

The Perception of the Environment

Essays on livelihood, dwelling and skill

Tim Ingold

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London and New York

*For Anna and Susanna,
in memory of my mother,
L. M. Ingold (1910–1998)*

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General introduction

This book has grown from the same concerns as those that, over thirty years ago, led me to embark upon the study of anthropology. At school I had done well in mathematics and, thanks to a wonderful teacher, I had been fired by a passion for physics. It was assumed that I should go to university to read natural science. But my initial enthusiasm soon gave way to disillusionment. Like so many of my contemporaries I was appalled by the extent to which science had reneged both on its sense of democratic responsibility and on its original commitment to enlarge the scope of human knowledge, and had allowed itself to become subservient to the demands of the military-industrial complex. The scientific establishment, it seemed to me, was so massively institutionalised, internally specialised and oppressively hierarchical that as a professional scientist one could never be more than a small cog in a huge juggernaut of an enterprise. Towards the end of my first year at university I went to see my tutor, and politely informed him over a glass of sherry (this was Cambridge!) that natural science was not for me, and that I was seeking a discipline where there was more room to breathe. It would be exciting, I thought, to join in a subject still on the make – one, perhaps, that was in the same formative stage that physics was in at the time of Galileo.

My tutor, whose considerable percipience was laced with a hint of mischief, suggested anthropology. I, of course, with that callow conceit of the Cambridge undergraduate who thinks himself too clever by half, wanted to be the Galileo of anthropology – provided that I did not have to suffer as Galileo did. Though I have long since abandoned these adolescent fantasies, the real intellectual reasons why I took up anthropology then (it was 1967) are still the reasons why I study it now. Concerned about the widening gap between the arts and the humanities on the one hand, and the natural sciences on the other, I was looking for a discipline that would somehow close the gap, or enable us to rise above it, while still remaining close to the realities of lived experience. Anthropology, for me, has been that discipline, and since embarking on it I have never looked back. I have, however, often looked from side to side, observing with mounting despair how it has been fractured along the very lines of fission that I thought it existed to overcome. These fractures ultimately seem to derive from a single, underlying fault upon which the entire edifice of Western thought and science has been built – namely that which separates the 'two worlds' of humanity and nature. For this is what has given us the overriding academic division of labour between the disciplines that deal, on the one hand, with the human mind and its manifold linguistic, social and cultural products, and on the other, with the structures and composition of the material world. And it also cleaves anthropology itself into its sociocultural and biophysical divisions, whose respective practitioners have less to say to one another than they do to colleagues in other disciplines on the same side of the

academic fence. Social or cultural anthropologists would rather read the work of historians, linguists, philosophers and literary critics; biological or physical anthropologists prefer to talk to colleagues in other fields of biology or biomedicine.

My aim has always been to bring these two sides of anthropology together. There must be something wrong, I reasoned, with a social or cultural anthropology that cannot countenance the fact that human beings are biological organisms that have evolved, and that undergo processes of growth and development, as other organisms do. But there must be something equally wrong with a biological anthropology that denies anything but a proximate role for agency, intentionality or imagination in the direction of human affairs. Advocates of both extreme positions are not hard to find, from those who insist, on the one hand, that there is nothing that is not socially or culturally constructed to those, on the other, who hold that all there is to know about human beings is written into our genetic constitution, and therefore that by deciphering the genome we would discover the key to our humanity. In steering a course between these extremes, my first inclination was to argue for the essential complementarity of the biogenetic and sociocultural dimensions of human existence. The fact that human beings are organisms whose life and reproduction depends upon their interaction with organisms of other species, as well as with abiotic components of the environment, does not rule out the possibility that they are also aware of themselves as beings who can relate to one another as subjects, and who can therefore – on this intersubjective level – enjoy a distinctively social life. Likewise, the fact that human beings are the bearers of genes whose specific combination is a product of variation under natural selection does not mean that they cannot also be the bearers of cultural traditions that may be passed on by a process of learning in some ways analogous to, but by the same token fundamentally distinct from, the process of genetic replication.

In 1986 I brought out a book, entitled *Evolution and social life*, in which I attempted, among other things, to establish this complementarity thesis. But as several critics pointed out, the argument of the book did not really cohere, since the connection between the human being as a biological *organism*, and as a social subject or *person*, could not be substantiated save by way of a third term, namely the human mind. The discipline that exists to ~~study the mind is, of course, psychology.~~ In my book I had virtually ignored psychology, largely because I had had my work cut out simply in finding my way through the extensive literatures in anthropology and biology. But the criticism was just: there would seem to be no way of piecing together the two halves of anthropology, the biophysical and sociocultural, without taking a loop through psychology. Clearly, I would have to read up on the subject. I was introduced to it, however, from a rather unorthodox angle. On the recommendation of several friends and colleagues, I turned to the writings of James Gibson and, in particular, to his masterpiece of 1979, *The ecological approach to visual perception*. Reading this book was a revelation: indeed I cannot think of any other work that has exerted a greater influence on my thinking over the last ten years or so. This influence is evident in everything I have written since, including the essays that make up this volume.

Gibson wanted to know how people come to perceive the environment around them. The majority of psychologists, at least at the time when Gibson was writing, assumed that they did so by constructing representations of the world inside their heads. It was supposed that the mind got to work on the raw material of experience, consisting of sensations of light, sound, pressure on the skin, and so on, organising it into an internal model which, in turn, could serve as a guide to subsequent action. The mind, then, was conceived as

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a kind of data-processing device, akin to a digital computer, and the problem for the psychologist was to figure out how it worked. But Gibson's approach was quite different. It was to throw out the idea, that has been with us since the time of Descartes, of the mind as a distinct organ that is capable of operating upon the bodily data of sense. Perception, Gibson argued, is not the achievement of a mind in a body, but of the organism as a whole in its environment, and is tantamount to the organism's own exploratory movement through the world. If mind is anywhere, then, it is not 'inside the head' rather than 'out there' in the world. To the contrary, it is immanent in the network of sensory pathways that are set up by virtue of the perceiver's immersion in his or her environment. Reading Gibson, I was reminded of the teaching of that notorious maverick of anthropology, Gregory Bateson. The mind, Bateson had always insisted, is not limited by the skin. Could not an ecological approach to perception provide the link I was looking for, between the biological life of the organism in its environment and the cultural life of the mind in society?

The issue for me, at the time, was to find a way of formulating this link that could also resolve what I felt to be a deep-rooted problem in my own work. Setting out from the complementarity thesis, I had argued that human beings must simultaneously be constituted both as organisms within systems of ecological relations, and as persons within systems of social relations. The critical task for anthropology, it seemed, was to understand the reciprocal interplay between the two kinds of system, social and ecological. In 1986, alongside *Evolution and social life*, I had brought out a book of essays under the title *The appropriation of nature*, all of which sought to explore this interplay in one way or another. But I had continued to be troubled by the inherent dualism of this approach, with its implied dichotomies between person and organism, society and nature. I vividly remember one Saturday morning in April 1988 – an entirely ordinary one for Manchester at that time of year, with grey skies and a little rain – when, on my way to catch a bus, it suddenly dawned on me that the organism and the person could be one and the same. Instead of trying to reconstruct the complete human being from two separate but complementary components, respectively biophysical and sociocultural, held together with a film of psychological cement, it struck me that we should be trying to find a way of talking about human life that eliminates the need to slice it up into these different layers. Everything I have written since has been driven by this agenda.

Why had this view, that the person is the organism, and not something added on top, eluded me for so long? In retrospect it seems so obvious as almost to 'go without saying'. I now realise that the obstacle that had prevented me from seeing it was a certain conception of the organism, one that is built into mainstream theory in both evolutionary and environmental biology. According to this conception, every organism is a discrete, bounded entity, a 'living thing', one of a population of such things, and relating to other organisms in its environment along lines of external contact that leave its basic, internally specified nature unaffected. I had assumed that my task was not to challenge accepted biological wisdom but to reconcile it with what contemporary anthropology has to teach us about the constitution of human beings as persons. This is that the identities and characteristics of persons are not bestowed upon them in advance of their involvement with others but are the condensations of histories of growth and maturation within fields of social relationships. Thus every person emerges as a locus of development within such a field, which is in turn carried forward and transformed through their own actions.

Understanding persons in this way, however, calls for a kind of 'relational thinking' that goes right against the grain of the 'population thinking' that has been *de rigueur* in

biological science ever since the establishment of the so-called modern synthesis of Darwinian theory and population genetics. Now so long as the organism and the person are conceived as separate components of the human being, one could perhaps think about the former in populational terms and the latter in relational terms, without fear of contradiction. Whereas the population, it might be said, is of individual objects (organisms), relationships exist between social or cultural subjects (persons). But if persons *are* organisms, then the principles of relational thinking, far from being restricted to the domain of human sociality, must be applicable right across the continuum of organic life. What I glimpsed, on that fateful day in 1988, was that this would require nothing less than a radically alternative biology. For if every organism is not so much a discrete entity as a node in a field of relationships, then we have to think in a new way not only about the interdependence of organisms and their environments but also about their evolution.

Of course, like all good ideas, others had had it before. On further inquiry I discovered that there already existed a considerable literature taking up what I would call a relational view of the organism, and that sets out expressly to break the stranglehold that neo-Darwinian theory has tended to exert, up to now, on mainstream biological thought. Significantly, most of the contributors to this literature work in the field of developmental biology. They have been concerned to unravel the dynamics of those processes of growth and maturation that actually give rise to the forms and capacities of organisms. And they have shown, quite convincingly, that it is not enough to regard these forms and capacities as the mere expressions of designs or blueprints that have already been established by natural selection, and that are imparted to every organism-to-be – along with its complement of genes – at the moment of conception. The characteristics of organisms, they argue, are not so much expressed as *generated* in the course of development, arising as emergent properties of the fields of relationship set up through their presence and activity within a particular environment. Here, then, was the biology that would help to substantiate my view of the organism-person, undergoing growth and development in an environment furnished by the work and presence of others.

It is a biology, however, that also resonates very closely with the principles of Gibsonian ecological psychology. Both approaches take as their point of departure the developing organism-in-its-environment, as opposed to the self-contained individual confronting a world 'out there'. The approaches are linked, too, in terms of their opposition to established positions in biology and psychology. Indeed there is a striking parallel between the 'developmentalist' critique of neo-Darwinian biology and the 'ecological' critique of mainstream cognitive psychology. In both cases the objection is to the idea that what an organism does, or what it perceives, is the calculated output of an intelligent design, whether that intelligence be equated with the mind or with natural selection (which is, after all, but the reflection of scientific reason in the mirror of nature). Moreover, a very similar objection can be raised against those versions of culture theory, in anthropology, that would attribute human behaviour to designs that are passed from one generation to the next as the content of acquired tradition. These parallels led me to suggest that a combination of 'relational' thinking in anthropology, 'ecological' thinking in psychology and 'developmental systems' thinking in biology would yield a synthesis infinitely more powerful than any of the 'biosocial', 'psychocultural' or 'biopsychocultural' alternatives currently on offer, all of which invoke some version of the complementarity thesis.

Crucially, such a synthesis would start from a conception of the human being not as a composite entity made up of separable but complementary parts, such as body, mind and culture, but rather as a singular locus of creative growth within a continually unfolding

field of relationships. In the following chapters I pursue three implications of this approach. The first is that much if not all of what we are accustomed to call cultural variation in fact consists of variations of skills. By skills I do not mean techniques of the body, but the capabilities of action and perception of the whole organic being (indissolubly mind and body) situated in a richly structured environment. As properties of human organisms, skills are thus as much biological as cultural. Secondly, and stemming from the above, becoming skilled in the practice of a certain form of life is not a matter of furnishing a set of generalised capacities, given from the start as compartments of a universal human nature, with specific cultural content. Skills are not transmitted from generation to generation but are regrown in each, incorporated into the *modus operandi* of the developing human organism through training and experience in the performance of particular tasks. Hence, thirdly, the study of skill demands a perspective which situates the practitioner, right from the start, in the context of an active engagement with the constituents of his or her surroundings. I call this the 'dwelling perspective'. Humans, I argue, are brought into existence as organism-persons within a world that is inhabited by beings of manifold kinds, both human and non-human. Therefore relations among humans, which we are accustomed to calling 'social', are but a sub-set of ecological relations.

The essays collected together here comprise a series of attempts to establish this relational-ecological-developmental synthesis. I have come to the project from a background in ecological anthropology, in the anthropology of technology, and in the history of anthropological theory. In my ecological work I have concentrated on the comparative study of hunter-gatherer and pastoral societies, an interest that has its roots in my earlier research on northern circumpolar reindeer hunting and herding peoples. This accounts for my particular concern with human-animal relations, and with the conceptualisation of the humanity-animality interface. It is also the reason why, in selecting ethnographic material to substantiate my arguments, I have tended to go for studies of northern circumpolar societies. My interest in technology developed in part from a reconsideration of the significance of toolmaking as an index of human distinctiveness, and in part from a growing interest in the connection, in human evolution, between technology and language. More recently, I have tried to find ways of bringing together the anthropologies of technology and of art, and it is this, above all, that has led me to my present view of the centrality of skilled practice. In my work on the history of theory I focused on the way in which the notion of evolution has figured in the writings of anthropologists, biologists and historians from the late nineteenth century to the present. The key question to which I sought an answer was how, if at all, the concept of evolution was to be separated from that of history. I did not resolve this question to my satisfaction, and it has remained at the top of my agenda. I believe now that the proposed synthesis of relational, ecological and developmental approaches offers a solution.

The volume is divided into three parts. In the first, on 'livelihood', my concern is to find a way of comprehending how human beings relate to their environments, in the tasks of making a living, that does not set up a polarity between the ecological domain of their relations with non-human 'nature' and the cognitive domain of its cultural construction. The second part, on 'dwelling', explores the implications of the position that awareness and activity are rooted in the engagement between persons and environment for our understanding of perception and cognition, architecture and the built environment, local and global conceptions of environmental change, landscape and temporality, mapping and wayfinding, and the differentiation of the senses. In the third part, on 'skill', I show how a focus on practical enskilment, conceived as the embodiment of capacities of awareness and response by environmentally situated agents, can help us to overcome both an overly

rigid division between the works of human beings and those of non-human animals and, in the human case, the opposition between the fields of 'art' and 'technology'. This tripartite division is, however, largely a matter of convenience. The parts themselves are anything but watertight. All I can say is that there is a rather greater density of thematic interconnectedness among the chapters making up each part than there is between them.

As for the individual chapters, they are of diverse origin. Most were initially written for presentation at conferences, and have been extensively revised since. Earlier versions of many of these have already appeared in conference publications. Naturally, the form and substance of each essay have to some extent been dictated by the needs of the occasion for which it was originally prepared. All were written, however, with the ultimate intention of bringing them together into one coherent work. With one exception, none dates back more than a decade: thus they all represent my post-1988 thinking. The exception is Chapter 15, which I first drafted for a conference in 1987. I have included it here since it marks the beginnings of my reconsideration of the concept of technology. Four chapters (Six, Eight, Thirteen and Fourteen) have been written specially for this volume. Chapter Fourteen is by far and away the longest, and it was undoubtedly, for me, the most challenging to write. Surveying the book in its entirety, I see it somewhat in the shape of a mountain, with a steady climb through the first part, a brief plateau at the start of the second followed by an ascent to the summit in Chapters Thirteen and Fourteen. Having reached that far, the third part affords a relatively easy descent. But like a mountain, one could just as well proceed in the other direction, starting with the third part and ending with the first. Indeed there is no fixed order in which the chapters should be tackled. Each can be read and understood on its own, or as one of the set of explorations of closely connected themes comprising each part, which in turn can be read as one aspect of the total intellectual project comprised by the book as a whole.

Before closing this general introduction, I should insert a note about my use of the concepts of 'the Western' and 'the modern'. These concepts have been the source of no end of trouble for anthropologists, and I am no exception. Every time I find myself using them I bite my lip with frustration, and wish that I could avoid it. The objections to the concepts are well known: that in most anthropological accounts they serve as a largely implicit foil against which to contrast a 'native point of view'; that much of the philosophical ammunition for the critique of so-called Western or modern thought comes straight out of the Western tradition itself (thus we find such figures as the young Karl Marx, Martin Heidegger and Maurice Merleau-Ponty enlisted in the enterprise of showing how the understandings of North American Indians, New Guinea Highlanders or Australian Aborigines differ from those of 'Euro-Americans'); that once we get to know people well – even the inhabitants of nominally Western countries – not one of them turns out to be a full-blooded Westerner, or even to be particularly modern in their approach to life; and that the Western tradition of thought, closely examined, is as richly various, multivocal, historically changeable and contest-riven as any other.

For those of us who call ourselves academics and intellectuals, however, there is a good reason why we cannot escape 'the West', or avoid the anxieties of modernity. It is that our very activity, in thinking and writing, is underpinned by a belief in the absolute worth of disciplined, rational inquiry. In this book, it is to this belief that the terms 'Western' and 'modern' refer. And however much we may object to the dichotomies to which it gives rise, between humanity and nature, intelligence and instinct, the mental and the material, and so on, the art of critical disputation on these matters is precisely what 'the West' is all about. For when all is said and done, there can be nothing more 'Western',

or more 'modern', than to write an academic book such as this. Nor can I be anything less than profoundly grateful for the freedom, education and institutional facilities that have allowed me to do so.