these runners the notion of terrain also has connotations of “affordance” (Gibson, 2014); that is the perceivable properties that an environment provides: whether we can, for example, undertake speed work on a flat stretch, or have to proceed with a degree of caution over heather-sprung moorland to avoid potential ankle twists. Properties of ground and their interactions with the running body are also salient; for example, the kind of underlying or exposed rock, the soil, the temperature of the ground, its hardness, (un)evenness, slipperiness, friability, what vegetation covers the ground, and also any objects strewn upon it. Runners’ intentionality is thus strongly directed toward the terrain their feet touch, with “ground-feel” (Brown, 2017) or “ground tactility” (Lee Vergunst, 2008) mediated by the running shoes selected (except in the case of barefoot runners of course). For cross-country runners, who generally abandon the relative uniformity of “boring” tarmac-covered roads in search of less predictable surfaces (see also Barnfield, 2020), there is a cultural valorization of engagement with the “rough,” “natural” (as variously defined by runners themselves) and endlessly changing underfoot conditions “off-road.” The following field note illustrates the body–world nexus, focusing on the interplay between ground and the sensory receptors of the running body: mechanoreceptors (pressure detecting), thermoreceptors (temperature detecting), and nociceptors (pain detecting). In this instance, Jacqueyl was confined to the grasslands of a park, rather than preferred riverside trackways, and her cross-country accustomed running feet suffered the sudden shock of engagement with urban concrete surfaces:
Winter has descended suddenly and overnight. Fabulous run, mainly in fresh, crisp but soft snow. The banality of the working town is transformed into a winter wonderland of snow and icicle adorned trees, lamp-posts, fences and aerials… The fresh snow on the park is soft and twinkly-crunchy underfoot, cushioned to the foot sole. Quads and calves have to work harder on the soft surface, a benign aching testifies to their greater workload as I reach the end of the parkland and head toward the road and pavement stretch before it’s back on to the track. Bang! Plantar fascia [tissues supporting the foot arch] snap back, retract and sting in shock as I hit the hard-frozen pavement. Ouch, ouch, ouch! I can feel them pull away, cowering from the unforgiving concrete. (Study 2)

Merleau-Ponty’s (1969) description of inter-sensuality and the interweaving of the senses is apposite here, for rarely do we encounter the senses in singular modality, but rather in a complex and shifting synesthesia. For him, the intermingling of the visual and the haptic is particularly strong, giving rise to a “crossing” (a chiasm), a meshing of the visible and the tangible. A field note portrays such visual-haptic braiding when navigating different types of terrain:

Crossing a small junction, another flat smooth stretch of park appears to beckon on its far side, or at least it was smooth and for a number of years we did real speedwork on it, lots of repetitions. Unfortunately, a series of fairs and unofficial football games has now generated lots of concealed ruts and divots. Although I can lengthen my stride here, real fast work is not recommended—hit one of those divots at speed and injury is on the cards. The natural history of some parkland then, once seen in one way and now another… I leave the park, stride down a minor road and cross a roundabout with a large grass area at its centre, my feet feeling the difference as the concrete-induced jarring subsides. I know the grass is smooth at this point and there is enough reflection from the street lights so that I can traverse it safely, even in the darkest winter nights, if I weave artfully between the shadows. (Study 1)

In addition to the visual-haptic interplay as runners both see and feel the terrain they encounter, the above fieldnote also demonstrates the role of emplaced “somatic learning” in developing somatic knowledge of what affordances particular spaces and sections of terrain offer, over time, seasonally (see also Qviström et al., 2020) and under specific weather conditions. The vagaries of the British weather are also manifest in relation to the second element we examine here: air.

Air-borne bodies

In addition to somatic and sensory learning of “ground-feel” (Brown, 2017), and resonating with Ingold’s (2010) observation that as humans we walk and generally move in (and through) air, the running data also revealed how we became highly attuned to air and the affordances (Gibson, 2014) offered by certain qualities of air. The impact of air quality on exercisers (including runners) has been increasingly discussed in recent years, specifically in relation to subjective experiences of the nexus of air, health, and place (e.g. Day, 2007; Hodgson and Hitchings, 2018). For runners, it is not only air quality—in terms of the intensity and form of pollution and contamination—that is at stake, but also other properties such as the temperature and “consistency” of air, which
affect performance and the general ease or “dys-ease” (Leder, 1990) of our running bodies:

…it’s Saturday and I am out in the trails, with only some early dog walkers accompanying me, the dogs eyes lit up by my head torch. I finish this easy 5 miles knowing that tomorrow will be a bigger day. The temperature was cold today … although not as bad as the other days. I can now judge as soon as I take a step outside the house as to how cold it is. My breath is the first thing I notice: the air feels thinner and hits the throat and lungs more sharply. (Study 3)

Strong zonal run tonight. The compacted ice and snow of recent days washed away by heavy rain, and the cutting Easterly wind has given way to an almost balmy Westerly. The air glides into my lungs, smooth, warmed, no residue of the icy shards that provoked coughing and spluttering only days ago. Windy out along the exposed fields but the air seems to part for my body as I wend a steady, rhythmic path down to the weir. The going is perfect, track still slightly dampened, soft from the snow, cushioning my football and bouncing me back for the next stride. (Study 2)

The above extracts illustrate Merleau-Ponty’s (1969) highlighting of the braiding and interconnectedness of body-and-world, and the ways in which the external world mingles with the internal world of the body. The data illustrate the incorporation of air into the body, at times resulting in bodily “dys-ease” (Leder, 1990), by provoking coughing and spluttering, or sharply touching throat and lungs. At other times, air touch is gentler and more harmonious, the air seemingly gliding gently and effortlessly into our lungs.

In contrast to the gentle air–body intermingling portrayed in Study 2 above, at times the haptic force and power of air strongly contours the running experience, challenging and constraining our running bodies, and even making it nigh on impossible to run effectively, so strong is the wind-resistance (see also Simpson (2019) on analogous effects of air turbulence on cyclists):

We’ve been running straight into the gale-force, ice-edged wind, struggling up the mud-slippery slope, when all of a sudden, the field corner is upon me and I have to turn and change direction. The precipitous drop in wind force nearly knocks me off balance – my whole body has been leaning into the wind, head down, shoulders protectively hunched, but now the wind is behind me, under my feet, pushing me on. Heat infuses my wind-stinging cheeks and for a minute or so, I’m too hot, pulling my ski-mask down to breathe more easily, unzipping the top of my running jacket to let the swirling wind cool my neck. Then, as we change direction again, it’s now nearly impossible to run against the blast, we hold on to our jacket hoods, whipping against our ears, eyes and noses streaming from the cold air. We walk the last section, back to the car. Our shouted words are snatched by the greedy wind. We give up trying to talk, each knowing that the other is saving energy to battle against the gale, iced raindrops blown horizontal into our rapidly chilling bodies. (Study 2)

In such instances, the elemental power of air brings our running bodies forcibly into the forefront of consciousness as objects of intentionality, including of a thermoceptive nature (Allen-Collinson and Owton, 2015; Allen-Collinson et al., 2018b). Air
temperature is an important part of the running experience, particularly as for us, as for many cross-country (and road) runners, indoor running is truly perceived as a last resort. The touch of the elements is an integral component of the running experience, both pleasurable and dis-pleasurable. In contrast to the cold blasts of air assailing Jacquelyn and her running partner in the above extracts, the following quote illustrates the pleasurable touch of warm air caressing winter-worn skin:

It’s only late February, but amazingly it’s been warm enough to abandon the winter ‘Trackster’ bottoms and hunt out shorts from the running-clothes box … It’s a shock to see pale, winter-white skin revealed against the soft drapes of my shorts, but the mild, springlike air is gentle against newly exposed thighs. After all the dark months of being encased in layers of thick, warm clothing, bare legs and arms feel vulnerable, but also light and free. ‘Running free!’ we chorus, grinning widely at each other. (Study 1)

As highlighted earlier, a more sociologized variant of phenomenology acknowledges the specificity of embodiment and lived experience as well as more general experience (if not the “universal” that philosophical phenomenology seeks). Thus, embodied experiences are fundamentally shaped by, and lived through, gender, socioeconomic class, age, ethnicity, health and illness conditions, and differing degrees of physical and mental ability. For one of the authors, who has suffered from asthma of varying degrees since childhood, properties of air are of great salience. As Leder (1990) notes, when our everyday bodily routines are interrupted, for example, when we become ill, in pain or when a strong sensation suddenly overcomes us, the body breaks into consciousness, becoming a focus of intentionality. Analogous to Leder’s insights, Becker (1999) describes this mode of self-conscious corporeal realization in relation to asthma sufferers, who, when breathing becomes difficult, become self-consciously aware of their bodies. This breathing-body awareness emerged in several field notes, where the unpleasant touch of “contaminated” air provoked considerable dys-ease:

The heavy, pollen-thick air sticks to my throat, it feels as though only a third of my lungs can fill with air, even taking the air down my throat is difficult. Rib cage expands heavily with the effort of sucking in the humid air. Brief respite with the light, clean-cut pungency of pine tree and evergreen hedge, before I am accosted by the drowsy richness of dark, rain-sodden roses as I run past neatly trimmed gardens on the edge of the park. Chest heavy and labouring with the effort to breathe in, and even more with the effort to breathe out …. (Study 2)

These, then, were some of the key elemental haptics revolving around air and ground encounters on our cross-country training runs. It now remains for us to consider how our chosen theoretical framework of a sociologized variant of phenomenology can afford us particular insights into sporting embodiment.

**Discussion and conclusion**

Employing the theoretical perspective of phenomenological sociology, this article has sought to examine the elemental haptic dimensions of the sporting lifeworld of
cross-country running. Following Shilling (2021), we have also explored the incarnation of cultural values, in this case physical–cultural values, whereby encounters with the vagaries of the weather and elements are valorized and even celebrated by the cross-country running community as to what “proper” cross-country running entails. In these final sections, we consider what phenomenological sociology can offer sociologists of sport and physical cultures, and how the sociological component of this challenging theoretical combination encourages the analysis of socio-cultural influences, including values, on our sensory engagements with sporting worlds.

This form of phenomenologically sensitive sociology can, we argue, generate fresh perspectives on embodiment, and on the moving, sensing, and sensuous sporting body, while also recognizing that this material body clearly holds cultural meanings, beliefs, and purposes, and is subject to social–structural effects and constraints. For us, the potent (but sometimes uneasy) combination of the philosophical phenomenological tradition with the sociological enterprise requires that we, as researchers, systematically identify, acknowledge, and fundamentally challenge the everyday tacit assumptions, interpretations, and meanings of the “natural attitude,” including those we hold as runners. While we are fully cognizant of the impossibility of complete, phenomenological-style bracketing, our form of phenomenological sociology nevertheless underscores the need for determined, heightened, and sustained researcher reflexivity (see also Allen-Collinson, 2011a; McNarry et al., 2019) in seeking to identify those everyday assumptions and presuppositions that can envelop and even obscure a novel understanding of phenomena. While there are undoubted strengths to this philosophically inspired form of sociology, there are also, perhaps inevitably, considerable challenges with this particular nexus, not least the quest to identify “universal” experiences, pursued in some forms of philosophical phenomenology. From a sport sociological perspective, any lack of analytic attention to the specificities of embodiment wrought by, for example, gender, age, ethnicity, socioeconomic class, degrees of dis/ability, etc., would be highly problematic and neglectful. Hence, there are benefits of incorporating analytic insights drawn from other theoretical traditions, such as feminist sociology and theory (Allen-Collinson, 2011b; Ronkainen et al., 2020), feminist philosophy (Chisholm, 2008; Young, 1998), and critical sociology (Hughson and Inglis, 2002) in addressing the sporting body. In the form of phenomenological sociology employed here, embodiment and lived experiences are acknowledged to be fundamentally shaped by these sociological “variables,” and also, importantly, by the norms and values of specific sporting cultures.

For us, as runners who undertake most of our training in cross-country environments, the values of the cross-country running world pervade our consciousness and lived experience. These values include the celebration of the outdoors, of being (as far as possible) in “natural” environments, and not forced on to artificial terrain such as pavements/sidewalks, tarmac, asphalt, and so on. They also include a valorization of the willingness to endure and even to embrace the vagaries of climate, weather, and all the elements. These physical–cultural values, gradually over time and running practice become incorporated into our running bodies and minds. The need for sociological investigation into such incarnation of cultural values has very recently been signaled (see Shilling, 2021), and we hope to have started to address this research lacuna.
Phenomenological sociology explores how our minds and bodies interact with our environments. As portrayed above, skilled sports participants must often become highly attuned to properties of the environments in which they train and compete, including elements such as earth, air, and water, with which they haptically interact. As Nettleton (2015: 771) observes with regard to fell runners, the way these runners come to know, use, and see the elements, bog, stone, grass, and so on, is a form of pragmatic somatic learning that relies on fleshy and visceral improvisation. We concur and emphasize how runners must learn, develop, deploy, and refine a spectrum of sensory skills and ways of knowing, which over time and practice become embodied and incorporated into the sporting body-self, but never learned once and for all. For the mind–body–world contexts and environments are constantly in flux, as evident in many sports and physical activities, where participants must make constant improvisational adjustments and readjustments, including to the weather and the elements (Allen-Collinson, 2018; Allen-Collinson et al., 2019). As Wright and Tofa (2021) portray, the beings and becomings of weather have their own laws beyond human control, and for us, as cross-country runners subject to the vagaries of the weather, part of the attraction of our running environments is precisely their unpredictability and ever shifting, elemental character.

Acknowledgements

We are grateful to the editor and two anonymous reviewers for helpful suggestions as to how to improve the initial submission, and to Dr John Hockey, who kindly agreed to the sharing of data collected for the collaborative autoethnographic study.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID iDs

Jacquelyn Allen-Collinson https://orcid.org/0000-0003-2146-8000
Patricia C Jackman https://orcid.org/0000-0002-5756-4494

Note

1. We have also re-analyzed two of the data sets using more sociologically contoured reflexive thematic analytic procedures, but here it is the phenomenologically sensitive data analytic process on which we drew.

References

Aggerholm K and Larsen S (2017) Parkour as acrobatics: An existential phenomenological study of movement in parkour. *Qualitative Research in Sport, Exercise and Health* 9(1): 69–86.
Allen-Collinson J (2009) Sporting embodiment: Sports studies and the (continuing) promise of phenomenology. *Qualitative Research in Sport and Exercise* 1(3): 279–296.

Allen-Collinson J (2011a) Intention and epochê in tension: Autophenomenography, bracketing and a novel approach to researching sporting embodiment. *Qualitative Research in Sport, Exercise & Health* 3(1): 48–62.

Allen-Collinson J (2011b) Feminist phenomenology and the woman in the running body. *Sport, Ethics & Philosophy* 3(1): 48–62.

Allen-Collinson J (2013) Autoethnography as the engagement of self/other, self/culture, self/politics, selves/futures. In: Holman Jones S, Adams TE and Ellis C (eds) *Handbook of Autoethnography*. Walnut Creek, CA: Left Coast Press, 281–299.

Allen-Collinson J (2018) ‘Weather work’: Embodiment and weather learning in a national outdoor exercise programme. *Qualitative Research in Sport, Exercise and Health* 10(1): 63–74.

Allen-Collinson J and Hockley J (2011) Feeling the way: Notes toward a haptic phenomenology of scuba diving and distance running. *International Review for the Sociology of Sport* 46(3): 330–345.

Allen-Collinson J and Owton H (2015) Intense embodiment: Senses of heat in women’s running and boxing. *Body & Society* 21(2): 245–268.

Allen-Collinson J, Crust L and Swann C (2018a) ‘Endurance work’: Embodiment and the mind-body nexus in the physical culture of high-altitude mountaineering. *Sociology* 52(6): 1324–1341.

Allen-Collinson J, Jennings G, Vahtinen A, et al. (2019) Weather-wise? Sporting embodiment, weather work and weather learning in running and triathlon. *International Review for the Sociology of Sport* 54(7): 777–792.

Allen-Collinson J, Vahtinen A, Jennings G, et al. (2018b) Exploring lived heat, ‘temperature work’ and embodiment: Novel auto/ethnographic insights from physical cultures. *Journal of Contemporary Ethnography* 47(3): 283–305.

Anderson L (2006) Analytic autoethnography. *Journal of Contemporary Ethnography* 35(4): 373–395.

Atkinson M (2010) Fell running in post-sport territories. *Qualitative Research in Sport and Exercise* 2(2): 109–132.

Bale J (2004) *Running Cultures*. London: Routledge.

Bamberg J, Hitchings R and Latham A (2018) Enriching green exercise research. *Landscape and Urban Planning* 178: 270–275.

Barnfield A (2020) ‘The feel of the stones, sounds of cars, the different smells’: How incorporating the senses can help support equitable health promotion. *Social Sciences* 9(6): 108.

Becker G (1999) *Disrupted Lives: How People Create Meaning in a Chaotic World*. Berkeley: University of California Press.

Bell SL, Leyshon C and Phoenix C (2019) Negotiating nature’s weather worlds in the context of life with sight impairment. *Transactions of the Institute of British Geographers* 44(2): 270–283.

Bluhm K and Ravn S (2021) ‘It has to hurt’: A phenomenological analysis of elite runners’ experiences in handling non-injuring running-related pain. *Qualitative Research in Sport, Exercise and Health*. Online early at: https://doi.org/10.1080/2159676X.2021.1901136.

Brown KM (2017) The haptic pleasures of ground-feel: The role of textured terrain in motivating regular exercise. *Health & Place* 46: 307–314.

Bull M, Gilroy P, Howes D, et al. (2006) Introducing sensory studies. *The Senses and Society* 1(1): 5–8.

Burns M (2003) Interviewing: Embodied communication. *Feminism and Psychology* 13(2): 229–236.
Chisholm D (2008) Climbing like a girl: An exemplary adventure in feminist phenomenology. *Hypatia* 23(1): 9–40.

Classen C (ed.) (2005) *The Book of Touch*. Oxford: Berg.

Day R (2007) Place and the experience of air quality. *Health and Place* 13: 249–260.

Eccles DW and Arsal G (2017) The think aloud method: What is it and how do I use it? *Qualitative Research in Sport, Exercise and Health* 9(4): 514–531.

Garfinkel H (2002) *Ethnomethodology’s Program: Working out Durkheim’s Aphorism*. New York: Rowman & Littlefield.

Geurts KL (2002) *Culture and the Senses: Bodily Ways of Knowing in an African Community*. Berkeley: University of California Press.

Gibson JJ (2014) *The Ecological Approach to Visual Perception*. New York: Psychology Press Classic Edition.

Giorgi A (1997) The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology* 28(2): 235–261.

Gross T (2021) Bodies as arenas of experimentation: Experiencing novel ways of running. *Journal of Contemporary Ethnography*. Online early at: https://doi.org/10.1177/0891241621996789.

Hemphill D (2005) Deeper inside the beautiful game. *Journal of the Philosophy of Sport* XXXII: 105–115.

Hockey J (2006) Sensing the run: The senses and distance running. *Senses and Society* 1(2): 183–201.

Hockey J and Allen-Collinson J (2007) Grasping the phenomenology of sporting bodies. *International Review for the Sociology of Sport* 42(2): 115–131.

Hockey J and Allen-Collinson J (2016) Digging in: The sociological phenomenology of ‘doing endurance’ in distance-running. In: Bridel W, Markula P and Denison J (eds) *Endurance Running: A Socio-Cultural Examination*. London: Routledge, 227–242.

Hockey J and Allen-Collinson J (2017) Running a temperature: Sociological-phenomenological perspectives on distance running, thermoception and ‘temperature work’. In: Sparkes AC (ed.) *Seeking the Senses in Physical Cultures: Sensual Scholarship in Action*. London: Routledge, 42–62.

Hodgson A and Hitchings R (2018) Urban air pollution perception through the experience of social practices: Talking about breathing with recreational runners in London. *Health and Place* 53: 26–33.

Howes D (ed.) (1991) *The Varieties of Sensory Experience: A Sourcebook in the Anthropology of the Senses*. Toronto: University of Toronto Press.

Howes D (2006) Charting the sensorial revolution. *Senses and Society* 1(1): 113–128.

Howes D and Classen C (2014) *Ways of Sensing: Understanding the Senses in Society*. London and New York: Routledge.

Hughes C (2018) A song of the paddle: Haptic aesthetics of canoe travel in the English Lake District. *Leisure Studies* 37(3): 268–281.

Hughson J and Inglis D (2002) Inside the beautiful game: Towards a Merleau-Pontian phenomenology of soccer play. *Journal of the Philosophy of Sport* XXIX: 1–15.

Husserl E (1983) *Ideas: General Introduction to Pure Phenomenology. First Book: General Introduction to a Pure Phenomenology* (Trans. Kersten F). The Hague: Martinus Nijhoff.

Ingold T (2010) Footprints through the weather-world: Walking, breathing, knowing. *Journal of the Royal Anthropological Institute* 16: S121–S139.

Ingold T (2011) *Being Alive: Essays on Movement, Knowledge and Description*. Abingdon: Taylor & Francis.

Lamont M (2020) Embodiment in active sport tourism: An autophenomenography of the Tour de France alpine ‘cols’. *Sociology of Sport Journal*. Online early at: https://doi.org/10.1123/ssj.2019-0190.
Leder D (1990) The Absent Body. Chicago, IL: University of Chicago Press.
Lee Vergunst J (2008) Taking a trip and taking care in everyday life. In: Ingold T and Lee Vergunst J (eds) Ways of Walking: Ethnography and Practice on Foot. Aldershot: Ashgate, 105–121.
Liu L (2021) Paddling with Maxine Sheets-Johnstone: Exploring the moving body in sport. International Review for the Sociology of Sport. Online early at: https://doi.org/10.1177/10126902211000958.
Macnaughton J (2020) Making breath visible: Reflections on relations between bodies, breath and world in the critical medical humanities. Body & Society 26(2): 30–54.
McNarry G, Allen-Collinson J and Evans AB (2019) Reflexivity and bracketing in sociological phenomenological research: Researching the competitive swimming lifeworld. Qualitative Research in Sport, Exercise and Health 11(1): 38–51.
McNarry G, Allen-Collinson J and Evans AB (2020) Sensory sociological phenomenology, somatic learning and ‘lived’ temperature in competitive pool swimming. The Sociological Review 69(1): 206–222.
Merchant S (2011) Negotiating underwater space: The sensorium, the body and the practice of scuba-diving. Tourist Studies 11(3): 215–234.
Merleau-Ponty M (1969) The Visible and the Invisible (trans. A Lingis). Evanston: Northwestern University Press.
Merleau-Ponty M (2001) Phenomenology of Perception (trans. C Smith). London: Routledge & Kegan Paul.
Münch R (1994) Sociological Theory: From the 1920s to the 1960s. Chicago: Nelson Hall.
Nettleton S (2015) Fell runners and walking walls: Towards a sociology of living landscapes and aesthetic atmospheres as an alternative to a Lakeland picturesque. British Journal of Sociology 66(4): 759–778.
Qviström M, Fridell L and Kärrholm M (2020) Differentiating the time-geography of recreational running. Mobilities 15(4): 575–587.
Oxley R and Russell A (2020) Interdisciplinary perspectives on breath, body and world. Body & Society 26(2): 3–29.
Paterson M (2007) The Senses of Touch: Haptics, Affects and Technologies. Oxford: Berg.
Pink S (2012) Doing Sensory Ethnography. London: Sage.
Powis B (2019) Soundscape elicitation and visually impaired cricket: Using auditory methodology in sport and physical activity research. Qualitative Research in Sport, Exercise and Health 11(1): 35–45.
Purser A (2018) ‘Getting it into the body’: Understanding skill acquisition through Merleau-Ponty and the embodied practice of dance. Qualitative Research in Sport, Exercise and Health 10(3): 318–332.
Ravn S (2021) Integrating qualitative research methodologies and phenomenology – using dancers’ and athletes’ experiences for phenomenological analysis. Phenomenology and the Cognitive Sciences. Online early at: https://doi.org/10.1007/s11097-021-09735-0.
Ravn S and Hansen H (2013) How to explore dancers’ sense experiences? A study of how multi-sited fieldwork and phenomenology can be combined. Qualitative Research in Sport, Exercise and Health 5(2): 196–213.
Rochat N, Gesbert V, Seifert L, et al. (2018) Enacting phenomenological gestalts in ultra-trail running: An inductive analysis of trail runners’ courses of experience. Frontiers in Psychology 9. Available at: https://doi.org/10.3389/fpsyg.2018.02038.
Rodaway P (1994) Sensuous Geographies: Body, Sense and Place. London: Routledge.
Ronkainen N, Allen-Collinson J, Aggerholm K, et al. (2020 in press) Superwomen? Young sporting women, temporality, and learning not to be perfect. International Review for the Sociology of Sport. Online early at: https://doi.org/10.1177/1012690220979710.
Schütz A (1967) *Phenomenology of the Social World*. Evanston: Northwestern University Press.

Seamon D (1979) *A Geography of the Lifeworld*. New York: St Martin’s Press.

Sheets-Johnstone M (2017) Agency: Phenomenological insights and dynamic complementarities. *The Humanistic Psychologist* 45(1): 1–22.

Shilling C (2021 forthcoming) Body pedagogics, culture and the transactional case of vélo worlds. *European Journal of Social Theory*.

Shipway R, Holloway I and Jones I (2013) Organisations, practices, actors, and events: Exploring inside the distance running social world. *International Review for the Sociology of Sport* 48(3): 259–276.

Simpson P (2019) Elemental mobilities: Atmospheres, matter and cycling amid the weather-world. *Social & Cultural Geography* 20(8): 1050–1069.

Sparkes AC (2009) Ethnography and the senses: Challenges and possibilities. *Qualitative Research in Sport and Exercise* 1(1): 21–35.

Sparkes AC (ed.) (2017) *Seeking the Senses in Physical Cultures: Sensual Scholarship in Action*. London: Routledge.

Spencer D (2009) Habit(us), body techniques and body callusing: An ethnography of mixed martial arts. *Body & Society* 1(4): 119–143.

Spinney J (2006) A place of sense: A kinaesthetic ethnography of cyclists on Mont Ventoux. *Environment and Planning D: Society and Space* 24(5): 709–732.

Straughan E (2012) Touched by water: The body in scuba diving. *Emotion, Space and Society* 5(1): 19–26.

Telles TCB, Vaittinen AM and Barreira CRA (2018) Karate, capoeira and MMA: A phenomenological approach to the process of starting a fight. *Revista de Artes Marciales Asiáticas* 13(2): 114–130.

Wright S and Tofa M (2021) Weather geographies: Talking about the weather, considering diverse sovereignties. *Progress in Human Geography*. Online early at: https://doi.org/10.1177/0309132520982949.

Young IM (1998) ‘Throwing like a girl’: Twenty years later. In: Welton D (ed.) *Body and Flesh: A Philosophical Reader*. Oxford: Blackwell, 286–290.

Zeiler K (2010) A phenomenological analysis of bodily self-awareness in the experience of pain and pleasure: On dys-appearance and eu-appearance. *Medicine, Health Care and Philosophy* 13(4): 333–342.