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# Running a temperature: sociological- phenomenological perspectives on distance running, thermoception and ‘temperature work’

## Introduction

Drawing on theoretical and conceptual tools relating to ‘sensory work’ within sociology and sociological phenomenology, in this chapter we address the under-researched sense of thermoception, the lived experience of temperature perception. We explore this particular sensory modality as experienced within our own chosen sporting domain of distance running. Drawing on the findings from two automethodological research projects, we describe some of the complex sensuousities of our ‘intensely embodied’ experiences of heat and cold (Allen-Collinson & Leledaki, 2015). In exploring thermoception, we seek to remedy the relative lack of social science research into this important dimension of the sensorium and, commensurate with the purposes of this edited collection, to challenge received notions of the ‘classic five senses’ as traditionally conceptualised within ‘Western’ science.

Our interest in this particular sensory dimension of sporting embodiment arises in part due to the relative scarcity of sociological research and particularly ethnographic sociological research into thermoception and the lived experience of heat/cold in physical cultural embodiment. The lack of embodied ethnographic approaches to temperature is surprising, as Vannini and Taggart (2014) highlight, despite the importance of warmth/cold in everyday human interactions. So important is thermoception, the sense by which an organism feels temperature, and thermoregulation, that humans would, relatively rapidly, die without a sense of heat; even a relatively tiny divergence from humans’ core body temperature of circa 37°C results in death.

The sense of heat has been argued by some to constitute a distinctive sensory mode (see for example, Potter, 2008; Allen-Collinson & Hockey, 2011; Ong, 2012), a trans-boundary sense, and also a sense of inner energy. Other writers, however, analyse heat perception as a specific form of the haptic. Drawing on our findings, we assess these two formulations in relation to our research on running. Exploring heat as lived in the distance runner’s body, during training and racing, we also consider it as an aspect of the injury experience, where the pain of acute and chronic injuries, together with remedial practices, expose runners to a range of temperatures, both internally and externally perceived. To address our topic, we first provide a brief consideration of our theoretical and methodological framework of phenomenological sociology, before describing the two automethodological projects from which our data are drawn. Our findings are then presented, as we examine how the two contrasting theorisations of heat as a sense were encountered during running and also during our injury rehabilitation activities.

## Phenomenological sociology and embodiment

Whilst our work falls firmly within sociology, it is also informed by and sensitive to a phenomenological perspective; a perspective that is novel within sports studies and sport sociology (see Allen-Collinson, 2009, for an overview in relation to sport and exercise). It is important to emphasize at this juncture that phenomenology is most certainly not just a particular kind of qualitative research (as sometimes represented in research methods texts), but is a tradition with its roots firmly grounded in rich philosophical soil, and with its own specific and stringent methodological processes. For our purposes here, suffice it to say that two key stages are involved in the phenomenological ‘method’ (which describes a whole way of looking at/perceiving the world, a *Weltanschauung*, rather than

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‘method’ as research technique). These stages require the phenomenological researcher to engage in the epochē – the researcher’s best efforts to suspend or bracket the ‘natural attitude’ of our everyday thinking, to identify and question ordinary, taken for granted, ideas, assumptions and presuppositions about a particular phenomenon and to reflect upon our experience of that phenomenon. As Overgaard (2010) succinctly portrays, phenomenological descriptions are efforts to ‘quote’ the experiences being reflected upon, to recount how things are ‘according to the experience’ (p. 180). For us as ‘veteran’ sociologists (with some anthropological training also), the notion that anyone can completely ‘bracket’ pre-existing assumptions, ideas and presuppositions, is an impossibility. For a start, the very language that we employ to describe something is value-laden, and both shapes and constrains our ways of thinking about that thing. To return to the phenomenological method, a further stage is the phenomenological reduction, researchers’ attempts to arrive at the eidos of a phenomenon, its essential forms or characteristics, those which makes a thing the thing it is, without which it would cease to be the phenomenon under investigation. These methodological requirements thus render phenomenology very different from qualitative research approaches that seek to identify and give voice to direct, subjective, phenomenal experience (see Allen-Collinson, 2011). For phenomenologists, it is the essences of the structures or patterns of such subjective, immediate lived experiences that must be identified and interrogated, in an attempt to reveal the inner core of the experience, stripped (as much as possible) of the taken-for-granted assumptions enveloping it. The immediate, ‘upfront’, lived- reality of an experience is therefore ‘suspect’ and to be questioned.

Whilst phenomenology is very firmly grounded in philosophy, more applied, empirical forms of phenomenology (see Hockey & Allen-Collinson, 2007; [Martínková](#) & Parry, 2011) have more recently developed, including phenomenological ethnography (Katz & Csordas, 2003) and phenomenological sociology (Schütz, 1967). Sobchack (2010) explores how phenomenology can be used as an empirical method of describing and thematising human experience, and the ways in which ‘objects of consciousness as well as the affects and values that qualify them are synthesized ... by an embodied consciousness, a “lived body”’ (p. 52). Cultural and sociological forms of phenomenology emphasize the cultural and social ‘situatedness’ (Crossley, 2001) of this embodied consciousness, addressing the considerable influence of social-structural, historical, cultural and ideological forces (Allen-Collinson, 2011; Allen-Collinson & Hockey, 2011) upon bodily experience. It is this (sometimes uneasy) combination of phenomenology and sociology that has provided us, as researchers, with a powerful – if very challenging! – way of addressing the sensorium in sporting and exercise embodiment. Here, we employ this ‘sociologised’ phenomenology analytically to explore our aesthetic experiences as distance runners (see also, Martin, 2007), particularly thermoception, the sense of temperature. Of key concern to us here is the need to explore sensory experiences and somatic knowledge as subculturally, as well as culturally constituted, framed and lived, including in relation to particular physical cultures, such as distance running.

Also drawing on phenomenologically attuned analyses, we use the term ‘intense embodiment’ (Allen-Collinson & Leledaki, 2015; Allen-Collinson & Owton, 2015) to describe periods of heightened awareness of somatic experience, including thermoception. These instances of intense corporeal awareness share commonalities with Leder’s (1990) notion of the ‘dys-appearing’ body, which stands in contrast to the ‘disappearing body’. This latter describes a state of being where there is a relative lack of intentionality (directed awareness) toward the body in our conscious thought. Thus, the body disappears from our immediate attention, it is not ‘attended to’. The ‘absent’ body (or part/s of it), in contrast, is brought to our conscious attention and ‘dys-appears’ when pain or illness, or any intense feelings, remind us of its presence; for example when we experience a sporting injury. Intense embodiment similarly involves a greater level of conscious

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awareness of the body and bodily processes, but not necessarily with the more negative or discomforting connotations of the 'dys' prefix. Intense embodiment can thus connote a more neutral or even a positively heightened sense of corporeal 'aliveness', of the senses working at an intense level (Allen-Collinson & Owton, 2015). Lived temperature variation can, as we describe below, generate this experience of intense embodiment, calling (sometimes demanding) our attention to feelings of heat and cold both inside and outside the sporting body, and also to a sense of internal energy.

### Sense(s) of heat?

As has long been noted by anthropologists, and highlighted in the introduction to this volume by Sparkes (see chapter 1), there exist very different notions of the senses cross-culturally (and also historically). Other senses beyond the 'classic five' Romano-Grecian senses may be familiar to researchers within sports and physical cultural studies, for example, kinaesthesia, balance, and proprioception, as 'inner senses' (Paterson, 2007) and nociception, the perception of pain. The conceptualisation of thermoception as a distinctive sense is perhaps less familiar (Vannini & Taggart, 2014), although Ong (2012) argues that the sense of heat is perhaps the most important sense of all as it helps ensure homeostasis and thus allows us to stay alive.

Given that heat has been conceptualised both as a specific mode of touch perception, and as a distinct sense *sui generis*, in relation to our findings, we consider both these formulations, although it should be noted that, commensurate with our phenomenologically-inspired perspective, in lived experience it is often very difficult to discern and 'unravel' distinctive components of sensory perception. This perceptual 'blurriness' we certainly found to be the case *vis-à-vis* thermoception. As Merleau-Ponty (2001) notes, there is usually an inter-sensory perception of a phenomenon, where several or all the senses are used in concert. For example, when, as runners we visually appraise the terrain that comes up to meet us on a running route, based upon our prior experience we also anticipate the tactile elements of that terrain; how it will feel under our feet, or more specifically under the soles of our trainers. Interestingly, Merleau-Ponty (2001) portrays heat as having a kind of tactility, when he argues that: 'Heat enters experience as a kind of vibration of the thing' (p. 319).

Other writers have theorised the sense of heat as a specialised sense of touch (e.g. Geurts, 2002), but some have considered it a distinctive sense *per se* (e.g. Classen, 1993; 2005; Potter, 2008; Ong, 2012). As a vivid example, Classen (2005) describes the ways in which thermal symbolism is highly elaborated amongst the Tzotzil people of South Mexico, where heat is considered the basic force of the universe. Nearer to home, in terms of our focus on physical cultures, Potter (2008: 453-454) also posits heat as perceptually distinct from touch. Drawing on the findings of an ethnographic project with contemporary dancers, she argues persuasively for the conceptualisation of heat as a distinct sense, a sense of energy and life force. Potter (2008) notes that whereas touch is experienced as a proximal sense based on actual corporeal contact between bodies or body and object, heat is perceived both inside the body (without external contact) and at the boundaries of the body, where it touches (or blends with) the external world. This trans-boundary capacity makes heat analogous to the sense of smell, she argues. It also reflects Merleau-Ponty's problematising of the (putative) dichotomy between inside and outside the body. Here, we draw upon both these conceptualisations of heat, and their applicability to the sensorial findings of our research projects, described below.

### The research projects

The findings outlined below derive from two linked research projects, one a collaborative

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autoethnographic project undertaken by us both as injured and rehabilitating distance runners, and one an autophenomenographic project undertaken by Jacquelyn to research her own lived experience as a distance-running woman. A brief foray into our running-biographical background might be helpful at this juncture, so as to situate ourselves as researchers and explain our 'auto' insider perspectives on the distance-running subculture in the UK. We have both been involved in this particular physical cultural domain for decades: John for 48 years and Jacquelyn (as a 'late starter') for 30 years, sustaining a commitment to training, initially 6-7 days a week, with racing experience ranging from five miles to marathons. Although we were (sadly) certainly never elite runners, even at the height of our performance, we are nevertheless committed, 'serious' runners, who: 'regularly (run) further and faster than fitness for health would demand' (Smith, 2000: 190). Our running, and more specifically in terms of time commitment, our training for running, is commensurate with Bale's (2004) conceptualisation of running as work rather than a form of leisure. This work demands regular, disciplined, demanding and routinized engagement. Howe and Morris (2009) describe in detail the running 'taskscape', which requires of runners regular and frequent, disciplined and routinized activity, and is typically undertaken in a somewhat functional fashion as a means of producing the running body. Such is our running-biographical background in brief, and this provides the backdrop to the two research projects from which our automethodological data emerged. In the research projects described here, Running Study 1 (RS1) was the collaborative autoethnographic project (for a more detailed description, see Allen-Collinson & Hockey, 2007) for which data were collected over a two-year period spanning the initial incurrence of knee injuries, followed by subsequent efforts (progress was never linear) at rehabilitating our respective, and seemingly reluctant knees. By a strange intercorporeal coincidence, we both sustained knee injuries during the very same week of dark-evening, November training in England. Data were collected via highly detailed individual training/injury/research logs, together with what we termed our 'analytic log', in which we wrote up longer, more evocative narratives based on detailed field notes and recordings. Here, we also discussed emergent analytical themes and concepts, and generally mused on the research process itself, including our engagement with bracketing practices. For example, we questioned ourselves and each other as to some of the pre-suppositions and assumptions we held regarding the meanings, beliefs and kinds of knowledge we used and generated as runners, and the generality of our lived experience of running. In RS1, John's individual log entries are coded as Log 1, and Jacquelyn's as Log 2, with the analytic log coded as Log 3. In Running Study 2 (RS2), Jacquelyn similarly maintained detailed distance-running training/research logs for 3 years, incorporating a strong autophenomenographic element in addition to her autoethnographic reflections. Whilst readers may be familiar with autoethnography as a research approach (see Allen-Collinson, 2013; Holman Jones et al., 2013), auto-phenomenography may be less familiar to many. Sometimes termed phenomenological autobiography (Sobchack, 2010), autophenomenography (Gruppetta, 2004; Allen-Collinson, 2009, 2010) is an automethodology analogous to autoethnography but where the researcher draws upon phenomenological principles such as *epochē* and the reduction in order to explore the structures or patterns of her/his own experiences of a phenomenon or a set of phenomena, and identify the core elements of these. Having outlined the nature of the research studies undertaken, we now portray some of the principal findings relating to the lived experience of heat and cold, and the related feeling of inner energy, in our running embodiment.

### Warming to our task

As noted above, within the literature, heat has been theorised both as a specialised sense

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of touch (e.g. Geurts, 2002), and also as a distinct sensory perception (Potter, 2008). Here we compare both these theorisations vis-à-vis our data, commencing with heat as a distinct sense, which includes sensations of ‘inner’ warmth, life-force and energy. Inner heat and energy

Potter (2008), drawing upon her ethnographic research with British, professional, contemporary dancers, argues that heat is a distinct perceptory mode, on the grounds of direct bodily experience. For her, heat is experienced both within the human body and also at our bodily boundaries where the body blends with the external world, as noted earlier. For us as runners, as for Potter’s dancers - and indeed within many physical cultures, thermoception is a key structure of experience, and effective bodily ‘warming up’, thermoregulation and subsequent warming/cooling down, are important elements in both training and competition performance.

As distance running takes place outdoors, apart from on the rare occasions when the British weather is very warm, as older runners we tend to engage in warming up exercises to loosen stiff muscles, and to prepare the body for imminent physical demands. Both of us have for a good deal of our working lives been employed in indoor and academic jobs, with too many hours spent in sedentary mode, so the transition from sitting for long hours undertaking ‘head-work’ to moving at a rapid pace (although not perhaps so rapid as in earlier years!) in and through the ‘weather-world’ (Ingold, 2010) requires some mind-body adjustment. Often this just involves gentle jogging at the start of a run, but if the weather is very cold, we might do some pre-run indoor stretching. For several years, we both worked at the same University and ran from the sports centre there, where its indoor swimming pool provided ideal conditions for this warm-up activity:

We’ve started doing our pre-run stretches on the yoga mats on the balcony overlooking the Olympic-size swimming pool. The warm, moist air of the pool space is brilliant for warming up, particularly when we’ve been confined to a desk or lecture theatre for most of the day! By the time we hit the frosty grass on the moon-lit campus this evening, we were so thoroughly warmed up with glow-orange cores that we didn’t even notice the cold. By the time we’d registered that it was well below zero, and about 20 mins in, the pool warmth was replaced by our own run-generated inner glow. (RS1 Log 2)

In this instance, conceptualisations of heat as both a tactile sense and an inner ‘glow’ or energy force, are evident in the log extract. The warm, moist air initially touches skin, running kit, and is breathed into the lungs. Subsequently, though, the trans-boundary experiential shift is toward the feeling of heat as an internal, proprioceptively experienced phenomenon: an ‘inner glow’.

Perhaps more clearly in terms of conceptualising heat as a distinct sense – of inner energy – there is a form of mental energising and warm-up that often accompanies, or precedes, the physical warm-up. Here, the phenomenological emphasis on the mind-body nexus emerges strongly. The psychological warm-up shifts the body-mind from the mental-work focus to the physical-work focus. For Jacquelyn, when commuting by car was necessary for work-to-home journeys, music provided a powerful energising and warming transitional impetus:

As soon as I get in the car and leave the campus, I crack on the radio. If I can’t find a station with some decent rock, it’s on with the Zep or Coverdale tape. I need something with a rocksteady beat, something with a lot of whack to it, something you can feel deep down... It’s an energizing thing really, such a change from being so static and sedentary at work, so mind-orientated. I really need that change

of tempo, to wake me up, to get everything moving so as to be ready to pull on the training gear as soon as I get home. It's like I have to prepare my muscles and also get myself focused for the sensations of running. A lot of academic thought is abstract, it's mediated and disembodied, but distance running demands right-on physicality from the very first step, when the elements hit you... (RS1 Log 2)

This sensing of heat as a force of internal bodily energy also coheres with Potter's (2008) vivid account of heat in relation to the dancers she studied, who experienced heat as a sense of internal energy and bodily readiness. Body heat was generated in order to prepare the dancers for both effective performances and for improving somatic learning during training exercises. Similarly, within our own physical culture, part of the socialisation of distance runners includes the development of a practical understanding of the relationship between athletic performance and energy as lived in the body. Energy incorporates physiological, psychological and interactional dimensions. In the sphere of distance running, it includes the expenditure of effort required to propel the body forward to complete set distances across specific terrain in a particular time, at a particular pace, and under particular climatic conditions. Energy is felt physiologically by runners as a force they can utilise to propel them forward. By systematically drawing upon and expending that energy so as to reach certain levels of (primarily) cardio-respiratory fitness, athletes complete whatever running task is to hand, or perhaps we should say 'to foot'. Fitness levels do not automatically equate to energy levels, however; so for example, as runners we can be training at a pace of seven minutes per mile and that intensity of running will be experienced as relatively easy. The very next day, though, the same pace may be maintained but the effort will be experienced as greater, as the inner energy force feels comparatively diminished. Athletes in the UK distance running subculture tend to categorise how they are running by using the term 'going' (Hockey, 2013). So when runners are 'going well' energy levels are invariably high, and when 'going badly' energy levels are experienced as low. The felt availability of this internal force is then very much a contingent one. Hence, when runners start a training run or race, they are immediately searching for a sense of that energising force, seeking to identify its availability for a particular running task. Its 'feltness' is experienced overwhelmingly in the limbs, hips, and lungs. When this energy is sensed interoceptively, runners' breathing will generally be easy – apart from for those with asthma or other breathing conditions (see Allen-Collinson & Owton, 2014) – breathing is rhythmic, muscles responsive, movement light, posture aligned. These sensory perceptions constitute for us the somatic indicators of this inner, energising force. With experience, these perceptions come to be recognized and known by runners; the energy becomes a phenomenon – it appears to the conscious mind. When the energising force is acknowledged as being plentiful, it is brought to mind as a typification of 'going well':

Lots of 'oomph' today! Not exactly effortless, but got up the hills easily and that's always the prime sign of good training. In some ways it's all in the quads (quadriceps). You ask them the question when you get to the bottom, 'ready?' and then you try to surge up, and then you find out if it's there, and like today it was. It's sort of having a bank balance and being in credit physically, you draw on it, and when it's there you can feel the power. (RS1 Log 1)

A contrasting corporeal state is experienced when the runner feels lacking in energy, devoid – or at least depleted – of the necessary force to achieve satisfactory propulsion. 'Satisfactory' is meant in the sense that training objectives can be met without experiencing undue physical overload, which produces gross fatigue, and can propel athletes into illness and injury. When the energy force is experienced as depleted, the

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session then truly becomes a matter of endurance (see Hockey & Allen-Collinson, 2016). The lack of this energising, propulsive force is signalled to the runner by a state of ‘dys-ease’ (Leder, 1990), and unpleasant sensations, with fatigued, tight and unresponsive muscles, disjointed style, slumped posture, heavy footfall and ragged breathing. The latter is a prime indicator of ‘going badly’, particularly for those who usually have no problems with respiration, and is comprehended via a specific kind of ‘acoustic knowing’ (Feld, 1996: 97):

All over the place this morning, I could not get it together at all. J kept on looking at me anxiously. I could tell straight away it was going to be a duff run. Felt very hollow right from the first mile, no push, a real slog all away around the route. The biggest sign for some reason (who knows?) was my breathing. I could not believe the noise I was making as an experienced runner. It was like I was some kind of beginner again. As I passed by folk having a picnic on the park, they actually looked up suddenly. They must have thought I was bound for a cardiac arrest... (RS1 Log 1)

The contingency of this internal energy is complicated as, via their habitual corporeal experience, runners come to realise that the majority of their training endeavours are sessions which are not simply either full of energy or devoid of it, but rather there exists a complex and shifting combination of both. Examination of our data revealed that there was considerable fluctuation in energy levels experienced during the course of the great majority of runs, with concomitant sensory experience of a positive and negative nature. These fluctuations we came to conceptualise via the phrase ‘little good patches and little bad patches’. These ‘patch’ episodes had a high degree of unpredictability and serendipity attached to them, for try as we might, we could never identify any regular pattern of occurrence or sequence. Thus, at the start of a run the energy would sometimes be difficult to find and at other times relatively easily available, for no discernible reason. Or, at the end of a training session, energy would seem utterly depleted, whilst at other times one or both of us would feel a reservoir of energy still remained. In the midst of sessions, we experienced similar fluctuations in levels of energy. Sometimes energy-dips would occur for obvious reasons – when running up a steep hill, over rocky terrain, or into a strong wind, but they were not always so neatly correlated with increased energy demands. Trying to understand causation at a phenomenal level was thus difficult, and our understanding was confined to co-relating dips in energy for whole sessions, or prolonged dips across a period of training, with increases in the volume or intensity of our overall running schedule. This lack of causal explanation was at times a source of frustration, particularly when energy levels suddenly and seemingly inexplicably plunged just prior to a much-anticipated race day or race time. There is then a paradox at work with distance running: one can be training hard and effectively, and have achieved a plateau of considerable physiological fitness, and yet, relatively speaking, feel devoid of the internal energy source, and the heat of vitality:

We have been training hard in preparation for doing some races in the North. We know we are fit, we know we are getting ready. The problem is most of the time we both feel dog tired, we can’t feel the edge, there is no buzz, no élan, no - I guess – ‘spring’ to the running. We are just grinding it out mile after mile, night after weary, winter night, at the pace we need to. Analytically, it’s curious. Practically we can only hope IT comes back when we reduce training prior to the races. May the Force be with you?? (RS1 Log 3)

Interestingly, examination of our data revealed various kinds of reification of this internal

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bodily energy, as it became an 'IT', or 'gas'(olene), with its embodied container often being referred to as a 'tank'. Hence, there were various mundane performative utterances (Turner, 1975) between the two of us during running sessions or immediately post-run. We would tell each other, variously: 'IT was not there today', 'No gas in the tank', 'lots of gas in the tank today', and other variations on a theme, which provided the interactional transmission of our internal energy states to one another. This transmission of 'feeling state', in our combined athletic experience, extends to the wider UK running subculture, and contributes to the development of intersubjective understandings between distance runners.

The above findings suggest a lived experience of heat as a distinct perceptory mode within distance running, relating not only to feelings of inner heat, but also to inner energy and a life force. In the next section, we consider temperature perception as tactile, a specialised form of touch. Again, we would emphasize, however, that there is substantial overlap and intertwining of these sensory ways of knowing.

### Thermoception as touch

In this section, we explore the ways in which heat and cold are experienced as a form of the haptic. Distance running and racing are primarily outdoor activities in the UK (there are few indoor tracks), with runners being constantly exposed to a gamut of different meteorological and atmospheric conditions. As Ingold (2010) notes in relation to the weather-world of walking outdoors, the weather is an all-enveloping infusion, 'not so much what we perceive as what we perceive in' (p. 131). For runners too, we are intertwined with, and immersed in this weather-world, and often highly 'attuned' to atmospheres, including air quality (Allen-Collinson & Owton, 2014). Hence, part of the socialization into both the cultural and physiological practices of this athletic endeavour consists of experiencing the ways in which varying temperatures and climatic conditions impact upon the running body, and understanding one's own strengths and weaknesses in relation to these impacts. Given the physically-demanding nature of the sport, in hot weather a rise in body temperature occurs relatively quickly, and thermoception is a sense to which runners need to attend, and become well-attuned. This is particularly important given the very narrowly circumscribed limits of corporeal-core temperature variation that humans can endure. Outside of these parameters, dire consequences can occur (heat exhaustion, heat stroke, death).

Assailed by the 'touch' of high external temperature, the runner's skin provides a clear warning sign that running conditions need to be monitored. Whilst the rise in temperature is one significant variable, its combination with increasing humidity levels (a frequent occurrence in the UK, particularly away from fresher, coastal breezes) necessitates an even greater alertness on the part of the athlete. When the outer skin becomes both hot and 'clammy', face flushed and sweat accumulating, usually this indicates a rise in core temperature that can have a deleterious impact on performance. Although it is possible to develop some degree of physiological tolerance to this bodily 'heating up' via a gradual build-up of training in analogous conditions, even very fit and healthy individuals vary in their ability to withstand heat, as the recent deaths from heat of very fit Territorial Army soldiers testify (Farmer, 2013). Furthermore, in the UK, the weather is notoriously variable, which generates difficulties in adapting to rapid and unpredictable changing conditions and temperatures:

Saturday. End of the training week and our day off tomorrow. The weather has been up and down all week. We had tee shirts and longs (running tights) on the first couple of days when it was cold for May, then 'up we go', and we put shorts on midweek and by Thursday Jaqui had even switched to a summer vest. Now

today, we're both back to the kit we had on at the start of the week. Crazy – you just never know in 'Blighty' (affectionate term for 'England')! (RS1 Log 3)

In contrast, and at the other end of the temperature spectrum, a similar process occurs, with the runner's skin registering low temperatures via 'goose bumps', especially if a drop in temperature is accompanied by strong winds. Proprioceptively, core temperature begins to drop and despite heat-generating movement, runners' bodies can become chilled, risking pulled muscles - and in extreme cases, hypothermia. Through these sensory experiences, runners develop ways of bodily knowing vis-a-vis their own limits of temperature toleration, and then change their training accordingly, wherever possible. This constitutes a form of 'situational adjustment' (Becker, 1977: 279) and embraces a number of processes, for example, donning or discarding clothing, the selection of running-shoes best suited to the conditions (to keep feet drier or cooler, for example). Ensuring adequate hydration is very important, before, during (carrying fluid, particularly on longer runs) and after running in high temperatures. Known running routes can be adjusted to maximise shade in the heat (forest paths are cooler than open moorland), and shelter in the cold. The pace of training (and racing) can similarly be adjusted so as to try and keep within one's tolerance levels; generally, the faster and harder the run, the higher the core temperature rises. Runners build up not only somatic knowledge about their own bodily reactions to heat and cold, but also, when routes are well-known, they learn to envisage the rapid temperature fluctuations that might occur with changing terrain and environment, and to take specific action in anticipation:

Today I ran up Clougha (moorland fell in north-west England) then across the moor to near Cragg Wood and then down until I hit the road and then back home. I knew it was going to be cold on the tops as it was well freezing on campus near sea level with a wind blowing. I had all the gear on, hat, gloves, tights, thermal top, wind breaker, but I knew I was going to get blasted on the tops given the exposure. So coming off the road onto the fell I started pushing the pace as I climbed. That way I knew when I got to the summit I would be really warm. I figured that would last a long time maybe until I started descending on the way back. It worked not all the way, but a good part of it. Result! (RS1 Log 1)

These lived-body experiences are suggestive of the tactility of thermoception, as the body is literally touched by the atmosphere, elements and environmental conditions: the touch of icy rain upon naked flesh, or the stinging slap of hot tarmac against a thinly-cushioned foot sole. Just as Merleau-Ponty (2001) highlights the intertwining of mind-body-world in his notion of chiasm (portrayed by the Greek letter 'Chi' 'χ'), running-bodies are fundamentally linked to and merged with the elemental world; they are part of the fabric of the world, the 'flesh-of-the-world'. This body-world interconnectedness for us is a central structure of lived-running experience. As runners, we encounter and sometimes feel we 'fold into' the landscape, the terrain, and a whole gamut of elements, struggling forward against vicious, cutting winds, being pelted by stinging icy rain and hail out on the moors, cooled by fat warm drops of summer rain, breathing and taking into ourselves the atmosphere and the elements:

Cold wet run tonight as heavy sleet, snow and rain made for a drenching cocktail. A week's snow has been washed into slurry by the heavy rain, making for that strange double-layered surface when newly thawed snow mixes with mud and shifts and slides atop of still frozen ground - treacherous to run on, even though welcome after the compacted ice- packed pavements... Slip sliding over the sodden grass, I opt for the firmness of the rough track through the river meadows

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as the January night descends. Sleets pelts my frozen cheeks so I pull my ski mask higher, but it's already drenched with the big wet flakes of sodden snow. I seem to be breathing in slushy snow particles... Picking my way carefully around potholes and puddles, I leap straight into an unseen one - cursing, then a moment's anticipation before the near freezing water seeps into my trainers and through two layers of socks and then begins slowly, slowly to warm as I squelch my way home through the pinging sleet. (RS2)

The touch of the elements often involves a degree of unpredictability, even Heidegger-ian 'thrown-ness', requiring runners to react swiftly in making bodily adjustments. In contrast, more deliberate seeking and application of heat and cold are also undertaken. This occurs when we seek out specific conditions in which to train, so as to prepare for analogous conditions in races, for example, undertaking hot-weather training in order to build up endurance for a race in a specific high- temperature location. Heat- and cold-seeking is also undertaken in relation to another, sadly all-too-common, occurrence for those who run regularly and often: injury. This may be an acute (and hopefully short-lived) injury or more chronic pain and discomfort, for example, John's 'grumbling' peroneal tendons or Jacquelyn's arthritic toe, the latter painfully exacerbated by running on hard and/or hot surfaces:

Hot dusty hard-whack of a run tonight... The heat spikes up in painful shards from the ungiving pavements, and even the softer ground of the common has dried out and compacted to provide little respite to aching legs and sore feet. My feet were swollen by the end of a long working day, I could feel the pinch as I pulled on trainers and had to loosen the laces to squeeze in reluctant feet. Stumble up the hill again at the end of a heat-shortened run, poor old toe and right foot stinging, burning. I try to put feet down evenly, not to 'move away' from the painful one. Later, with right leg propped on the coffee table, the carefully applied ice-bag seems to melt against the angry-red, pulsing heat of the injured toe. Then gradually, gratefully, the toe begins to calm as the soothing blue-cool absorbs its fury... (RS2)

This deliberate seeking out and employment of forms of heat or cold for their therapeutic use, on occasion on a daily basis, then becomes part of distance runners' self-help (Hockey, 2005) craft practice, necessary for keeping them running (otherwise most would be in penury from physiotherapy fees!):

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Trying to be analytic about using heat and cold and examining our research logs and previous training logs, it's obvious we have learnt over the years various techniques to treat both chronic and acute problems. Most of the time that has been by trial and error as we could not just go on 'on line' for injury treatment advice! So for example, putting a damp flannel around a hot water bottle and applying it to a dodgy hamstring repeatedly throughout the day. Now of course we also have various home use devices like TENS1 which will help the healing process. Or, when 1 Transcutaneous electrical nerve stimulation (TENS); a TENS machine is a small, battery-operated device that sends small electrical impulses to the painful area of the body. The impulses can block/reduce the pain signals travelling to the spinal cord and brain. Applying ice to stop swelling and inflammation, learning how to avoid ice- burns. (RS1 Log 3)

As Vannini and Taggart (2013) have recently noted, currently there is a surprising dearth of ethnographic research on the experience of heat/cold, despite its centrality in human

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life. In this chapter, we examine in some depth via a phenomenological-sociological perspective how temperature is experienced and dealt with by us as two very experienced, 'veteran' distance runners, portraying elements of the thermoceptive data from two running projects. The analysis focuses on different but, we argue, closely intertwined, ways of conceptualising thermoception: as a specific form of the haptic, whereby heat and cold are felt as external elements directly touching the running body. And we also explore heat/cold as a distinct sense, experienced interoceptively, as a feeling of 'core' warmth/cold and inner energy. Commensurate with our phenomenologically-inspired approach, these two sensory experiences are not conceptualised as some kind of duality. Rather, and in agreement with Paterson (2009), we argue that there is dialogue, a mutually influencing interaction between them, which is always ongoing. There is a 'blurring' of perceptual modes, which shift endlessly, depending upon the context of the running experience, be that on top of a freezing, wind-blasted fell, on a sun-scorched beach, or along an overcast polluted city street. In our lived experience, and talking to others who inhabit our runners' life-world, both these forms of temperature perception are experienced as an integral part of running; both emerged strongly from the research findings and are analytically viable.

As illustrated in our field notes, distance runners are often acutely attuned to the 'weather-world' (Ingold, 2010), and to changes in the atmospheric and environmental conditions, including temperatures, accosting them. Sometimes, these can be tiny, highly nuanced shifts in atmospheres – internal and external, and, as existential phenomenology in particular highlights, at the body-world interface. Runners are also finely attuned to the levels of internal energy they feel are available to draw upon in the running-moment. They are thus engaged in a process of constant 'situational adjustment' (Becker, 1977: 279) in the face of these sensory forces. This constant adaptation and re-adaptation is the means by which runners strive to achieve what Dewey has conceptualised as an 'equilibrium' (1980:12) with their immediate environment, including the 'thermo-environment'. We are thus engaged in a form of ongoing 'temperature work', constantly seeking a balance of heat/cold, energy/effort in order to complete effectively our training sessions and races. This 'work' is required within our own running life-world, not only in terms of accomplishing a decent (or, if one is very lucky, a good) running performance, but also in order to avoid - or at least lessen the risk of - injury and illness, occasioned by a lack of such equilibrium. Ultimately, however, and beyond any particular physical cultural life-world, this 'temperature work', reliant upon both thermoception and thermoregulation, is requisite for staying alive.

### Concluding reflections

Doing the two research projects on which this chapter is based has had many interesting consequences; three of which are particularly salient in the current context. The first reminds us of our sociological socialisation, and how we now view the social order of sport; our perspective (if this is not too an ocularcentric expression) has changed in recent years. Following Becker (1977), we had previously conceptualised social order and structure as fundamentally 'people doing things together'. Our stance did not, however, take on board the full impact of the sensory. The latter is at its most pervasive in the constant flow of everyday life, in the mundane world, so to speak. Yet it is only relatively recently that the 'sporting mundane' and its saturation by sensory activity has come under sociological and particularly ethnographic scrutiny. This is interesting, for as Giddens (1984) asserts, the stable continuity of both individual selves and of social institutions is dependent upon the continuous reproduction of mundane routine events. In effect, as Lynch (2001) has acutely observed, what is really at stake is not so much the theoretical

problem of order but the substantive production of order on singular occasions, which is routinely and mundanely accomplished day by day. Those ongoing patterned sensory accomplishments then constitute the bedrock of social life and arguably this is nowhere more pervasive than within sport and physical culture generally. These accomplishments are now from our changed stance foundational, and order (rules, regulations, etc) and structure (institutions, roles, etc) are built upon them.

Prior to undertaking the research projects, our relationship to sensory activity during distance running was solely via a member's knowledge. In Garfinkel's (2002) phenomenologically-based terms, we more than fulfilled the 'unique adequacy requirement' (p. 175) of being distance runners and 'doing' distance running. The activity of many decades had built (and continues to build) for both of us a sensory based 'stock of knowledge at hand' (Schutz, 1967) which pervades our identities. Our research projects can then be understood as an ongoing process of 'knowledge-making' (Ingold, 2010) that seeks to unfold and depict analytically that hitherto taken-for-granted, mundane stock of athletic sensory knowledge. The whole enterprise has been and remains one in which we have been trying to uncover how we are 'vulgarly competent' (Garfinkel, 2002: 175) in distance running, particularly in a sensorial way. To date we feel we have made some small head way with that task.

This has, however, resulted in a second consequence, an ironic one, as distance running now is not the same 'pristine' activity as it was before our sensory research endeavours. For now we carry with us, stride by stride, an additional kind of member's knowledge, a sociological one of that hitherto untouched (sociologically-speaking) sensory activity. Elsewhere (e.g. Hockey & Allen-Collinson, 2016) we have used the phenomenologically inspired work of Drew Leder (1990) to show how runner's awareness of pain and discomfort fluctuates, sometimes 'dys-appearing' (appearing to consciousness) and then disappearing (receding from immediate consciousness). Now on the run there is the additional presence of another fluctuating feature, for we carry with us abstractions, concepts we have used to analyse our sensorium, which periodically intrude into our athletic consciousness, categorising its sensorial dimensions sociologically - often whether we want this presence or not! So now our leisure time is impinged upon by academic work, albeit interesting work, but still work. This provides an example of Merton's (1936) classic sociological analysis of how certain kinds of social action (our research) produce unintended and unanticipated consequences.

The third salient consequence is that researching at this phenomenological level of analysis has forced us to engage with 'things small' and made us arguably more competent ethnographers. So for example, the sensory activity (and its meanings) emanating from the mundane routine of putting on and securing our running shoes, produced data which connect fundamentally to both the 'surety' of each run materially, psychologically and to conceptions of identity.

Given our claim that researching the sporting sensory is foundational, where do we go from here? What are the future prospects for its interrogation analytically? So far in much of the published work there has been a propensity for researchers to create autoethnographic accounts of their own sporting activity (e.g. Downey, 2005; Spencer, 2012) which have produced new, useful and interesting 'thick sensory description' (Taylor & Hansen, 2005: 1225). These sensory data have often been represented in ways that have moved outside the conventional canons of realist writing, to portray evocatively the sensuousness of sport (Sparkes, 2002). So, how do we broaden out our analysis? Recently, Howes and Classen (2014) have noted: 'The meaning of the senses is in their use, and usage is everywhere informed by culture... Cultural and personal associations in turn affect our physical perceptions' (p. 8).

Within sport, therefore, we need to engage in-depth with the sensory aspects of different subcultures or lifeworlds. We might, for example, extend and develop our analysis of the

sensuous activity of sport parachuting, by compiling a series of accounts of that activity. Such accounts could be used to generate a set of inter-linked analytic categories. The nature of that linkage and its consequences could then be interrogated; for example how do parachutists touch when they are packing their own parachutes, and how do they see the latter using their own sensory rooted subcultural understandings? What are the consequences for performance of that human-equipment interaction? It might then be possible to use those analytic categories to compile an agenda for interviewing a cohort of experienced parachutists. In this way, knowledge of the sensorium of parachutists could be built up, connecting the empirical data to theory. Having done that, we could then examine a similar risk-taking sport, such as parkour, for example, in relation to the sensorium brought into play. Once we have achieved the analytic depiction of the sensoria of different sporting subcultures, insightful comparisons become possible about the ongoing construction and maintenance of the sporting order under different conditions. At present, we know little about precisely how people play across a range of sports, and that playing is formidably sensory.

To conclude, we portray one instance that gives some indication of the depth and complexity of the ethnographic challenge before us. Relatively recently, John, who is a football (soccer) fan, was listening to Lee Dixon, the ex-Arsenal and England fullback, on a football radio programme where he was a pundit. How fullbacks play and their situational awareness became a topic of conversation, and Dixon explained how he knew exactly where to position himself on the pitch when playing at home. He knew his precise spot because opposite that spot every game was a huge, loud and abrasive fan who let him know in no uncertain terms when he was playing badly or even averagely! Dixon in this case was hearing and looking 'in active ways' (Emmison & Smith, 2000: 185); sensory activity foundational to his skilled footballing performance. Uncovering this kind of small but often important, even crucial, 'way of knowing' lies at the heart of the auto/ethnographic challenge. There is much to be done.

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