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Footprints through the weather-world: walking, breathing, knowing

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This essay investigates the relation between becoming knowledgeable, walking along, and the experience of weather. It begins by exploring the meaning of ground. Far from being uniform, homogeneous, and pre-prepared, the ground is variegated, composite, and undergoes continuous generation. Moreover, it is apprehended in movement rather than from fixed points. Making their way along the ground, people create paths and tracks. These are made, however, through the impression of footprints rather than gestural inscription. As footprints are made in soft ground rather than stamped on a hard surface, their temporality is bound to the dynamics of its formation. These dynamics are a function of the weather, and of reactions across the interface between earth and air. Breathing with every step they take, wayfarers walk at once in the air and on the ground. This walking is itself a process of thinking and knowing. Thus knowledge is formed along paths of movement in the weather-world.

> We can't go over it.
> We can't go under it.
> Oh no!
> We've got to go through it!
>
> Rosen & Oxenbury 1989

'We're going on a bear hunt', sings the traditional nursery rhyme. 'What a beautiful day!' On their way to encounter the bear, our intrepid, would-be hunters walk through long grass that goes 'swishy swashy' as they pass, a deep river that goes 'splash splosh', oozy mud that goes 'squelch squerch', a dark forest where they go 'stumble trip', and a whirling snowstorm that howls 'hoooo woooo'. It turns out to be a chastening experience, and the youngsters return a little wiser and less foolhardy than when they set out. The story is a beautiful illustration of the intimate relation between becoming knowledgeable, walking along, and the experience of weather. By *becoming knowledgeable* I mean that knowledge is grown along the myriad paths we take as we make our ways through the world in the course of everyday activities, rather than assembled from information obtained from numerous fixed locations. Thus it is by *walking along* from place to place, and not by building up from local particulars, that we come to know

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what we do. Yet as we walk, we do not so much traverse the exterior surface of the world as negotiate a way through a zone of admixture and interchange between the more or less solid substances of the earth and the volatile medium of air. It is in this zone that all terrestrial life is lived. As inhabitants of this zone we are continually subject to those fluxes of the medium we call weather. The *experience of weather* lies at the root of our moods and motivations; indeed it is the very temperament of our being. It is therefore critical to the relation between bodily movement and the formation of knowledge.

My objective in this essay is to investigate the relation between these components of ambulatory knowing, pedestrian movement, and temperate experience. I shall proceed in four steps. First, I shall explore the meaning of what we take to be the *ground*. From there, I move on to consider the formation of *paths and tracks*. Thirdly, acknowledging that as we walk the ground we also breathe the air, I shall attend to the *wind*. Finally, I shall turn to the implications of these explorations of ground, path, and wind for our understanding of *knowledge* and of how it is formed.

Before proceeding, let me take a moment to situate my investigation within the context of the present collection. The papers comprising the collection were originally written for a series of seminars on *The transmission of knowledge*. Like many of my fellow contributors, however, I am convinced that 'transmission' is quite the wrong word to describe the ways in which people come to know what they do. I have set out the reasons for my conviction elsewhere (Ingold 2000*a*; 2001; 2009; see also Ingold & Hallam 2007: 5-6), and will not repeat them here. As Marchand explains in his preface to this collection, it was in part because of a general dissatisfaction with the notion of transmission that the volume has been renamed *Making knowledge*. Yet even the notion of making, I contend, needs to be qualified. If knowledge is indeed made, then making has to be understood in the sense implied when we say of people that they 'make their way' in the world. It is not a construction, governed by cognitive mechanisms of one sort or another, but an improvisatory movement – of 'going along' or wayfaring – that is open-ended and knows no final destination. It is precisely this sense of knowledge-making, which is equally knowledge-growing, that I attempt to establish in this essay.

My argument has a critical corollary, however, which distinguishes it from most other contributions to this collection. It has become almost an anthropological cliché to describe the relation between knowledge and the body by resort to the idea of 'embodiment'. Yet a mindful body that knows and remembers must also live and breathe. A living, breathing body is at once a body-on-the-ground and a body-in-the-air. Earth and sky, then, are not components of an external environment with which the progressively 'knowledged-up' (socialized or enculturated) body interacts. They are rather regions of the body's very existence, without which no knowing or remembering would be possible at all. 'Inside me', confessed Saint Augustine, 'in the vast cloisters of my memory ... are the sky, the earth and the sea, ready at my summons, together with everything that I have ever perceived in them by my senses' (cited in Carruthers 1998: 29). What follows may be read as a protest against ways of theorizing the embodiment of knowledge that proceed, to the contrary, as though earth and sky – indeed the world itself – were extrinsic to what mindful bodies *are*. It is a protest against psychologistic approaches to 'grounded cognition', of the kind advocated by Emma Cohen (this volume), that effectively put the ground inside the

brain, leaving individuals stranded in an unspecified 'environment' which is invoked merely for the purposes of allowing the body to have something material to interact with. The increasing regard for the neurological correlates of knowing has, it seems, been matched by an increasing disregard for the marvellous complexities of the world we inhabit, indeed for life itself. To restore ways of knowing to the processes of life, we must put this trend into reverse.

On the ground

Human beings are terrestrial creatures; they live on the ground. That much appears at first glance to be obvious. But what *is* the ground? As a first approximation, we might suppose that it is a portion of the surface of the earth that is evident to the senses of an upright body. 'To my senses', wrote Immanuel Kant, the earth appears as 'a flat surface, with a circular horizon' (1933: 606). This surface, for Kant, lies at the very foundation of human experience: it is 'the stage on which the play of our skills proceeds [and] the ground on which our knowledge is acquired and applied' (Kant 1970: 257). Everything that exists and that might form the object of our perception is placed upon this surface, rather as properties and scenery might be set upon the stage of a theatre. Beneath the surface lies the domain of formless matter, the physical stuff of the world. And above it lies the domain of immaterial form, of pure ideas or concepts, which the mind is said to bring to the evidence of the senses in order to organize the piecemeal data of experience into a systematic knowledge of the world as a whole – knowledge which Kant imagined to be arrayed as if on the surface of a sphere, at once continuous and finite in extent. With his feet firmly planted on the level ground and his mind soaring in the sphere of reason, the Kantian subject was above all a seeker after knowledge.[1] It was Karl Marx who subsequently put the subject to work, through a process of labour that saw the earth turned into an instrument of his purpose. The earth, Marx declared, is 'the most general instrument of labour ... since it provides the worker with the platform for all his operations, and supplies a field of employment for his activity' (1930: 173). What for Kant was a stage became, for Marx, a production platform, not merely furnished but materially transformed through human activity. Yet the ground still appears as a *substratum* for such activity, an interface between the mental and the material where the sheer physicality of the world comes hard up against the creativity of human endeavour.

More than a century later, James Gibson returned to the significance of the ground in his pioneering work on the ecology of visual perception. He begins, again, with what sounds like a truism: 'The *ground* refers, of course, to the surface of the earth' (1979: 33, original emphasis). There is much in common between Gibson's understanding of this surface and what both Marx and Kant had to say about it. For Marx's idea of the instrumental or use-value of the earth, Gibson substitutes the notion of *affordance*. Thus the ground surface is a substratum that affords support for a terrestrial biped or quadruped. It is 'stand-on-able, ... walk-on-able and run-over-able' (Gibson 1979: 127). In the limiting case of what Gibson calls the 'open environment', void of content, the ground would be realized as a perfectly level plain, receding without interruption to the great circle of the horizon. That, as we have seen, was Kant's view as well. There is one key difference, however. For in Gibson's thinking the ground has none of the metaphysical significance that it had for Kant or even Marx. It does not mark the boundary between the mental and the material or between conceptual reason and sensory experience; nor does it separate the consciousness of

the labourer from the soil on which he works. It does not, in short, envelop the material world but rather comprises an interface, *within a world of materials*, between the relatively solid *substances* of the earth and the relatively volatile *medium* of the air (Gibson 1979: 16).[2] When Marx declared, in the *Communist manifesto* of 1848, that 'all that is solid melts into air', he was referring metaphorically to the evaporation, in bourgeois society, of the 'fixed, fast-frozen relations' of pre-capitalist modes of production, and not to any process of nature (Marx & Engels 1978: 476). For Gibson, by contrast, solidity is what distinguishes the substances of the earth from the gaseous medium above, a distinction that is revealed to perception as the ground surface. If the solid earth were to melt into air, then the ground would simply disappear (Gibson 1979: 22).

With the earth below and the sky above, and supported on the ground, the Gibsonian perceiver is placed in the midst of the phenomenal world rather than banished to its exterior surface. He is, in that sense, an inhabitant. He has air to breathe, and a platform to stand on. Yet an open environment, comprising the ground surface alone, would not in itself be habitable. Arguing this point, Gibson compares the ground to the floor of a room. In an empty, unfurnished room one could stand, walk, or even run on the floor, but do little else. In any inhabited house, however, the rooms are cluttered with furniture, and it is this clutter that makes possible all the other, everyday activities that are carried on there (as well as hindering some activities like running about). Likewise, Gibson reasoned, a plain devoid of features, though it might afford standing and walking, would in all other respects be a scene of utter desolation. It could harbour no life, and could not therefore serve as an environment for any animate being. In Gibson's words 'the *furniture* of the earth, like the furnishings of a room, is what makes it livable' (1979: 78, original emphasis). Like the room, the earth is cluttered with all manner of things which afford the diverse activities of its innumerable inhabitants. There are objects, which may be attached or detached, enclosures such as caves and burrows, convexities such as hills, concavities such as hollows, and apertures such as cracks and openings. Indeed it seems that any ordinary environment would be so cluttered up that its inhabitants would be unlikely ever to come directly into contact with the ground at all.

This result is deeply paradoxical. On the one hand, Gibson insists that the ground is 'the literal *basis* of the terrestrial environment', 'the underlying surface of support', and even 'the reference surface for all other surfaces' (1979: 10, 33, original emphasis). In that sense it should be fundamentally *there*, before all else. And yet, on the other hand, it is a surface that can only be arrived at through a process of abstraction and reconstruction: by excising every variation or particular from the environment of which it is a part, remodelling it as a piece of furniture or scenery, and then reconstructing the scene by imagining each piece placed on a pre-prepared and absolutely featureless floor. As a child I built a model railway, of which I was very proud. The most important part of the layout, however, was not the line but the landscape of hills and valleys through which it ran, made out of wire-netting, papier mâché, and plaster, all of which rested on a plane sheet of softwood mounted on a wooden frame and legs. This sheet, known as the baseboard, was indeed an underlying surface of support and the very basis of my model. But it was completely hidden from view by the 'clutter' I had constructed on it. Had the miniature people and animals that I had placed in my landscape been capable of movement, they would not have been walking across the ground of the baseboard but clambering over the scenery! It

would have made no difference whether they were up on a hill-top or down in a valley, for both were part of the clutter. In the real world, by contrast, there is nothing equivalent to the baseboard of my model. It is a figment of the imagination. Making his way over hill and through valley, the walker treads the ground itself, experiencing its rising and falling in the alternation of close and distant horizons, and in the greater or lesser degrees of muscular exertion entailed in first toiling against, and then surrendering to, the force of gravity. Real hills and valleys, in short, do not rest upon the foundation of the earth's surface, as the scenery of my model rested on the baseboard, but are themselves formations of that surface.

How, then, is this surface to be understood? Our example of the walker already suggests one part of the answer. The ground is perceived *kinaesthetically*, in movement. If we say of the ground of a hill that it 'rises up', this is not because the ground itself is on the move but because we feel its contours in our own bodily exercise (Bachelard 1964: 10-11; see also Ingold 2000*b*: 203-4). Even if we view the hill from a distance, we sense its rise in the ocular movement of our focal attention as it scans the upward-sloping line of the horizon. Moreover, far from comprising a featureless and perfectly level plane, the ground appears *infinitely variegated*. These variations are not just of contour but also of substance, colouration, and texture. For all that clutter that Gibson supposed to be placed upon the ground is actually intrinsic to its very constitution. Of course it can be observed at different scales, from close-up to far away, and each will reveal different patterns, textures, and grains. Whatever the scale of observation we adopt, however, it is liable to appear just as puckered, mottled, and polymorphic. In that sense the ground surface has a fractal quality, whence follows a third characteristic: it is *composite*. It is, if you will, the surface of all surfaces, matted from the interweaving of a miscellany of different materials, each with its own peculiar properties. An analogy might be drawn with a textile, whose surface is not the same as those of all the strands of which it is woven, but is nevertheless constituted by them. Finally and perhaps most critically, the ground surface is not pre-existent but undergoes *continuous generation*. Recall that for Gibson, surfaces persist only to the extent that solid substances resist transformation into the gaseous state, or do not 'melt into air'. The presence of the surface, he thinks, is proof of the separation and immiscibility of substances and medium (Gibson 1979: 22). In the living world, however, the ground surface persists not in spite of reactions between substances and medium, but because of them. Indeed it is through such reactions that the ground is formed in the first place.

Much of the earth's surface is covered in vegetation. Plants grow *in* the ground, not *on* it, as their roots penetrate deep into the soil while their stems and leaves mingle with the open air, rustling in its currents.[3] Delving into the earth, we find the tangle of vegetation becoming ever more densely packed, so that it is often impossible to determine with any precision where 'ground level' actually lies. What matters for the plant is that it should have access to light, so that in practice the ground is not so much a coherent surface as a limit of illumination. The plant's growth is fuelled by a photosynthetic reaction which binds carbon dioxide in the air with moisture already absorbed into the soil from the atmosphere and taken up by the roots, releasing the oxygen which we and other animals breathe. When the plant eventually dies and decomposes, its material deposit adds to the layer of soil, rich in nutrients, from which further growth issues. In this sense the earth is perpetually growing over, which is why archaeologists have to dig to discover evidence of past lives (Ingold 2007*b*: S33). Clearly,

then, the ground is not inert. To the contrary, it is the most active of surfaces, the primary site of those reactions, of which photosynthesis is the most fundamental, on which all life depends. Wherever life is going on, earthly substances are binding with the medium of air in the ongoing formation of the ground. Or as Martin Heidegger put it, in rather more poetic language, the earth 'is the serving bearer, blossoming and fruiting, spreading out in rock and water, rising up into plant and animal' (1971: 149). In short, thanks to its exposure to light, moisture, and currents of air – to sun, rain, and wind – the earth is forever bursting forth, not destroying the ground in consequence but creating it.

It is not, then, the surface of the earth that maintains the separation of substances and medium, or confines them to their respective domains. It is rather its *surfacing*. By this I mean the engineering of the ground surface by coating it with a layer of hard and resistant material such as concrete or asphalt, as in road building or laying the foundations for urban development. The objective of such engineering is to convert the ground into the kind of surface that theorists of modernity always thought it was – level, homogeneous, pre-existent and inert (Ingold 2008: 1808-9). It is to make the earth into a stage, platform, or baseboard, or, in a word, into an *infrastructure*, upon which the superstructure of the city can be erected. Hard surfacing, I contend, is the definitive characteristic of the built environment. In such an environment, life is truly lived on or above the ground and not in it. Plants grow in pots, people in apartments, fed and watered from remote sources. The built environment, as Gibson said of environments in general, is cluttered with manifold objects whose only connection with any piece of ground is that they happen to have been set up on it. Were all the clutter removed, we would indeed be confronted with a scene of desolation. The hard-surfaced world, devoid of furnishing, is featureless and barren. Nothing can grow there. This is an extreme, however, that is never realized in practice, even in the most heavily engineered of environments. For unless it is constantly maintained and reinforced, hard surfacing cannot withstand the elemental forces of the sky and earth that erode it from above and subvert it from below. Eventually, it cracks and crumbles, and as it does so – as the substances beneath are exposed again to the light, moisture, and currents of the air – the earth once more bursts into life, overwhelming human attempts to cover it up.

Along the path

This distinction between the surface of the earth and its surfacing provides us with a key criterion by which to draw another, between the path or track and the road. Of course a road can be many things, as can a path, and the distinction I propose here is merely heuristic. But it serves to highlight the contrast between two modalities of movement which I call, respectively, wayfaring and transport (Ingold 2007*c*: 75-84). The wayfarer is a being who, in following a path of life, negotiates or improvises a passage as he goes *along*. In his movement as in life, his concern is to seek a way through: not to reach a specific destination or terminus but to keep on going. Though he may pause to rest, even returning repeatedly and circuitously to the same place to do so, every period of rest punctuates an ongoing movement. For wherever he is, and so long as life goes on, there is somewhere further he can go. Along the way, events take place, observations are made, and life unfolds. Transport, by contrast, carries the passenger *across* a pre-prepared, planar surface. The movement is a lateral displacement rather than a lineal progression, and connects a point of embarkation with a terminus. The

passenger's concern is literally to get from A to B, ideally in as short a time as possible. What happens along the way is of no consequence, and is banished from memory or conscious awareness. In the perfect case, the passenger is delivered at the terminus in a condition identical to that in which he set out, as though nothing at all had happened in between. Unlike the continual *tactical* manoeuvring of the wayfarer, picking his way along the ground, the passenger's career may be understood as a series of *strategic* moves from location to location – rather like the 'moves', in draughts or chess, of a piece across the board.[4]

In practice, however, pure transport is an ideal that can no more be actualized than can the dream of being in two places at once. Time passes and life goes on, even while the passenger is in transit. And it does so, as we have seen, thanks to the fact that the world is *not* fully surfaced. Every road is a strip of hard-surfacing, laid down in preparation for the boots that march[5] or the vehicles that roll over it, and is more or less unmarked by their passage. But while the road provides the infrastructural support for transporting persons and their effects from point to point, quotidian life proceeds for the most part along winding paths that infiltrate the ground on either side (Ingold & Lee Vergunst 2008: 12-14). Inhabitants are wayfarers and not passengers; for them the road is an obstacle rather than a conduit – just another potentially dangerous feature of the terrain to be negotiated. Where the path differs from the road is that it is a cumulative trace, not so much engineered in advance as generated in the course of pedestrian movement itself. And by the same token, the path is marked in the ground, not laid over it. One could perhaps compare wayfaring with drawing: as the draughtsman traces a line with his pencil, so the wayfarer – walking along – paces a line with his feet. The painter Paul Klee had explicit resort to this comparison in his definition of drawing as 'taking a line for a walk' (1961: 105). Subsequently, in his landmark work of 1967, *A line made by walking*, sculptor Richard Long turned the metaphor into an actuality, creating a linear path in a grassy meadow by walking repeatedly up and down. Reviewing a recent exhibition of Long's work, Robert Macfarlane observes that the artist's 'legs are his stylus, his feet the nib with which he inscribes his traces on the world'. Walking becomes an act of inscription, of writing in the original sense of drawing a sharp point over a surface, of furrowing a track (Macfarlane 2009).

There are nevertheless important differences between walking and drawing which complicate the idea of path-making as a simple process of inscribing the ground. For a start, the walker does not set out upon a blank sheet. In the case of drawing, suggests art historian James Elkins, the first mark 'is born in blindness' (1996: 234). The draughtsman may begin with a figure in mind, or the outline of a shape, that he intends to realize on paper. Yet on the sheet before him there is initially nothing to see. Only as the picture evolves does blindness give way – though never fully – to vision, while the mental image correspondingly fades. The pedestrian is blind in a different way. It is not that he cannot see anything in the field of vision. On the contrary, since the ground is a fractal surface there is no limit to the variety it offers to his inspection. What he cannot see, however, either in his mind's eye or on the ground, is the overall pattern or design traced by his movement. This is due to the factor of scale. *Relative to the expanse of his walking*, the pedestrian's eyes are simply too close to the ground. To see the designs, he would have to fly with the birds, as in some societies shamans are reputed to do (indeed the exceptional cases of walked figures, such as the Nazca lines of highland Peru, seem to be premised on the idea of a shamanic or god's-eye view).[6] Ordinarily, however, the

wayfarer is not a walker of shapes or outlines, and his vision unfolds at ground level, as he goes along, rather than from a superior and stationary vantage-point. To put it the other way around: if drawing were like ordinary walking, then the draughtsman's eyes would have to be located not in his head but somewhere near the tip of his pencil. For this reason, I believe it is misleading to compare the ground surface, as does the architect Francesco Careri, to a palimpsest upon which successive figures are superimposed, one upon the other. According to Careri, the surface of walking 'is not a white page, but an intricate design of historical and geographical sedimentation on which to simply add one more layer' (2002: 150). Path-making, however, does not so much add another figurative layer to the ground surface as weave another strand of movement *into* it.

A further difference between walking and drawing hinges on the contrasting action potentials of the hands and feet. The hand, liberated in the course of anatomical evolution from the function of supporting the body, is free to manipulate an inscribing tool which can cut a groove or deposit a trace as a more or less enduring record of its gestures. Such inscriptions can appear as continuous lines. But the feet, bearing the full weight of the body, *impress* the ground rather than inscribing it. Although the movement of walking is continuous, each footfall makes a separate impression. For the path to appear along the ground as a continuous line it must be walked many times, or by many people, so as to iron out the incidence of individual treads. On many surfaces, the traces left by these treads are so subtle as to be barely visible. Sometimes they leave no trace at all. The ground of a footpath may be just as variegated as that of the terrain through which it winds, and can only be discerned because of the way passing feet have compressed the soil, created or altered patterns of plant growth, rearranged gravel, or polished the surfaces of rocks and stones. No material need be added or scratched away. When Long made his famous line by walking the length of a meadow, we can only make it out thanks to the way grass stems bent and flattened by his footsteps caught the light (Macfarlane 2009). He has not cut the line with his boots, nor has material been deposited – as, for example, when lines are painted on grass to mark out a sports-ground. Another example comes from northern Namibia, where indigenous Akhoe Hai//om hunter-gatherers, according to their ethnographer Thomas Widlok (2008: 60), have unwittingly created paths through the desert, primarily between water-pans, in the form of lines of mangetti trees. As they went on their way, people would chew the highly prized nuts of these trees, periodically spitting out the hard kernels from which new trees grew. And although the trees have a short life-span, once the path is made it is conducive to further use as the trees provide food in the form of nuts, shade from the hot sun, and water that collects in the hollows of old trunks.

Inscriptions, then, are one thing; impressions another. This difference, in turn, invites some reflection on the phenomenon of footprints. One can read movement and direction from a footprint just as one can from an inscription – not, however, as the trace of a gesture, but rather as a record of changing pressure distributions at the interface between the walking body and the ground. In attending to surface texture as well as outline, it is a reading that is as much tactile as visual. Distinct footprints are registered most clearly not on hard surfaces but on those which, being soft and malleable, are easily impressed, such as the surfaces of snow, sand, mud, and moss, or – as Sherlock Holmes observed in the case of 'The crooked man' – a grassy lawn. 'There had been a man in the room', said Holmes, 'and he had crossed the lawn coming from the

road. I was able to obtain five very clear impressions of his footmarks ... He had apparently rushed across the lawn, for his toe marks were much deeper than his heels' (Doyle 1959: 146). Yet precisely because soft surfaces do not readily hold their form, footprints tend to be relatively ephemeral. Snow may be covered by further falls or may eventually melt away, sand may be sculpted anew by the wind or washed by the tide, mud may be dissolved by the rain, and moss or grass may grow over again. Footprints thus have a temporal existence, a duration, which is bound to the very dynamics of the ground to which they belong: to the cycles of organic growth and decay, of the weather, and of the seasons. The ground, as we have seen, is matted from diverse materials. Footprints are impressed in the mat.

Although inscriptions and impressions register differently in the surfaces they mark, they have in common that they are the traces of a moving body as it goes along. In this regard they are equally opposed to another species of mark that I call the *stamp*, made by imposing a ready-made design from above on a hard surface. In the field of writing, for example, this is what distinguishes the work of the scribe from that of the printer, or the pen from the press. As the ancient metaphor of the text implies, the lettering hand of the scribe or calligrapher leaves a trail of ink in its wake just as does the shuttling hand of the weaver of tapestries in laying the weft (Ingold 2007*c*: 68-71). The printer, by contrast, imposes a composition pre-assembled from discrete typographic elements, and set in the galley, upon a uniform and resistant surface made ready to receive it. To the modern author of printed works, according to Michel de Certeau (1984: 134-5), the page appears as a blank space awaiting the imprint of a composition of his own design. De Certeau compares the author to the colonial conqueror who confronts a territory, exorcized of all ambiguity, and erased of its past, as a surface on which to rewrite history. By setting his stamp upon the ground, the conqueror stakes a claim. This is precisely what Friedrich Engels had in mind when he declared that in the course of its historical transformation 'man alone has succeeded in impressing his stamp on nature' (1934: 34). He was referring to the imprint of a human design – 'premeditated, planned action directed towards definite preconceived ends' (1934: 178) – upon a surfaced world. Here, the surface is configured as an interface between the mental and the material: intentions already engraven in the mind are stamped on the solid earth.

But footprints are not stamps.[7] They differ from stamps in their texture, in their temporality, and in their embeddedness in the ground of habitation (Ingold & Lee Vergunst 2008: 7-8). The designs of footprints are not ready-made, nor are they imposed from above *upon* a hard surface. They are rather made as a human being or other animal walks or runs along, *in* a surface that is soft, pliable, or absorbent. Thus whereas the stamp connotes immobility and omnipresence, footprints register emplaced movement. Far from staking a claim, the indigenous inhabitant leaves footprints in the ground as clues to his whereabouts and intentions, and for others to follow. While a trained eye and touch can read much from a single footprint, even more can be read from a series of prints. Such a series, observed in sequence, comprises a track. If the same track is trodden often enough, the many individual prints merge into a continuous path. One cannot, then, read individual movements from a path, but only those commonly or collectively made.

One striking characteristic of such movements, and the paths they create, is that they are nearly always winding and hardly ever straight. In this regard, Long's *Line made by walking* is exceptional, since it is perfectly rectilinear. Paths are not generally straight for

the same reason that it is virtually impossible to draw a perfectly straight line freehand without the aid of a ruler. Indeed, with allowances for the differences between walking and drawing noted above, the contrast between drawing a line freehand and with a ruler is precisely akin to that between wayfaring and transport (Ingold 2007*c*: 161-2). If, in transport, the passenger has 'found the way', as a connection between points, even before setting out, so also, in drawing a line with a ruler, the edge of the ruler is lined up against the points to be connected before putting pencil to paper. In drawing freehand, by contrast, one has always to keep an eye on where the pencil is going, making adjustments while on the move. So too the wayfarer, as he goes along, has continually to attend to his path, adjusting or 'fine-tuning' his movement as the journey unfolds. Only when he has reached a place can he truly be said to have found his way there. In de Certeau's terms, wayfaring is tactical rather than strategic: its paths are 'wandering' or 'errant' (1984: xviii). To wander is to follow a course that is sinuous instead of straight, or literally, to *wind along*. And it is to winding's namesake, the wind, that I now turn.

In the wind

Tom Brown is a tracker from New Jersey who learned his skills as a boy following a chance meeting with an old Apache scout by the name of Stalking Wolf. A track, Brown tells us, is a temporary thing:

> Unless the mud goes hard and turns gradually to stone, tracks do not last. They fade, and as they dry, the wind sweeps them relentlessly level to ease its way across the ground. Tracks exist at the interface where the sky drags along the surface of the earth. They exist for a relatively brief time in a narrow level *near the surface of the ground* where the wind and the weather move across, changing the temperature and building information into the track. Wind pushes the tracks flat; rain tries to wash them away (Brown 1978: 6, my emphasis).

Brown's intuition that tracks exist not on the ground surface but near it resonates with our earlier characterization of the ground as a surface that itself undergoes continual formation within an unstable zone of interpenetration in which the substances of the earth mingle and bind with the medium of air. These blending reactions, as we have seen, are fundamental to all life. But if that is so, then we should surely acknowledge that the track or path is as much an aerial phenomenon as a terrestrial one. Formed by creatures – human or non-human – that must perforce breathe the air as they walk the ground, it is not only impressed in the earth but suspended in the currents of wind and weather that, dragging the earth's surface, conspire to erase it. Looking for a way to express this essential ambiguity of the track, as at once terrestrial and aerial, Brown evidently found it by splitting the difference. 'Near' the ground surface, it is not quite of the earth and not quite of the air, but of both simultaneously. The synonymy between the *wind* of the meandering path and the *wind* of the swirling air may, then, be more than accidental.

Elsewhere, in an essay on the nature and history of the line (Ingold 2007*c*), I have suggested that lines come in two principal kinds: traces and threads. Traces are formed on surfaces; threads are strung through the air. My argument was that these two manifestations of line are readily inter-convertible. In the formation of surfaces, threads are converted into traces; in their dissolution, traces are converted into threads. Is the path, then, a trace or a thread? Recognizing that it passes through a world of

substances and medium in constant interchange, where surfaces are perpetually forming and dissolving, we should perhaps answer that the path is neither one nor the other, but rather 'thread becoming trace' or 'trace becoming thread'. In his ethnographic account of the significance of wind among Khoisan hunter-gatherers of southern Africa, Chris Low provides a wonderful example of the former, describing how, for the Khoisan, 'wind connects the hunter with the prey like a thread leading from one body to another' (2007: S75). The thread is essentially one of scent – the smell of the animal wafted through the air. As every animal has its distinctive smell, the whole environment is riddled with such scent-threads, binding its human and non-human inhabitants into an intricate web and percolating the very depths of their awareness. People even spoke of the threads as vibrating inside them, making a ringing sound. In tracking an animal whose scent is wafted towards you, it is essential to move *against* the wind, lest the animal be alerted to your intentions. Thus you start at the end of the thread and gradually wind it up, leaving the trace of your movement behind you as you advance on your quarry (Low 2007: S75-7). Among the Aboriginal people of Yarralin, in the Australian Northwest Territory, the converse transformation occurs as tracks left by ancestral Dreamings on the earth's surface, in the era of world creation, are perceived as *strings* akin to the long streaks that appear across the sky at sunset, or in forked lightning, and along which dreaded *kaya* beings, mediators between earth and sky and between life and death, drop to earth or pull people up (Rose 2000: 52-6, 92-5).

If the path is at once a trace and a thread, both on the ground and in the air, so too the pedestrian body simultaneously walks and breathes.[8] Exhalation follows inhalation as step follows step in a closely coupled, rhythmic alternation. However, the tendency, to which I have already alluded, to envision the material world as a clutter of solid objects mounted on a baseboard – like the landscape of my model railway – has led in the writings of philosophers and theorists to a certain suppression of the aerial dimension of bodily movement and experience. While emphasizing the solid forms of the landscape, they have neglected the fluxes of the medium in which they are immersed. In a word, they have shut out the weather. Yet even the residents of the hyper-modern city have to contend with the weather, despite their best efforts to banish it to the exterior of their air-conditioned, temperature-regulated, artificially lit, and glass-enclosed buildings. For the walker out of doors, however, the weather is no spectacle to be admired through picture windows but an all-enveloping infusion which steeps his entire being. As I have argued elsewhere (Ingold 2005), the weather is not so much what we perceive as what we perceive *in*. We see in sunlight whose shades and colours reveal more about the composition and textures of the ground surface than about the shapes of objects, we hear these textures in the rain from the sounds of drops falling on diverse materials, and we touch and smell in the keen wind that – piercing the body – opens it up and sharpens its haptic and olfactory responses.[9] Indeed a strong wind can so overwhelm the senses as virtually to drown out the perception of contact with the ground. 'Around, up, above, what wind-walks!', exclaimed Gerard Manley Hopkins in his poem 'Hurrahing in Harvest' (Hopkins 1972: 27). The wind-walker does not, however, literally fly. The philosopher Gaston Bachelard compares him to a reed. Like the reed, the walker remains earthbound. Dynamically, however, as Bachelard observes, the one is the *reverse* of the other. Whereas the reed bends backwards in the wind, the walker leans forwards, tilting against the current. 'His walking stick pierces the hurricane, makes holes in the earth, thrusts through the wind' (Bachelard 1983: 162).

Given its centrality to life and experience, the absence of weather from anthropological accounts of human ways of being and knowing is little short of extraordinary. This cannot be due to its neglect in our fieldnotes, since I am sure that the notes of most ethnographers are full of references to weather phenomena, as indeed mine are. I began my entry for every day of fieldwork in Finnish Lapland with a brief description of what the weather was like. But when I came to sort and rearrange my notes, in the process that ethnographers rather grandly call 'analysis', these descriptions dropped out. I did not know what to do with them. My omission, then, was not one of observation. It lay more in the lack of any conceptual framework within which to accommodate anything as protean and temperamental as the weather. I doubt whether I have been alone in this. It has been conventional in both anthropology and archaeology to think of the 'material world' as comprising the two broad components of *landscape* and *artefacts* (Gosden 1999: 152). Much attention has been paid to the ways in which people engage with the things of this world, to the apparent capacity of things to act back, and to the 'hybrid' agencies that are formed when persons and things combine in the production of effects. In all of this, however, no one has given a thought to the air.[10] The reason, I contend, is that so long as we suppose that all that is material is locked up in the congealed forms of the landscape and in the solid objects resting on its surface – or in what the archaeologist Bjørnar Olsen calls 'the hard physicality of the world' (2003: 88) – then the air is literally unthinkable. As a material medium that has escaped the bounds of materiality, it would be a contradiction in terms. We would be forced to conclude either that air does not exist, or that it is actually immaterial and therefore of no consequence. And if that is so, then there could be no weather in the world.

This conclusion is not only contrary to experience but patently absurd. To draw the limits of materiality around the surfaces of the landscape and artefacts would be to leave the inhabitants of the landscape and the users of artefacts in a vacuum. They would be unable to breathe. Nor could anything grow. Let us, then, readmit the air as an essential material constituent of the inhabited world. This is easily done, yet is not without consequences for the way we think about our relations with the environment. One consequence is that we can no longer imagine that all such relations take the form of interactions between persons and things, or that they necessarily arise from the conjoint action of persons and things assembled in hybrid networks. For the air is not a person or a thing, or indeed an entity of any kind, and cannot therefore comprise part of any networked assembly. It is rather, quite simply, a *medium* which, as Gibson pointed out, affords locomotion, respiration, and perception. Ironically, in his reconstruction of the lived environment as a furnished floor, the medium appears to vanish from Gibson's account, leaving an empty void. It is as though, in between the clutter, the environment were riddled with holes. 'It is into these holes', Gibson declared, 'that the birds fly' (Gibson 1979: 106). In the real world, of course, birds fly in the air, not in holes. Indeed their flight is made possible thanks to air currents and vortices partly set up through the movements of their wings. But this does not make the bird into a bird-air hybrid, any more than the fact that we humans ordinarily walk in the air turns us into human-air hybrids. It is merely to recognize that for persons or things to interact at all they must be immersed in the flows, forces, and pressure gradients of the surrounding media. Cut out from such currents, they would be *dead*.

In short, the medium is not so much an interactant as the very condition of interaction. It is only *because* of their suspension in the currents of the medium that things can interact. The point may best be demonstrated by flying a kite. A kite-in-the-air

behaves very much like a living being. It seems to possess an agency of its own. Buoyed up by the wind and swooping in its currents, the kite strains at the thread linking it to the hand of the human flyer. On the ground the flyer, also bathed in the air, feels the tension in the thread, and 'plays' the kite by alternately loosening it and reining it in. An interaction is going on between the flyer and the kite, which is perhaps so close that one might better speak of the whole performance as the action of a flyer-kite hybrid. But this interaction could not take place were it not for the fact that both flyer and kite are jointly immersed in the current of air. Were the current stilled, the kite would crumple and drop, lifeless and inert like a dead bird. This leads me to one last observation. If the medium is a condition of interaction, then it follows that the quality of that interaction will be tempered by what is going on in the medium, that is, by the weather. Such, indeed, is our experience. With its twin connotations of mixing or blending and fine-tuning, the verb *to temper* captures perfectly the way the fluxes of the medium comprise the ever-present undercurrent for our actions as we go along in the world. By way of our immersion in the medium, we are constituted not as hybrid but as *temperate* (and temperamental) beings. The fact that a whole suite of words derived from this common root refer interchangeably both to the characteristics of the weather and to human moods and motivations is sufficient proof that the two are not just analogous but fundamentally identical.[11] Both refer to the conditioning of interaction by our suspension in the medium. And if the weather conditions our interaction with people and things, then, by the same token, it also conditions how we know them. This brings me to my final theme, namely the formation of knowledge.

Know as you go

I began with Kant, and it is to him that I now return. I have referred to his postulate that the surface of the earth is given to experience as a flat and uniform substratum upon which lie all things that might form the objects of perception. Placed at a particular point on this surface, the perceiver can acquire a more or less complete knowledge of things lying within the circle of the horizon. What he can never know, however, is how much more there is still to be known. Imagining himself in this predicament, Kant admitted that 'I know the limits of my actual knowledge of the earth at any given time, but not the limits of all possible geography' (1933: 606). In such a situation there could be no possibility of systematic knowledge, no way of fitting what is known so far within an overall conception of the whole. To explain how such knowledge nevertheless lies within the grasp of human reason, Kant drew a sophisticated analogy between the topology of the mind and that of the earth's surface. Let us suppose that our perceiver already knows, *a priori*, that – contrary to the evidence of his senses – the earth is not flat but spherical in form. His situation is then transformed. For, as the extent of the surface is finite and potentially calculable, he is able to estimate not only the limits of his present knowledge, but also the limits of the entire, potentially knowable world. And if the knowable world is spherical, Kant argued, so, likewise, is the world of knowledge.

> Our reason is not like a plane indefinitely far extended, the limits of which we know in a general way only; but must rather be compared to a sphere, the radius of which can be determined from the curvature of the arc of its surface – that is to say, from the nature of synthetic *a priori* propositions – and whereby we can likewise specify with certainty its volume and its limits (1933: 607-8).

Knowledge is thus arrayed upon the spherical surface of the mind, just as the objects of knowledge are arrayed upon the spherical surface of the earth.

Let us imagine a Kantian traveller (Ingold 2000*b*: 212-13). Traversing the earth's surface, he picks up data from here and there, cumulatively fitting local particulars into nested conceptual frames of ever-wider, and ultimately global, span. Thus as he travels *across* the surface his knowledge is architectonically built *up*, as a superstructure, upon the curved foundation of his reason. Reconstructing the world from the pieces he collects, the mind's hard but initially empty surface is furnished with content. The traveller is, in effect, a mental map-maker. And as is the rule in cartography, his observations are taken from a series of fixed points rather than *en route* from one place to another. His moves serve no other purpose than to carry himself and his equipment – that is to say, the mind and its body – from one stationary locus of observation to another. His ideal mode of travel, then, is transport. In his observations he measures up the world *as if* it were a full-scale model, calculating lengths and altitudes in relation to an imaginary base conventionally mounted at sea-level (conveniently ignoring the fact, as every mariner knows, that the surface of the ocean is *not* level and in any case rises and falls with the tides). Perhaps this will suffice to show how closely linked is the Kantian conception of knowledge, and of the limits to knowledge, to certain presuppositions about the ground, and about movement, that we have explored in previous sections. These presuppositions, as we have seen, are not realistic in practice and bear little relation to the lived experience of inhabitants.[12] For inhabitants are wayfarers: they move through the world rather than across its outer surface. And their knowledge, as I shall now show, is not built *up* but grows *along* the paths they take, both on the ground and in the air.

Recall that for Kant, the ground on which knowledge is acquired and applied is apprehended from a certain point, bounded by its horizon; this ground is uniform, homogeneous, and fully laid out in advance. In the experience of the wayfarer, by contrast, the ground is apprehended in the passage from place to place, 'in histories of movement and changing horizons along the way' (Ingold 2000*b*: 227). It is infinitely variegated, composite, and undergoes continuous generation. If this is what the ground of knowing is like, then what kind of knowledge results? Consider first the factor of movement. For the wayfarer, movement is not ancillary to knowing – not merely a means of getting from point to point in order to collect the raw data of sensation for subsequent modelling in the mind. Rather, moving *is* knowing. *The wayfarer knows as he goes along*. Proceeding on his way, his life unfolds: he grows older and wiser. Thus the growth of his knowledge is equivalent to the maturation of his own person, and like the latter it continues throughout life. What distinguishes the expert from the novice, then, is not that the mind of the former is more richly furnished with content – as though with every increment of learning yet more representations were packed inside the head – but a greater sensitivity to cues in the environment and a greater capacity to respond to these cues with judgement and precision. The difference, if you will, is not one of how much you know but of how well you know. Someone who knows well is able to *tell*, in the sense not only of being able to recount stories of the world, but also of having a finely tempered perceptual awareness of his surroundings. Sherlock Holmes, to revert to an earlier example, was supremely knowledgeable in this sense. Though he liked to present himself as a master of deduction, his true skill lay in *abduction* (Gell 1998: 14-16) – in the ability to draw an entire thread of antecedent events from the examination of, say, a single footprint. The skill of a tracker such as the Apache scout, Stalking Wolf, or his disciple Tom Brown, is just the same.

In short, whereas the Kantian traveller reasons over a map in his mind, the wayfarer draws a tale from impressions in the ground. Less a surveyor than a narrator, his aim is not to 'classify and arrange', or 'to place every experience in its class' (Kant 1970: 257-8), but rather to situate each impression in relation to the occurrences that paved the way for it, presently concur with it, and follow along after. In this sense his knowledge is not classificatory but storied, not totalizing and synoptic but open-ended and exploratory (Ingold 2009). Walking along, as architectural theorist Jane Rendell explains,

> provides a way of understanding sites in flux in a manner that questions the logic of measuring, surveying and drawing a location from a series of fixed and static viewpoints. When we walk we encounter sites in motion and in relation to one another, suggesting that things seem different depending on whether we are 'coming to' or 'going from' (Rendell 2006: 188).

This leads us to the second property of the ground surface to be considered: that it is infinitely variegated. If there were, in the wayfarer's mind, a surface analogous to the surface of the earth, then it would not be that of a perfectly rounded globe but would rather be as wrinkled and puckered, at every scale, as the ground surface itself. Indeed the convolutions of neural tissue in the brain would furnish a better analogy than the bulbous dome of the skull. I do not think, however, that any analogies are needed. For the ground of knowing – or, if we must use the term, of cognition – is not an internal neural substrate that resembles the ground outside but the very ground we walk, where earth and sky are tempered in the ongoing production of life. As Gregory Bateson insisted (1973: 429), the mind is not bounded by the body but extends along the multiple sensory pathways that bind every living being into the texture of the world. These pathways, as we have seen, are both traced on the ground as tangible tracks and threaded through the air as trails of scent.

Walking along, then, is not the behavioural output of a mind encased within a pedestrian body. It is rather, in itself, a way of thinking and knowing – 'an activity that takes place through the heart and mind as much as through the feet' (Rendell 2006: 190). Like the dancer, the walker is *thinking in movement*. 'What is distinctive about thinking in movement', writes dance philosopher Maxine Sheets-Johnstone, 'is not that the flow of thought is kinetic, but that the thought itself is. It is motional through and through' (1999: 486). The motional thought, however, runs along the ground. Thus the complex surface of the ground is inextricably caught up in the very process of thinking and knowing. It is part of what Andy Clark (1998) has called the mind's 'wideware': those essential supports for cognition that lie beyond the body and its brain. In this regard the ground is an instrument, not only in the blunt sense that we need it to stand on, but also in the sense that without it we would lose much of our capacity to know. If its variations were erased and covered over by a hard surface, we would still be able to stand and walk but could no longer know as we go along. Just as there is no seeing for the draughtsman confronting a blank sheet of paper, so there is no knowing for the wayfarer on a surfaced earth. His walking would be reduced to the mere mechanics of locomotion, of getting from point to point. In reality, however, not only does the extended mind of the wayfarer infiltrate the ground along myriad pathways, but also, and inevitably, it tangles with the minds of fellow inhabitants. Thus the ground comprises a domain in which the lives and minds of its human and non-human inhabitants are comprehensively bound up with one another. It is, as we have already seen, a

composite, woven from diverse materials, and its surface is that of all surfaces. By the same token, the knowledge that runs in the ground is that of all knowledges. Or in a word, it is *social*. It is when it percolates the ground, tangling with the trails of other beings, and not on some transcendent surface of reason, that mindfulness enters the realm of the social.

I have already suggested that the growth of knowledge, for the wayfarer, is part and parcel of his own development and maturation as an embodied being. Through the repeated practice of travelling the same trails – a practice which gradually converts tracks into paths – every nuance of the ground surface is incorporated into what Bachelard would call his 'muscular consciousness' (1964: 11). But the body is not a sink. As a number of contributions to this collection demonstrate, and as I have argued elsewhere (Ingold 2006: 77-8), conscious awareness does not retreat with practice, or subside into the murky depths of unconscious automatism, but rather increases in concentration and intensity with the fluency of action, along the ever-extending pathways of the body's sensory entanglement in the lifeworld. It is not only the wayfarer, however, who grows. The ground he walks is growing too – 'rising up', as Heidegger wrote, 'into plant and animal' (1971: 149). The ground, in short, is continually coming into being along with its inhabitants. Like the tissues of plants and the bodies of animals, knowledge grows from the ground of the social. As inhabitants go their ways, following in the footsteps of predecessors, so the ground and the knowledge that grows from it are always in formation and never complete. Yet nothing would grow at all were it not for the currents of air that sweep the ground and the sunlight that bathes the bodies of its inhabitants. 'To be alive', writes Alphonso Lingis, 'is to enjoy the light, enjoy the support of the ground, the open paths and the buoyancy of the air' (1998: 17). Only a living body can know, and if knowledge is embodied, this is only because the body, in turn, is *enwinded* (Ingold 2007*b*: S32). Or in the words of environmental philosopher David Macauley, 'with our heads immersed in the thickness of the atmosphere or our lungs and limbs engaged with the surrounding winds, we breathe, think and dream in the regions of the air' (2005: 307).

Though it may not exactly melt into air, the body certainly walks, breathes, feels, and knows in it. Thus is knowledge formed along paths of movement in the weather-world. The ground from which knowledge grows is indeed the very same ground that – like the children on their bear hunt – we all walk in our everyday excursions, through calm and storm, swishing grass and root-riddled woods, sun-baked mud and rain-sodden ooze. I hope to have shown, in this essay, that far from being subsidiary to the constitution of knowledge, this ground, and the ways we walk it, lies at its very core. We can't go over it; we can't go under it; we just have to go through it.

NOTES

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[1] Throughout this paper, I employ the third-person singular pronoun in its masculine form. This is of no significance whatever for my argument, and readers are welcome to substitute the feminine form if they wish.

[2] On the distinction between the material world and the world of materials, see Ingold (2007*a*: 14).

[3] Once when I presented this paper to an archaeological seminar, this observation drew a caustic response from a particularly distinguished member of the audience. How, he wondered, could such statements of the downright obvious, as that 'plants grow in the ground, not on it', possibly advance our understanding? To this, my answer was that the most obvious truths are often those most easily forgotten. It sometimes pays to remind ourselves of them, lest we allow ourselves to be beguiled by an ontology that consigns the living world to the inertia of its objective representation.

[4] The distinction between tactical and strategic movements is drawn from the work of Michel de Certeau (1984: xviii-xix).

[5] Marching is the form of pedestrian movement that approximates most closely to transport. Unlike the wayfarer, whose movement continually responds to an ongoing perceptual monitoring of the country through which he passes, the pedestrian on the march notices nothing. Before his steadfast, unswerving gaze, the country passes unobserved, while his straightened legs and booted feet beat out a purely mechanical oscillation.

[6] Alfred Gell (1998: 86-90) analyses the Cretan labyrinth on the same premise. His argument is that the pattern of the labyrinth serves an apotropaic purpose, protecting those ensconced behind the surfaces on which it is inscribed from external aggression. Fascinated by the pattern, aggressors are waylaid by the cognitive conundrum it presents and never make it through to the other side. Though this may be true of some kinds of pattern, I believe that as an explanation of the labyrinth it is wide of the mark (Ingold 2007*c*: 53-7).

[7] In this respect it might be interesting to compare Engels's rhetoric of the human stamp, epitomizing the colonial mentality of the nineteenth century, with the twenty-first-century rhetoric of the carbon footprint. Whereas the stamp is hard and conspicuous, the footprint is vaporous and invisible.

[8] To get a measure of the magnitude of the phenomenon we are dealing with, it is worth bearing in mind that an average human being breathes approximately 15 litres of air per minute, and takes some 10,000 steps per day.

[9] On sunshine and shadows, see Baxandall (1995: 120-5); on hearing ground surfaces in the rain, see Hull (1997: 26-7, 120); on touching in the wind, see Ingold (2007*b*: S29).

[10] In this regard, art historians and cultural geographers are apparently as guilty of omission as anthropologists, archaeologists, and students of material culture. Painters have, of course, long appreciated that to paint a 'landscape' is to blend both earth and sky into a single field whose illumination depends at every moment on the fluxes of the medium. Yet in commenting on their pictures, cultural geographers and art historians, according to John Thornes (2008), have had almost nothing to say about the skies, concentrating exclusively on depictions of the ground and the scenery displayed on it.

[11] Apart from *temper*, *temperate*, and *temperament*, we have *tempest* and *temperature*. Of course we feel the temperature from the air that surrounds us.

[12] The philosopher Alphonso Lingis offers further corroboration of this point. 'The ground', he writes, 'is not – save for astronauts and for the imagination of astronomers – the planet, an object which viewed from the distance is spherical. We do not feel ourselves on a platform supported by nothing but feel a reservoir of support extending indefinitely in depth' (Lingis 1998: 14).

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Des traces de pas à travers les éléments : marcher, respirer, savoir

Résumé

Le présent essai étudie la relation entre l'acquisition de connaissances, la déambulation et la perception du temps qu'il fait. Pour commencer, il explore la signification du sol. Loin d'être uniforme, homogène et préparé, le sol est divers, composite et en recréation constante. Il est en outre appréhendé en mouvement plutôt qu'à partir de points fixes. En marchant sur le sol, les gens créent des pistes et des chemins. Ceux-ci sont produits par des traces de pas plutôt que par un geste d'inscription. Dès lors que ces empreintes s'inscrivent dans un sol meuble au lieu d'être imprimées sur une surface dure, leur temporalité est liée à la dynamique de leur formation, qui dépend elle-même du temps qu'il fait et des réactions à l'interface entre la terre et l'air. En respirant à chaque pas, les marcheurs déambulent à la fois dans l'air et sur terre. Marcher est donc en soi un processus de réflexion et de connaissance. C'est ainsi que le savoir naît le long des chemins de déplacement traversant le monde des éléments.

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