

# The Lure of Origins

An Inquiry into Human-Environmental Relations,  
Focused on the “Neolithization” of Sweden

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*till Ingrid,  
Gustav, Emil  
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# Part I



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Chapter I: I

# Introduction

## a. Purpose and Character of This Work

The purpose of this book is:

1) To question the adequacy of trying to comprehend the Early Neolithic period in Middle Sweden in terms of “the transition to *farming*”. It is suggested that a more differentiated view of human-environmental relations is a key to deeper understanding.

2) *a.* To present a heuristically useful ontology, able to encompass humans as being simultaneously “immanent” organisms and “transcendent” persons in all their environmental relationships. A differentiation is made between three interpenetrating ecological ambiances (organismic, artifactual, and symbolizing), in which humans are simultaneously present and active.

*b.* To indicate what the suggested ontology implies for our view of the “Neolithization”<sup>1</sup> of Sweden.

*c.* Finally, to briefly discuss how the same heuristic ontology may cast light on our own situation and its possibilities, when studying the Stone Age, or indeed any socioecological ambience different from that in which we, as modern scholars and scientists, find ourselves. In this context, the “lure of origins” is criticized as being intellectually confining.

These themes to some extent interpenetrate each another, but the first is mostly dealt with in Part II, the second in part III (*a*) and in Part IV (*b-c*).

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1 As will become evident, the term “Neolithization” is too bogged down with fuzzy and contradictory connotations to be analytically useful in a critical discussion. For this reason I have consistently put it between quotation marks.

All that will be said in this book regarding “Neolithization” refers, strictly speaking, only to the case of Middle Sweden. The main reason for this is the immediate academic context of this book, which forms a part of the *Coast to Coast Project* – a joint venture of the archaeology departments of Uppsala and Gothenburg universities, primarily. The purpose of the project has been to review, analyze and synthesize the evidence and theories of “Neolithization” in precisely Middle Sweden. One ambition has also been, however, to see in what way this seemingly restricted discussion may be illuminated by, and made relevant to, larger concerns – not only of archaeology but also of related disciplines – and this is the proper place of this work.

In order to pursue the first aim enumerated above, I have, in relation to what is presented as evidence, critically analyzed some of the basic assumptions found in certain archaeological texts, dealing with the late Mesolithic and Early Neolithic periods of eastern Middle Sweden, and, to some extent, southern Scandinavia generally. The second aim is realized by means of a constructive use and critical analysis of certain ideas dealing with human-environmental relations, from a comprehensive ecological perspective, particularly those argued by T. Ingold (2000). The basic strategy is to find ways of combining different fields with each other, in a way that makes a more integral perspective possible.

As a result of that twofold aim this book can be read in two different ways. *First*, as constituting a by no means comprehensive but nonetheless, I hope, pertinent critique of certain assumptions in contemporary Swedish Stone Age archaeology, *and* as a critical and appreciative study of Ingold’s concept of an “ontology of dwelling”, and related ideas of some other thinkers. This kind of ontology is then related to the issue of the “Neolithization” of Sweden – both in itself and as an object of contemporary interest. *Second*, it can be read as presenting, and defending, a certain perspective on the nature of human reality. When perusing it in the latter mode, however, the reader should bear in mind that I do not claim to have said more than I have, so to speak. My deepest *interest* lies very much in the second direction, but this *work* is *prima facie* concerned only with the first. Having said that, I can see nothing wrong with bearing the deeper vistas belonging to the second mode of reading in mind.

The central concepts of this study, elaborated and discussed in

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## Introduction

Part III, are *person* and *environment*, and they are taken as *absolutely fundamental*, in a way in which physics, or “social construction” – to mention the extremities of current academic polarization – cannot be, in my view. Furthermore, the inquiry is fundamentally ontological, metaphysical and cosmological, and what epistemological issues arise are subsumed under ontological and metaphysical ones.<sup>2</sup> This deviates from conventional priorities, which tend to see in epistemology the foundation of any inquiry, as if the world emerges out of our knowledge, and not vice versa. As a result of this position, certain

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- 2 *Ontology* in this work means primarily an inquiry into *the mode of existence* of various postulated entities (organisms, artifacts, stories, human beings etc), and their relationships. As part of a critical analytical endeavor, it also means an investigation into *what kinds* of existing entities that are logically presupposed in any given theory or theoretical position. Ontology, in other words, concerns what it is that exists in the world, and how it exists (by virtue of what other existing things, for example).

The kind of ontology which is presupposed and articulated in my discussions is an ecological one. *Ecology*, in this work, is primarily taken to be a matter of inter-organismic relations, or, more generally, relations between interacting entities of whatever nature. Relations between organisms and the non-organic aspects of their environments are relegated to the background, not because they are unimportant, but simply for convenience, given the focus I have given the inquiry.

Ontology in certain respects shades into *metaphysics*. This term may be used in several different senses. Generally I use it to denote, first, that which concerns the ultimate nature and origin of both the cosmic order and the things and beings within it; in other words it deals with “first principles” and is logically prior to ontology. For example, the question whether everything is ultimately a product of the permutations of matter, or not, is a metaphysical question in this sense. Second, and perhaps more frequently, I use the term to denote ontological entities which are meta-physical or super-natural, *i e*, not bound within the confines of time and space – like the higher “spirits” of certain traditional cosmologies.

Finally, the term *cosmology* is the name I will use for comprehensive intellectual conceptions regarding the order or structure of the world. A cosmology is thus a way of connecting metaphysics and ontology, and explains how different orders (like physical and meta-physical) are structurally related to each other – like in a hierarchy of beings of different orders, for example. The term is sometimes also used in an ontological sense, to signify that collectively apprehended world order in which a people lives, whether this can be designated as ultimately real or not.

It should be apparent that there are no sharp distinctions between these concepts; they partly overlap depending on the topic of discussion, and they all imply one another.

common terms (like “meaning”, “symbol”, “culture” etc) will, more often than not, assume meanings different from those they have in conventional usage. During the course of my text, this will be justified by means of arguments and examples, but the reader is hereby forewarned nevertheless.

Skeptical readers are advised to approach my perspective in the spirit of a thought experiment, as a sustained “What if?” inquiry. Its purpose is to gain a theoretical feel for a certain way of thinking about ourselves and the world, which to me seems to be able to encompass and make sense of superficially very different human ambiances (thereby assisting archaeological interpretation, among other things), and also to integrate as diverse fields as ecology, social psychology, technology, and religious symbolism, all of them concepts whose conventional boundaries will be dissolved, but whose contents are reassembled in a new way.

In general terms, my approach can be seen as akin to what Hviding (1996: 181) describes as a (desirable) move within ecological anthropology “towards analytical headings like process, ‘fuzziness’, flexibility and open-ended interaction”, something which would “highlight oscillations and relations among domains often seen as analytically in disjuncture – such as nature, culture, magic and science.” My analyses, however, do not have their ultimate background in anthropology, ecological or otherwise. Its personal intellectual roots lie, somewhat idiosyncratically, in studies in the history of science and ideas (especially regarding natural philosophy and metaphysics), the history of religions (especially the Old and New Testaments, Christian theology, and comparative religion), evolutionary biology, and cognitive science. My basic orienting questions have been for many years: What are “ideas”, really? How do they exist? Where do they come from? How are they preserved and transmitted? Why do they change, or seem to? What kinds of ideas are there? In this context it gradually became obvious to me, that any answers to such questions were intimately bound up with one’s explicit or implicit answer to the question: What is a human being? In conjunction with this questioning, I have been preoccupied with overcoming the obviously inadequate ontological dichotomies characteristic of post-Cartesian philosophy and science, particularly that of mind and matter. Early on I came to ponder the existence and nature of artifacts, as constituting a key issue



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## Introduction

when trying to overcome this dichotomy. When, therefore, I received the opportunity to participate, as a theorist, in the *Coast to Coast Project*, I did not hesitate.

This book, then, is inevitably an outcome of all of these circumstances, although the specific questions asked are other than those mentioned in the last paragraph. In relation to archaeology proper, it represents an outsider's view. I have not presumed to trespass on areas where my knowledge and training are clearly inadequate – the discovery, excavation, recovery, classification, detailed study, and evaluation of archaeological finds. But when it comes to questions of a more general interpretive nature, archaeology's basic problems really are the problems *common* to many other disciplines. There is no difference, in principle, between assessing the general import and socioecological nature of the material artifact finds of archaeologists, and the mental artifact finds (ideas expressed in writing) of historians of science and ideas. Neither can either of these two fields be ontologically separated (except as an analytical convenience), from the biological and/or spiritual nature of human beings. On these assumptions, I hope that what follows may be of interest to students of several academic disciplines, and seen as a contribution to a much needed transdisciplinary endeavor. In older days the latter was the province of *philosophy*, so in that old-fashioned sense this work is perhaps best classified as such.

The transdisciplinary road I have taken, inevitably entails that I cannot help treading into one intellectual minefield after another. I think that I am reasonably aware of the most important ones, but in most cases I will continue on my way, as if I have not heard them going off in my wake. (The reader will have to judge whether my presumption of emerging more or less unscathed is warranted or not.) The eminently practical reason for this seemingly unheeding attitude, is that if I were to stop and explore, or try to defuse, every mine encountered along the way, this work would have reached its appointed limit at the very first stop. And then other people would have had to write the other hundred or so volumes “necessary” – as they already have, in fact, many times over. The end result would again be just what we are always up against – an increasingly overwhelming mountain of special studies. D.C. Dennett's (1993: 202) uncomfortably truth-like slogan

A scholar is just a library's way of making another library

haunts me as the ultimate nightmare, which it will be difficult to avoid, if every qualified academic study is one of high specialization.<sup>3</sup> As already stated, in the work at hand I have endeavored to cruise between the Scylla of specialization and the Charybdis of vacuous generalization, by, first, concentrating on one empirically based example: recent conjectures regarding the nature and meaning of the “Neolithization” of Sweden – particularly Middle Sweden – around 4000 BC; and, second, by relating my arguments to a few – hopefully well chosen – other theorists, who have tried to cover the same kind of ontological questions from perspectives similar to mine.

Now, before embarking on the journey ahead, I will make a few introductory comments on the Stone Age part, and on the ontology part, respectively. In the process, some preliminary inklings may be gathered of how they are related.

## b. “Neolithization”, the TRB, and Origins

Three “great conceptual advances – the *antiquity of humankind*, Darwin’s *principle of evolution* and the *Three Age System* – at last offered a framework for studying the past, and for asking intelligent questions about it” write Renfrew & Bahn (1996: 25).<sup>4</sup> These were all in place in the middle of the 19th century, and have shaped archaeological thinking ever since. The term “Neolithic” originally denoted a division of the Stone Age into an Old and a New part, the latter characterized by ground and polished stone tools and pottery. Later, G. Childe having coined the expression “the Neolithic revolution” in the 1920s, the term came to be identified with the first appearance of agriculture. This history is well known; suffice to say that even now all the above connotations still adhere to the concept of “the Neolithic”, although a critical differentiation into various interpreta-

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3 I do not deplore or devalue detailed inquiries, studies, observations, or experiments. I just think that there must be a legitimate place, within academia, for synthetic and “non-disciplinary” work as well, and that risks in that direction must be taken.

4 All emphases in quotations are those of the original author, unless otherwise stated.

tions of the *process* of “Neolithization”, is apparent in the later decades of the last century. I do not intend to get into that subject here (see Rudebeck 2000 for a thorough review); I just note that it has become an increasingly contentious question what, exactly, this “Neolithic revolution” was originally all about. Was it a matter of new technology, new culture, new economy, population increase, new social structures, new ideas, or what (*cf* Whittle 1996: 4-8)? What, in any case, was the basic import of it all?

Thomas (1999b: 13) suggests that this conceptual problem “is at its most acute in the work of those archaeologists [...] who have equated the word ‘Neolithic’ with ‘agriculture’, and proceed to discuss the development of the period concerned as if all of the cultural and social innovations were subsidiary to the inception of farming.” This easily leads to a view of the Neolithic<sup>5</sup> as “a bounded totality”, while “in practice the evidence which is available to us relates to a more complex, messy and fragmented series of developments” (*ibid.*). Furthermore, in relation to the various traits attributed to the surmised “Neolithic package”, it can be maintained that “quite different tensions and transformations were at work in each” (*ibid.*: 14). In the view I will develop, the latter point is particularly important in relation to the discussion of the “Neolithization” of Middle Sweden.

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5 In all that follows, when I write “Mesolithic/Neolithic” with capital initial letters the chronologically defined periods are meant. When “Mesolithic/Neolithic” is written with lower-case initial letters, other than chronological connotations are supposed (*e.g.* when the terms are related to different kinds of subsistence).

In Scandinavia the Mesolithic is the name for the period between the end of the last Ice Age and the supposed beginnings of agriculture, from ca 8200 to ca 4000 BC. The Early Neolithic comprises the period from ca 4000 BC to about 3300 BC, the Middle Neolithic 3300-2400 BC, and the Late Neolithic 2400-1800 BC (according to *Nationalencyklopedin*; other more detailed and regionally adapted chronologies are found in the specialist literature).

When, in the case of Stone Age finds, years are given in relation to “BC”, calibrated carbon dates are meant, which more or less (but never precisely) correspond to calendar years. If in some case uncalibrated carbon datings are mentioned, these are styled “BP”; these may deviate hundreds of years from calibrated datings. (See Persson 1999: 15-37 for a discussion of dating methods in relation to Scandinavian finds of the Early Neolithic.)

As will become evident in what follows, this general situation means that the term and the concept(s) of the Neolithic in effect constitute an annoying hindrance to clear thinking about what happened. This is especially so in the case of Scandinavia, and probably northern Europe generally.<sup>6</sup> First of all, “Neolithization” means something else in this area than it does in the Levant. In the latter case we are dealing with the very first appearance of agriculture or farming (at least it is this which is singled out as the most important factor or consequence of what occurred). In Sweden, however, farming was “imported”, and the question of “Neolithization” is intimately tied to the rather sudden appearance of what is known as Funnel-beaker or TRB<sup>7</sup> culture. This archaeological culture<sup>8</sup> has, at least since the 1940s (Becker 1947) if not earlier, been identified with the introduction of, or transition to, farming in this area. In Part II of this book I will question this identification, with the result that the appearance of the TRB will have to be understood in other terms, than those

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6 In the context of African archaeology, Sinclair, Shaw & Andah (1993: 8) argue: “It is not to be supposed that, by dropping the term ‘Neolithic’ and substituting phrases such as ‘pastoral’, ‘agricultural’, ‘farming’, ‘crop-raising’, ‘food-producing’ or any other expressions, all problems will be solved. Such terms only relate to one aspect of one parameter of living – the subsistence base – and other parameters still have to be taken into account, since societies can only be satisfactorily described in multi-factorial terms. The understanding of the complex issues involved in sedentism, semi-sedentism, nomadism, territorial occupancy and the myriad forms of food production and food usage cannot be assisted by oversimplifying terminology. In addition, the term ‘Neolithic’, imported from Europe, has a series of confusing connotations. Rejection of the term ‘Neolithic’ for African studies would remove at least one reminder of a term with an outmoded eurocentric bias and thus remove a manifest obstacle to good communication between researchers.”

I would endorse a corresponding rejection of the term and, in particular, its conceptual baggage in the case of Sweden, and other North European areas, as well. The main problem with it is not that it is “eurocentric”, but rather that it is so thoroughly imbued with the peculiarly modern view of evolution and progress (which, to be sure, may be styled as “eurocentric”, but Europe or European is so much more than *modern* Europe).

7 From the German *Trichterbecher* (Sw. *trattbägare*).

8 The concept of an archaeological culture must not be confused with the ethnographic culture concept. An archaeological culture is, in this discussion, best defined as an assemblage of artifacts and other physical traits that regularly occur together (*The Macmillan Dictionary of Archaeology*).

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related to subsistence (even though certain “farming” indications seem to be intrinsic to the TRB, in addition to the typical artifacts). The latter point is not new per se; it follows, rather, a trend in recent archaeology of the Stone Age in Sweden. As we will see in the following chapters, however, the problem goes deeper than the recognition that the TRB may not have been “about” farming, at least not initially.

The deeper problem – which is the real focus of this work – has to do with how we envisage sociocultural, or socioecological, change in the first place. Even if many now believe that the appearance of the TRB culture was the outcome of something other than a change in subsistence, it is still placed in the general context of “the transition to farming”. The consequence of this is that our understanding of what the appearance of the TRB means, and meant, is subsumed under our general view of long term history, which is one of a continuous sequence of events from then to now; it is, in short, an evolutionary view. Even if the crude 19th century varieties of the latter are thoroughly discredited, the basic idea is alive and well, not least in the public cosmological ambience of modernity within which archaeology exists, and to which it contributes.

In the case of the TRB this appears most noticeably, I think, in the way in which the concept of farming (Sw. *jordbruk*) appears in the archaeological debate. The conventional meaning of this term is clear enough: “the use of land for agriculture or pasture to produce food, feedstuff and primary products for energy purposes or for further industrial refinement or preparation” (*Nationalencyklopedin*, article *jordbruk*).<sup>9</sup> When the term is used in connection with the Early Neolithic of Sweden, it is generally employed in essentially the same sense, barring the industrial bit (see Chapter II: 1). Now, a farmer or a population of farmers is a person or group of persons, who or which engage(s) in farming. In order for the term to be appropriate (in conventional usage), such a person or group of persons must be significantly occupied with the tasks that are necessary in order to farm a piece of land. As far as populations (societies) are concerned, it only makes sense to speak of “farming societies”, if the people involved are to a significant extent *dependent* on farming for their livelihood. If,

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9 All translations from Swedish are mine.

therefore, we say that the TRB culture indicates the “transition to farming”, this can hardly mean anything else than that the populations adopting TRB culture became, in that event, dependent on a new way of procuring their livelihood.

Consequently, if the economic importance of farming to the TRB people is doubted (as it is by not a few archaeologists), there appears a serious conceptual problem. On the one hand, one wants to say that the TRB indicates the first appearance of what at least later became farming in an unequivocal sense; on the other hand, one thinks that it is inadequate to speak of the TRB people as undoubtedly farmers. So, what were they? This way of *framing* the problem follows inevitably from the assumption that the TRB forms a link in a chain of events that began in the Levant some 10,000 years ago, and which continues into the present day. The TRB, in other words, is an intrinsic part of “the agricultural revolution”, conceived of as a global phenomenon, and regarded as perhaps the most important occurrence in all of human history. But, I submit, somewhere along the way in this chain of mental associations *the real TRB gets lost*. “The real TRB” cannot have been anything else than the people who produced the items now categorized under that label. They may or may not have been farmers in the above sense (probably not; see Chapter II: 2). But *in any case*, how probable is it that they saw themselves as adopting a new way of *subsistence*? Of course, it can be maintained that whatever they thought they were doing, it still *led to* farming (in the long run). But if we want to comprehend the processes that had this eventual consequence (if they did; this is really a separate problem), is it not necessary to take into account what the people involved may have thought about things? We can hardly deny them their minds. And what goes on in human minds, is necessarily a singularly important ingredient of what goes on in human societies, in their wider ecological environment – especially in such short time frames as the one in which the TRB appeared (70 years or so at the most<sup>10</sup>).

This line of reasoning is connected to the problem of *origins*. If our questions to the TRB are explicitly or implicitly framed in terms of what it is supposed to have led to (farming, a settled life, or whatever we retrospectively deem significant in a longer time perspective),

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10 See Chapter II: 2, Section *g*.

then “origins” can only refer to the origin of something that is currently important to *us*. If instead we frame our questions in terms of how the TRB could have arisen in *its* context (*i e*, that of the people concerned), then “origins” must refer to what was important to *them*. The first kind of origins search is subjectively centered on ourselves, even though it is objective in form and outlook. It is, we might say, “subjectively objective”. The second kind of origins search is objectively centered on the TRB people, even though it concerns their subjective world. It is, in other words, “objectively subjective”. This curious inversion should be carefully noted, I think. Both perspectives engender legitimate research questions. But the first perspective is so dominant, even dominating, that it is hardly out of place to champion the second as a corrective.<sup>11</sup>

The problems with this are severe, however. What is needed, in order to pursue questions of origins from the second – “objectively subjective” – perspective, is some way of thinking about mental worlds as *ingredients* in socioecological processes. We need to gain some kind of intellectual grasp of how it *can be* that human subjectivity (imagination, ideas etc) both participates in, and gives rise to its environment. What the TRB type artifacts (and certain imported organisms) signify, is the addition or entering of new ingredients into the social ecology of the people involved. In order to assess the import of the former, even if quite speculatively, we need to have some basic understanding of the *ontology* of human social ecology, in both its objective and its subjective aspects.

There is a dearth of works dealing with this kind of ontological problem in earnest, especially in a way that may be relevant to archaeological interpretation. One of the few that come to mind is *The Perception of the Environment* by T. Ingold (2000).<sup>12</sup> Its central theme is

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11 Obviously the second perspective is akin to the direction which in archaeology is known as “post-processualism”, or, more adequately, “interpretive archaeology” (Hodder *et al.* 1995). In contrast to most of what has been done in that vein, however, I take into account what is conventionally seen as biological human-environmental relations, not just social and cultural ones.

12 One may also consider, to mention two important recent works, Schiffer (1999) and Thomas (1999a). Schiffer’s book is highly interesting from a behavioral point of view, but does not consider the subjective dimension of existence. Thomas’ *Time, Culture and Identity* is, at least superficially, more akin to my approach, but he

the construction of what Ingold calls a “dwelling ontology” around the concept of human persons as “organisms-in-their-environments”, *i e*, not in terms of organisms/persons *and* environments, but in integral, non-dichotomic terms. This, to me, seems eminently fitted to illuminate the problems indicated above, not least since Ingold seriously strives to integrate the conceptions of various non-modern cosmologies with his own stance. The result is a thought-provoking dialogue between modern scholarly rationality, pursued in a synthetic manner, and non-modern modes of thinking and acting. This opens up vistas of understanding which seem unattainable in any other way. For this reason, Ingold’s recent book, and some of his other works of earlier date, will form a centerpiece of much of the following (par-

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shows no interest in integrating the cultural life of humans with considerations of humans as biological creatures. He is only concerned with integrating culturally based thinking/acting with its artifactual products and expressions. As to the human/nature distinction he states (*ibid.*: 17):

“[W]hat is most important with human bodies [in contrast to non-human organisms] is that they represent the media through which a quite different kind of Being from animal existence is being enacted. Only human bodies constitute the focus of the lived experience in which beings encounter other beings, and in the process interpret both themselves and others [...]. The way in which animals come into contact with other creatures is categorically different, determined not by interpreting Being but by the animal’s absorption in its instinctual drives. In the full sense, there are no ‘other beings’ for animals [...]. Nothing in the world ‘shows up’ in a meaningful way for any kind of creature which is not human. It is only through human beings that the world gains its intelligibility, and what distinguishes humans is not any positive attribute of their physical presence, but simply this way in which they allow other things to ‘show up’ [...]. [...] this does not mean that the material things which we recognise would not exist at all if we were not here to see them. Rather, it means that they would not be recognised as parts of a significant world [...]. Only human beings ‘have a world’, in the sense of allowing things to stand out as embedded in relations of meaning [...].”

In fact, he goes even further than this, and says that there “is no way that we can gain access to the biological constitution of creatures which evades language and history” (*ibid.*: 11). He disapproves of the opinion that human beings are “considered as a subset of other creatures, sharing some qualities, yet distinguished by some other elements which have been grafted on” (*ibid.*: 16). In other words, humans are not only unique in the animal kingdom, they are utterly different from all other creatures. As we will see in Part III, I subscribe to a radically different ontological and metaphysical position, although I too see human beings as special.



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## Introduction

ticularly in Parts III and IV). Ingold's perspective will also second my critical stand regarding the dominance of the first kind of origins question defined above. The main title of the present book should in fact more precisely read: *Escaping the Lure of and Fixation on Purely Historical Origins of Current Phenomena When Thinking about the Human Past*, or something like that. There is something about our usual outlook on "History" which is, I will argue, misleading when it comes to making sense of the TRB, or any other non-modern ambience, and indeed of our modern ones as well.



## Part II



## The Conceptual Captivity of the “Neolithization” Debate

In a recent Swedish archaeology textbook (Burenhult 1999: 267) we learn that the cultivation of cereals is present at the earliest Neolithic settlements in Scandinavia, but also that it was of “very marginal” importance. It was rather stockraising which “dominated the farming ingredients of the economy”. The farmers of the Scandinavian Neolithic are designated as pastoralists. It is also said that farming only led to “very marginal interference with nature” during all of the Neolithic. Still the period 4100-2300 B C is called “the Farmer Stone Age” (Sw. *bondestenåldern*) and we learn, furthermore, that when “elements of a farming economy in the form of agriculture and pastoralism were introduced in South Scandinavia about 4000 B C a process was begun which would go on continuously into the present day” (*ibid.* 245).

Persson (1999), in a critical review of the evidence, finds some, but not that much, evidence for farming in the Early Neolithic.<sup>13</sup> He also states unequivocally (*ibid.*: 13) that “the Neolithic type of farming is the one which assumes a decisive historical significance”. Welinder (1998a: 45), in a work dealing with the history of farming in Sweden, is more cautious, finding the term “farmer” to be a problematic designation for the Stone and Bronze Ages: “Few people during the Neolithic and the Bronze Age were farmers in the sense that they only practised farming. They were also fishers, gatherers and hunters. Is there in the Swedish language any term at all for people who support themselves in that way?” And he thinks that if our minds rise above the level of food, and try to fathom the way of life and worldview of the people in question, the terms “farming” and

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13 As I said in the Introduction, the terms “Neolithic”, “Mesolithic” and “Neolithization” refer geographically only to Scandinavia, unless otherwise stated.

“farmer” become *really* problematical.<sup>14</sup> Thomas (1996: 313) concurs with this view:

rather than a wholesale transformation to agriculture, communities in Scandinavia, Britain and Ireland, the Low Countries, northern France and the North European plain used individual aspects of what they could take from the Neolithic in order to create something new. What emerged in subsequent centuries was a series of social and economic forms that cannot easily be pigeon-holed as “hunter-gatherer” or “agricultural”, and for which we would be hard put to find direct analogues in the contemporary world.

Such warnings have rarely been heeded in earnest, however. The process of “Neolithization”, which is supposed to have made Neolithic “farmers” out of Mesolithic “hunter-gatherers”, is still most often regarded as *the beginning of agriculture* in this part of the world, and the whole discussion is conceptualized in terms of subsistence. Paradoxically this is so even among those who advocate a “social” or “ideological” background to the “Neolithization” process. The final aim, more often than not, is still to explain why former hunter-gatherers became farmers. Hence other questions are, when all is said and done, logically subsumed under the question of subsistence or economy. Price, Gebauer & Keeley (1995), for example, while stressing the religious nature of the Funnel Beaker culture (TRB, universally regarded as the “first farmers” of northern Europe), still frame their whole discussion in terms of “the introduction of farming”. This kind of inconsistency seems to be noted by Kaliff (1999: 31), in whose opinion an interpretation of “Neolithization” in terms of social and mental factors is “partly obscure”. He thinks that even if people had “a very developed mental world”, subsistence would remain of paramount importance. This puts us back on square one. And as the discussion stands, regardless of what kind of explanation is suggested, “Neolithization” *is* (in current discourse) basically a matter of changes in subsistence and economy.

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14 In the rest of the book referred to, however, Welinder retains, for want of a better designation, the term “farmer”. This may mislead the reader who has not noticed his (strong) initial reservation.

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A seemingly alternative perspective sometimes discussed is to regard the process as a change from a mobile to a settled way of life, but the reasons for becoming settled in the first place – once and for all, more or less – would still be tied to different subsistence options. H. Knutsson (1995) for instance, when addressing the issue of mobile/settled people of the Stone Age, focuses her investigation on Mesolithic and Neolithic burial customs, respectively, but the basis for comparison is a multi-cultural ethnographic sample sorted into different subsistence-based categories. This highlights the fact that whatever perspective one adopts, the whole debate seems always to remain *conceptually bound* to the question of subsistence, or economy.

Briefly put, it seems to me that the debate concerning the “Neolithization” of Sweden revolves around certain recurrent questions, which are framed according to an underlying logic which is rarely, if ever, seriously examined. Maybe this is one reason why Persson (1999) ends his review on a somewhat exasperated note, indicating that “there is today no such theory which presents a convincing explanation for all archaeological observations concerning the introduction of agriculture” to Scandinavia (*ibid.*: 184). “This is primarily due to weaknesses in the theories” (*ibid.*); and further: “The situation is dismal when it comes to theories about the causal connections” (*ibid.*: 190). Without claiming to have found a panacea for this lack, I venture that the inconsistencies surfacing in the theoretical debate, and also in the way the actual evidence seems to contradict widely held opinions, are both due to a false or, at the very least, misleading conceptualization of the way human beings relate to their environments. (This will be the main theme in later parts of the book.)

The authors cited above comprise just a tiny sample of an extremely voluminous discussion, but I am confident that a more comprehensive survey of the literature would not reveal much that is significantly different. Further examples are examined in what follows. In fact, almost all archaeological research in this field (“Neolithization”) is focused around subsistence and economy, in one way or another.<sup>15</sup> Changes in subsistence or economy in the “direction” of

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15 This has, it should be said, begun to be questioned among archaeologists (e.g. Pluciennik 2001), but the general picture – deeming from conversations with archaeologists, reading the literature and attending archaeological conferences – is very much the one stated.

farming is perceived as *the* most important change – I could almost add: ever. Hence if one begins to doubt – as I do – the conceptual foundation for this way of looking at the problems (*i e*, in terms of bestowing retroactive “importance”), one takes on a quite formidable tradition. And not only that, one challenges an important aspect of the collective identity of modern people. As Rudebeck (2000: 4, 6) puts it:

It is hardly an exaggeration to say that the emergence of agriculture is the most mythically charged theme in Western archaeology. Agricultural origins concern Western identity.

[A]griculture and its origins has often been discussed in connection with issues that have been quite persistent in Western philosophy, *i e*, the relation between the human being and God, [between humans] and nature, the emergence of human society and, not least, the major question of human nature.

And as if that was not enough, it is also the case that the “very creation, during the nineteenth century, of several academic disciplines dealing with different aspects of human history is, of course, a sign of ‘the enormous importance accorded to origins’ in *modern society*” (*ibid.*: 3). Because of this it becomes impossible to critically analyse the discussion of “Neolithization” in Sweden, and to propose an alternative perspective, without also paying due attention to the wider issues that Rudebeck mentions. This does not mean, however, that archaeological problems can be reduced to philosophical considerations. The archaeological finds, however inarticulately, *speak* to us of people like, and yet not like, us. But we cannot articulate what they might say to us without taking ourselves and our preconceptions into account. All research into the human condition, therefore, has to be *self-conscious* in a certain sense.<sup>16</sup> If the evidence of and our reasoning about some historical phenomenon seem to be contradictory and confused, as they do regarding the “Neolithization” issue in Scan-

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16 This, of course, is a commonplace in hermeneutically inclined studies. However, the deep ontological questions involved are, in contrast to epistemological issues, seldom dealt with in depth. The most fundamental of these deep questions whose answer, whether implicit or explicit, shapes all the others, is: *What is a human being?*



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dinavia, the chances are that it is our image of ourselves that is at fault, just as much as our image of “them”. The two go irreducibly together. I will lay great stress on that reflective dialectic and argue that if we could study and analyze “us” and “them” reciprocally, so to speak, *from the same general theoretical stance*, much would be gained. The nature of a possible comprehensive stance will be laid out and examined in later chapters; for the moment I just note its desirability.

The difficulties we will encounter are compounded through the use of the very terms “Mesolithic” and “Neolithic”, which have often been contrasted with each other in one way or another. These contrasts are generally thought of in terms of the differences between hunter-gatherers and farmers, the former being “closer to nature” and the latter more “artificial”. In its most radical form, the distinction between the Mesolithic and the Neolithic (as kinds of culture and subsistence, not only as chronological periods) has served to pit “the early post-glacial hunter-gatherers against the Neolithic farming societies as two typological extremes” (Zvelebil 1998: 4), thus endorsing a view of the Mesolithic and Neolithic as more or less alien to each other. This bias is in part an artifact of the research methods and research traditions of Mesolithic and Neolithic research, respectively. Zvelebil *et al.* (1998: 5) makes the following observation:

Conceptually, the concerns of Mesolithic specialists are focused on analyses of lithic and faunal assemblages, and on palaeoenvironmental and paleoeconomic reconstruction; while those working in the Neolithic focus on ceramics, stone axes, megalithic and non-megalithic burials, and settlement architecture as sources of evidence for belief systems and social organisation of the Neolithic communities. In this sense, the gap between the Mesolithic and the Neolithic has not been quite bridged [...].

Zvelebil (1998: 1) comments further: “When prehistorians first defined the Mesolithic and Neolithic at the end of the last century, they could hardly have expected that these concepts would come to mean so many different things”. Since then the exact meaning of these terms, originally chronological and clearly social evolutionary, have changed from one author to another, and even from one paragraph to another within the same text, and currently the confusion

has become troubling enough to warrant special attention (*e.g.*, Pluciennik 1998, Werbart 1998, Zvelebil 1998). Werbart (1998: 39) counts as many as 36 different labels of “similar, related or even identical cultures of the Baltic region during the third and fourth millennia bc”. All of these labels in one way or another make use of the Meso-/Neolithic distinction. Such difficulties leads Pluciennik (1998: 79) to say that

[w]hile the terms ‘Mesolithic’ and ‘Neolithic’ will continue to offer a useful shorthand *within* regions limited in time as well as space, the value of their content diminishes rapidly as the scale of application is expanded. We should attempt to treat the transition itself as an historically variable entity, and one in which perceptions of ‘the Neolithic’ were equally variable, partial, historically determined and different to each other – as are our own constructions of the phenomenon.

As for spatial limitations, however, Werbart (1998: 37), for example, points out that “in Latvia, Lithuania, and Estonia, Mesolithic traditions and conservative economies survive until the early Iron Age”. This indicates that even within one limited region, during a period covering “the transition from foraging to farming”, the use of the terms in question is very ambiguous.

Such difficulties become serious when it is realized that the terms in question have come to have other connotations than those of simple chronology or evolutionary stages. Somewhat ironically the historical origin of the concept of the Mesolithic appeared “as an alternative to nothing”, as Zvelebil (1998: 2) puts it. It was at first not generally accepted as a social epoch equivalent to the Palaeolithic or the Neolithic, the reason being “its nonconformity with prevailing social evolutionary views” (*ibid.*). As a result the Mesolithic for a long time remained a mostly chronological concept, an inbetween period no one really knew what to make of. Since the 1980s especially, however, there has been a trend to give some social characterization of the Mesolithic peoples in terms of social and economic complexity, but this has not been generally accepted (*ibid.*). So,

[n]otwithstanding the development of economic and culture historical archaeology, the Mesolithic retained its status of post-glacial, but

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pre-Neolithic hunter-gatherer societies by a sort of grudging consensus [...], while the Neolithic came to stand for Stone Age farming societies, and more specifically, village-based agro-pastoral farmers [...], whose roots – cultural or genetic – extend ultimately to the Near East. [*ibid.*]

If this “social upgrading” of the Mesolithic hunter-gatherers is accepted, however, we still face the difficulty of how, or if, to uphold the boundary between the Mesolithic and the Neolithic, conceptually as well as chronologically (Pluciennik 1998: 65).

Increasing knowledge about Mesolithic cultures have contributed further to the troubling fuzziness of the Mesolithic-Neolithic “transition”. In the 1980s Zvelebil (1986: 168) saw the writing on the wall very clearly:

If the postglacial hunters of the temperate zone can really be characterised by logistic, rather than residential mobility, storage, intensive resource-use strategies, non-egalitarian social organisation and the use of pottery, polished stone and other technological innovations traditionally associated with the Neolithic, what is left of the difference between the Mesolithic and the Neolithic?

This goes hand in hand with the recognition of the variability of pre-Neolithic hunter-gatherer societies (*e.g.*, Boaz 1998). The most noticeable consequence of this, so far, has been, as already noted, a kind of “upgrading” of the people of the Mesolithic; in short they appear to have been less “primitive” than they were earlier thought to be. But on the other side of the supposed divide, there “has been a failure to consider the enormous potential variability, in terms of subsistence, economy, social organisation and settlement pattern *within* farming societies” (Pluciennik 1998: 61). That such variability existed is beyond doubt (Larsson & Olsson 1997), but the obvious conclusion has not yet been drawn in earnest by very many, *viz.*, that this variability on both sides of the “divide” means that *there is no real boundary*, and hence no discernible basic differences for a long time, except the appearance, and sometimes disappearance again, of certain artifact kinds, and the appearance of certain new “domestic”

species.<sup>17</sup> The lack of evidential univocality (see next chapter) also means that it is quite difficult to imagine how one is to go about understanding and explaining the undeniable changes evident within a longer time perspective (hundreds of years). The issues that must be faced center critically around the concepts of hunter-gatherer and farmer, *and all the connotations that go with them*. Midgley (1992: 355) noted this in her monograph on the TRB:

The simplistic division between hunter-gatherers and farmers has long been shown to obscure a multitude of economic practices and has failed to offer any explanation as to why societies move from one form of exploiting their environment to another, or as to how these changes come about.

One notable and influential way of conceptually (heuristically) handling these difficulties has been proposed by Zvelebil: his famous *three-stage availability model* of the shift in subsistence mode, from hunting-gathering to farming. He has published several not substantially different versions of this; the following summary is based on Zvelebil (1996). He thinks that a shift in subsistence mode is the *only* determination (definition) of “the Neolithic” that is sufficiently clear and archaeologically visible to be able to serve as a signature of it in a *wider* geographical area. He thinks that corresponding changes, if any, in social structure or ideology should, on the other hand, be related to *local* contexts. In giving his large-scale view of the “transition to farming” in the Baltic area, then, he concentrates solely on the change of subsistence. This, he thinks, is warranted by the fact that “there is evidence of continuities in material culture and settlement pattern between the Mesolithic and the Neolithic” (*ibid.*: 324). In other words, in Zvelebil’s opinion it is unlikely that the transition involved migration, and it is uncertain – at least in the initial phase – whether it involved any farreaching social or ideological changes. The three-stage availability model is a heuristic device constructed to make sense of

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17 Obviously the whole issue *in fact* revolves around what one makes of these additions to the Mesolithic sociocultural contexts, regardless of one’s preconceptions. I do not deny that the discussion has an objective basis in actual changes; it is the import and meaning of these changes that is at issue.

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the varying and, in some areas, temporally prolonged character of the change in subsistence. The stages he postulates are the *availability phase* (during which farming is known to foragers, but not adopted, and some exchange takes place), the *substitution phase* (during which farming is adopted by foragers), and the *consolidation phase* (during which farming is well established as the principal mode of subsistence). According to this model, the substitution phase (“most often regarded as the time of presumed Neolithization”; *ibid.*: 325) will typically be short, “because of scheduling problems and the labour costs of maintaining a balanced hunting-farming economy” (*ibid.*: 326). This is supported, Zvelebil claims, by ethnographic analogies. As we will see in the next chapter, this contention of the rapidity of “substitution”<sup>18</sup> is questionable.

In Zvelebil’s model (see fig. 18.3 in Zvelebil 1996) one can intuit the movement of the “agricultural frontier” across the Baltic region. This frontier is “occupied by communities in different stages of the transition” (*ibid.*: 328), and it is within it that Zvelebil sees the contacts between farmers and hunter-gatherers as taking place. If the transition to farming is viewed as comprising all of the stages postulated by Zvelebil, then it is evident that it was a very slow affair indeed, occurring from about 4000 to about 500 BC, and even later in Finland, where the “last agricultural frontier in Europe is only a few hundred years old” (*ibid.*: 330).

The “complexity” of some forager communities (“invoking a degree of sedentism, high population density, more intensive food procurement, technological elaboration, development of exchange networks, social differentiation” etc; *ibid.*: 331) would probably, Zvelebil thinks, have acted against the ready adoption of agriculture (*ibid.*: 333), and would therefore have been characteristic of some areas where the agricultural frontier came to a stand-still for extended periods. As an example of this Zvelebil mentions the Ertebølle culture

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18 *I.e.*, if “substitution” is taken to refer to subsistence practices and dependence on “food production”. That the introduction of pottery, and of cereals and domestic animals (to an extent unknown) in Middle Sweden was fairly rapid seems certain (see next chapter). The controversy lies in the question whether these novelties signify a radical change (“substitution”) in subsistence, or not, and whether subsistence is the best concept around which to center the discussion.

of Denmark. In the Mesolithic Ertebølle case, the adoption of agriculture seems eventually (as I read Zvelebil) to have been a forced move. Initially, in the availability phase, interactions with regular farmers would have been of a cooperative nature. “At this stage, the effect of the frontier would have been largely supportive: the exchange of foodstuffs across the frontier would reduce stochastic variation in food supply and the risk of failure for both the hunting and farming communities” (*ibid.*: 334). In the Ertebølle case the hunter-gatherers imported pots and pottery technology, shoe-last adzes and other stone axes and probably cattle in small numbers. In the other direction went, Zvelebil thinks (there is no evidence), furs, seal fat, honey and other forest products. All this formed part of the initially cordial relationships between people on either side of the agricultural frontier. Zvelebil submits, however, that with time disruptive effects came to the fore. These include (*ibid.*: 337-38):

- Internal disruption of the social fabric among hunter-gatherers arising from increased circulation of prestige items and increased social competition
- Opportunistic use of hunter-gatherer lands by farmers [seriously interfering] with hunter-gatherer foraging strategies and information exchange and [initiating] disruptive ecological changes
- Direct procurement of raw materials and wild foods by farmers who establish their own “hunting lands” in hunter-gatherer territories as part of secondary agricultural expansion
- Increased exploitation of export commodities by hunter-gatherers to the long-term detriment of the forager economy
- Hypergyny: the loss through marriage of forager women to farmers.

In the long run, the increasing impact of such occurrences “would have reduced the benefits of maintaining the complex hunter-gatherer strategies and shifted the balance in favour of adopting farming” (*ibid.*: 339), by wearing down socioculturally entrenched resistance as it were. The outcome of this speculative scenario, then, was not an invasion by farmers, but a transformation of “social, ideological

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and economic strategies”. This, according to Zvelebil and many others, is indicated by “continuities in material culture, economy, settlement location and burial practices” (*ibid.*).

Regarding Zvelebil’s model as a whole, Pluciennik (1998) comments critically:

[D]espite Zvelebil’s [...] contention that Mesolithic subsistence strategies can be seen as alternatives to Near Eastern domestication and farming, the transition is basically seen as a one-way process: societies are defined within it according to the stage they have reached towards a pre-defined end (i.e. farming). [*ibid.*: 68]

[T]he model holds both the general process and the end result constant, despite the huge spread in space and time which any talk of a transition to the Neolithic or farming in Europe involves. However, once reached, the Neolithic is treated as a static and unchanging phenomenon. [*ibid.*: 68-69]

Thus Zvelebil’s three-stage model fits well within a general evolutionary account. On a very large scale the model as such is not unwarranted as a way of grasping the archaeologically evident changes over very long time spans. But it does not help much in explaining how the transition came about. What might have been the “nitty-gritty” of it? In a way Zvelebil seems to agree with this. He points out that although there have been proposed many explanations for the transition to agriculture in the Baltic area “less attention has been paid to the actual processes of the transition” (Zvelebil 1996: 341). In Zvelebil’s eyes “the forager-farmer contacts, through which the transition to farming was mediated in many areas, acted as a mechanism regulating the rate of transition, and may be counted as one among the causes of the transition” (*ibid.*). This position lands us squarely in the theoretical problem of the ontology of sociocultural processes, and of human-environmental relations. “Archaeological cultures”, as Zvelebil admits, cannot readily be identified with tribes, ethnic groups or the like, neither culturally nor genetically or linguistically. He gives a rather detailed list of what kinds of variables that have a bearing on the understanding of cultural variation and change:

The availability of raw materials, artefact function (both practical and symbolic), technological competence, exchange patterns, descent and residence rules, marriage patterns, sexual division of labour, social context of production, status and prestige, mobility patterns, subsistence strategies, population dynamics, ideology, discard patterns and taphonomic factors. [*ibid.*]

Here the problem of relative “non-difference” (*e g.* between the Ertebølle and the TRB) and variability (both in the Mesolithic and the Neolithic periods) looms large. What conceptual distinctions and categorizations do we need to make, in order to be able even to start thinking clearly about such seeming fuzziness? We should be wary of the implicit assumption that there *was a “transition”, i e.*, that the occurrences in this part of the world over millennia were coherent and continuous enough, for this term to be adequate to the actual processes involved. In the next chapter, I will conduct a sample review which shows in more detail some of the ways in which the “Neolithization” debate is so tied up with the idea of “the origins of farming” that the evidence is firmly tied to this general framework, despite speaking at least as much for a different view.



## Enigmas of the Early Neolithic in Sweden: A Sample Review

In this chapter we will be concerned with what different authors have said about or in relation to the “Neolithization” problem in Scandinavia, particularly eastern Middle Sweden.<sup>19</sup> I have limited the discussion to a selection of relatively recent works which I think are of particular interest. My aim is not a comprehensive review of the evidence or of the opinions of others. My purpose is only to present sufficient reasons for entertaining the doubts which have arisen in my mind and which, in turn, have led me to propose a different way of looking at some aspects of the Early Neolithic. For this purpose I believe that what is presented below is enough.<sup>20</sup> I will concentrate on the *arguments* and *assumptions* made by others rather than on the data as such. This means that I will discuss the data (or, rather, some data) only in relation to specific arguments and assumptions under consideration. Surveys and attempted syntheses or reviews of different kinds of data pertaining to the Mesolithic/Neolithic transition are plentifully available elsewhere.<sup>21</sup> It will become clear that

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19 Eastern Middle Sweden conventionally includes Uppland, Södermanland, (parts of) Västmanland, Närke and Östergötland (Åkerlund 2001: 47). In what follows the phrases “southern Sweden” or “South Sweden” will, somewhat loosely, denote everything south of Dalarna/Gästrikland, and the phrase “southern Scandinavia” or “South Scandinavia” will denote, somewhat loosely, the same area with the addition of Denmark and (perhaps) southern Norway.

20 Consequently, my omission of many recent works does not mean that I deem them to be insignificant in any way; it only follows from the limitations I have imposed on this text.

21 Recent reviews and histories of research can be found in Larsson & Olsson (1997) Persson (1999), Bergensträhle & Hellerström (2001), and, for Denmark, Fischer & Kristiansen (2000).

the data themselves<sup>22</sup> are discerned “through” certain assumptions about *the “Neolithization” issue*. This in itself is reason enough to highlight these assumptions and scrutinize them critically.

Perhaps it is also of some relevance to mention, that only since the mid-1980s have the archaeological investigations in eastern Middle Sweden increased considerably, resulting in new settlement sites being discovered, and the discussion becoming more critical and sustained (Åkerlund 2001: 48-49). During the course of the *Coast to Coast Project*, as well, new data (some as yet unpublished) has come to light, which may alter the picture painted here. I repeat, therefore, that what interests me is the *bias* of the viewpoints that will be discussed. This bias tends to stand in the way, I submit, of alternative equally warranted scenarios.

### a. Axes and farming

Recently F. Hallgren (several papers), and others at Uppsala University, have made important new contributions to the debate about the “Neolithization” of eastern Middle Sweden, in constructing a hypothesis, one face of which is based on a certain view of the subsistence practices of the early TRB culture in Middle Sweden, in part going back to the earlier work of S. Florin and S. Welinder.<sup>23</sup> Hallgren (2000a: 1) speaks of the “traces of a *settled rural landscape* of the Funnel Beaker Culture – as indicated by the frequent occurrence of stray finds of polygonal battle-axes and thin-butted greenstone axes” (my emphasis). The distribution of these different kinds of axes plays an important part in Hallgren’s argument; it was first explored in Apel *et al.* (1995). To begin with, it is noticeable that the thin-butted flint axes of eastern Middle Sweden fall into two categories: long and short. These axes originally came from southern Sweden (where

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22 The only data which to some extent are “assumption-independent” (in relation to hermeneutic concerns) is a number of C14 and other physical datings (Persson 1999).

23 Another face concerns the possible kinship structures and exchange relationships from the late Mesolithic to the Middle Neolithic in Sweden, especially eastern Middle Sweden and its northern borderland; see Hallgren 1996, 2000a, 2000b. This will not be discussed here.

flint occurs naturally), and the further they have travelled from the area of origin the more pronounced becomes the difference between short and long axes (Apel *et al.* 1995: 113f). The long axes of Middle Sweden do not seem to have been much used at all, while the short ones seem to have been used for felling trees and the like, as were the locally produced greenstone axes (*ibid.*). This is interpreted to mean that the long flint axes were used for “ritual” or “symbolic” purposes. Another difference between the two kinds of axes appears from studying their distribution. The long axes have all been found at what was then the coast, while the other axes have been found in inland areas, as well as at the coast (fig. 33 in Apel *et al.* 1995). At this point the reasonable assumption is made, that it was in the inland forested areas that “functional” axes were most needed (*ibid.*: 115). Since, furthermore, the long thin-butted flint axes are found at fairly regular intervals along the coast, the authors assume that these locations indicate “some kind of central place” (*ibid.*: 116), more precisely of a “ritual” kind.

Almost all the settlements of the TRB culture in Middle Sweden are found along the coast, but most of the axe finds have been made at inland locations (Apel *et al.* 1995: 89, 91). This observation is the germ of the hypothesis, promoted by Hallgren and others, that there existed inland settlements devoted to farming (specifically swidden cultivation) rather than to the hunting and gathering more characteristic of the coastal sites (see Apel *et al.* 1995: 89-95 for this argument). The reasoning in that paper was thought to have been confirmed by the Skogsmossen finds (Hallgren *et al.* 1997: 52), even though Skogsmossen and Fågelbacken (the focus of Apel *et al.*) are located far apart, and despite the fact that Skogsmossen was not far from the sea shore (about 1 km according to Hallgren himself, 2000a: 1, less according to Segerberg 1999: 197).<sup>24</sup> There are some indications of cereals and domestic animals at Skogsmossen; however it should be noted that the argument for agriculture still depends heavily on the distribution of axe finds. Hallgren (2000b: 153-55) once

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24 Most of the eastern Middle Swedish settlement sites mentioned in the text are situated around what was then a large bay of the Baltic Sea, now shrunk considerably to produce Lake Mälaren.

again illustrates the assumed presence of “an established rural landscape” (Sw. *bondebygd*) by means of maps showing the distribution of axe finds in eastern Middle Sweden (*ibid.*: figs. 3-4).

Hallgren (2000a) sees the Skogsmossen site as part of an occasionally moving farming community practicing swidden cultivation (Sw. *svedjebruk*). The 150 to 200 year intervals between the three phases of occupation at Skogsmossen are interpreted as constituting the time required to complete a “swidden cycle”. He estimates that the total amount of porphyrite axes manufactured at the site at intervals, over a period of several hundred years, were around 100 (*ibid.*: 9). This is not a large amount, and hardly indicates any really intensive clearing activities. The stray finds of flint and other axes mentioned earlier are not convincing proof for intensive axe use either. First, stray finds are difficult to date properly (Persson 1999: 76). Second, the finds referred to by Hallgren are, according to Segerberg (1999: 198f) not very many, perhaps only 18 in the Badelunda ridge area (*ibid.*: 199), which is focused on in the argument, and she doubts the value of the axe finds as indicative of farming. Even if the hypothesis of swidden cultivation (which can be questioned, see below) is granted, this hardly conjures up a “rural landscape”. Segerberg, too, stresses the quite hypothetical nature of this view.

Particular emphasis is placed on ridges with sandy soils (the Badelunda and Enköping ridges). These soils were “suitable for primitive agriculture” (Apel *et al.* 1995: 91) and much is made of the axe concentrations found in such areas; these are thought to indicate indirectly the presence of farming activities. Apel *et al.* (*ibid.*: 54) report also two concentrations of axe finds in inland areas which do not lie on ridges with sandy soils but along streams (which are regarded as “typical catching locations”). From their map (fig. 24, p 91) it is also evident that smaller concentrations of axes occur along the coast as well. It should be emphasized that the axe concentrations themselves do not directly indicate the presence of farming activities, but are only surmised to do so on the assumption that the sandy soils on the ridges seem suitable for agriculture. This quotation, from another related paper, sums up this line of reasoning:

It is fair to assume that some kind of agriculture was practiced by the inhabitants of Skumparberget 2 [an Early Neolithic site]. The geological earth deposits in the area of the settlement consist of sand and moraine. When the settlement was in use, 5000-6000 years ago, a deciduous forest grew in the area, which created a thin layer of brown soil suitable for swidden agriculture [...]. Occasional grain impressions in the pottery and burnt daub from the site confirm that domesticated plants were handled on the site. Thus it is proposed that the sandy soils surrounding the settlement were used for farming. [Apel, Hadevik & Sundström 1997: 35-36]

Where axes are found at other locations this is explained (by Apel *et al.* 1995) as indicating the presence of people engaged in catching activities, generally fishing. There is nothing wrong per se with the association of sandy soils with agriculture, but unless it is accompanied with more direct evidence for agriculture of any magnitude to speak of, the totality of axe finds could just as well be interpreted in a different manner. It should be taken into account that a fair number of axes have also been found at locations “not suitable” for agriculture. Also, axes and their use is nothing new to the area in the Early Neolithic, and Midgley (1992: 15) notes that “[a]cross the whole of the North European Plain [where TRB culture later emerged] the Mesolithic sites are found predominantly on the lighter sandy soils occupying elevations, river terraces and domes.” This seems to indicate that there is no necessary connection between sandy soils and farming during the period in question.

The issue raised, then, is if there might be some alternative explanation for the distribution of axe finds. As an obvious point of departure we can note, with Apel *et al.* (1995), that it is mostly at more inland locations that one needs axes to begin with. The fact that axes are found in inland areas is therefore not surprising in itself and needs no special explanation. What needs an explanation, however, is for what purpose the axes were used. Hallgren's and others' way of reasoning is heavily dependent on the assumption that the axe finds are indicative of *swidden cultivation of cereals*. The clearing of land for cereal cultivation is one possibility. It is (weakly, I think) supported by a few grain and pollen finds, of which especially the latter are very ambiguous as to their value as evidence for farming (see be-

low). Other explanations for both the axes and the possible (but not proved) burning of forest are possible, however. We will return to this matter below (Section 3).

Hallgren's and others' strong assumptions lead them to see great differences in subsistence where in fact these may have been much less significant than is supposed. Fågelbacken, for example, is regarded as a hunting site (Apel *et al.* 1995), while Skogsmossen is seen as a "farmstead" (Sw. *bondgård*) (Hallgren *et al.* 1997, Hallgren 2000a). But the actual finds indicating cereal cultivation and animal husbandry at Skogsmossen are few, and it seems quite possible that "farming" was practised to a very limited extent, hardly meriting the designation "farmstead", with its connotations of a settled rural economy.

## b. Subsistence Indications

In what follows I accept Prescott's (1995: 73) view of "subsistence" as distinct from "economy":

"Subsistence" is concerned with sources and means of support, or livelihood – i e in many ways the production process. "Economy" is concerned with the structure and organization of production, distribution and consumption of goods and services. On this level of analysis the terms are defined in accordance with common English usage. The same subsistence activities (for example hunting) can be carried out within different economies or economic systems, while similar economic systems can contain different subsistence types [...].

Hence with Prescott I regard the expression "subsistence economy" as unnecessarily confusing. In a more comprehensive view subsistence and economy (as actualities) cannot be so neatly kept apart, but in this section my purpose is to ask the question of what people probably *ate*, regardless of how they organized their procurement of it. Since the concept of "economy" comprises much more than the concept of "subsistence", to uncritically identify them or bring them together ("subsistence economy") breeds obscurity of thinking. There is a larger discussion, too, where "subsistence" and "economy" is best kept apart, *viz* about so-called "complex hunter-gatherers" (*e g*,

Price, Gebauer & Keeley 1995: 120ff). My question in this section then, regarding the Early Neolithic of Middle Sweden, is: were the people dependent on farming, as we usually understand it, for their *livelihood*? Only then, I think, is it adequate to speak of “farmers” in a meaningful sense. The question is first of all one of scale and not of the absolute presence or absence of finds of cereals, cattle, sheep or goats. Further, more difficult, questions concern the culturally internal meaning of what *we* call “farming practices”. In this respect too, as we will see, I think the meaning we attach to terms such as “farming” and “agriculture” is inadequate to likely Stone Age concerns. Many recent authors have answered the question just put negatively. Here I will note some of the facts and surmises which support this answer.

An often indicated source of evidence for early “farming” comes from palynological investigations, but “the earliest farming only leave very insignificant and difficult to interpret traces in the pollen diagrams. The most basic reason for this is in turn that the cultivated cereals do not spread much pollen” (Persson 1999: 71). Furthermore, it has proven difficult to date the pollen diagrams (Persson 1999: 73), and the extremely small amounts of pollen indicative of farming (in some sense) in the pollen diagrams need to be explained (*ibid.*: 74). According to Persson (*ibid.*) it is rather the archaeological evidence, not the pollen diagrams, which shows that cereals and domesticated animals were present in the Early Neolithic. This negative estimate of the interpretive usefulness of palynological evidence is shared by a number of recent authors.

A much better source of hard data consists of actual grains of different cereals, and of bones from domestic animals (sheep, goats, cattle; pigs are of more uncertain provenance, since it is difficult or impossible to distinguish osteologically between wild boar and domestic pig). But here too caution is warranted. For one thing carbonized grain and other plant remains are often found to be of a different age than that indicated “intuitively” from their place in a cultural layer (Ahlfont *et al.* 1995: 141). Impressions in potsherds are often better evidence; here, however, the possibility must be considered “that either the pot was manufactured or the grains were harvested at quite a different place than that at which the pot was deposited” (*ibid.*: 142; *cf* Hulthén & Welinder 1981: 133f). As concerns animal

remains there are other sources of uncertainty. For example, pigs (as has been mentioned) occurred in the wild during the Mesolithic/Neolithic, while aurochs was probably (but not certainly) extinct well before the Neolithic (Persson 1999: 46). Persson also notes (*ibid.*: 88-89) another serious uncertainty in the finds:

If [successive groups] of 10 persons have lived for 500 years in one place and if they have satisfied half of their need for calories from meat, this should result in several tons of bones. At an excavation as a rule only a few kilos are found [...]. Neither is there, unfortunately, any guarantee that the part that is found consists of a statistically unbiased sample.

In other words the representativity of the bones actually found is open to doubt. He also stresses that the total amount of bones recovered from Early Neolithic is *so small* that great liberties will have to be taken if one is to discuss them at all (*ibid.*: 89, cf Ahlfont *et al.* 1995: 146).

At Skogsmossen, in what is interpreted as post holes in the fen, 13 intact grains and 16 grain fragments (it is not said of what kind) were found (Hallgren *et al.* 1997: 72). In earth samples from a hearth and a cooking pit three grains were found (*ibid.*) Very few (burned) bones were found in the fen. Of the three fragments that could be identified one was from a ringed seal and two from pigs, whether wild or domestic can not be determined (*ibid.*: 71). If these bones are the remains of some kind of sacrifice (in accordance with the authors' interpretation of the fen), does that mean that wild animals were sacrificed? If so, the sacrificial activities cannot have had anything exclusively to do with the presence of domestic animals. Otherwise at the Skogsmossen site 26 bones could be identified with any certainty: 8 cattle, 5 goat or sheep, 5 seal, 5 fish, 1 waterfowl, 1 forest hare and 1 otter or badger (*ibid.*: 94).

At Fågelbacken imprints of grains and bean in pottery were found and pollen from barley was found in a nearby bog (Apel *et al.* 1995: 89). No remains of domestic animals were found (Hallgren *et al.* 1997: 94), which is perhaps not very surprising given that the site was situated on an island. The main difference between the two sites (Skogsmossen and Fågelbacken), however, is that at Fågelbacken



most of the bones found were human, while at Skogsmossen none were human (*ibid.*: 96). This may well indicate that the two sites were of a different character, but to say unequivocally that Skogsmossen was an “inland<sup>25</sup> farming site” and Fågelbacken a “coastal hunting site” seems to me to stretch the evidence a little too far. If, as Apel *et al.* (1995: 94) surmise, *all* of the sandy soils in the Badelunda ridge area were cultivated within the span of several hundred years, one would think that the indications of agriculture would be more numerous.

One should also bear in mind that the actual bone finds from Fågelbacken are very ambiguous, interpretively speaking (*ibid.*: 68-79). The in some respects similar site Anneberg has very much richer osteological finds (Segeberg 1999: 168ff).<sup>26</sup> Here the vast majority of bones were from fish; otherwise there were bones from several bird species (mostly water birds), and mammals (mostly seal). The few finds of cattle consisted mostly of fragments of teeth (hence the number of individuals represented is uncertain). Several of the species found have no connection with human subsistence and several finds (cat, turkey, and domestic fowl) are judged to be of recent origin.

Price, Gebauer & Keeley (1995: 110ff) list plant and animal species found at sites belonging to the Danish Mesolithic Ertebølle and TRB cultures. The picture is ambiguous. Many more *wild* plants have been found at TRB sites than at Ertebølle sites. In the Early Neolithic a large number of wild animal species is present, more than in the later Neolithic, but “preservation is not good at these sites and *the actual pattern is not observable*” (*ibid.*: 109; my emphasis). Persson’s (1999) figure 16 shows the ten oldest dated finds of grains and bones from domestic animals known from South Scandinavia. Only eight of them are from before 3500 BC. If agriculture was a regular feature during the period 4000 to 3500 BC, one would perhaps expect that the number of finds would have been greater.

The data reviewed by Ahlfont *et al.* (1995) also do not provide any convincing evidence for much agriculture to speak of during the

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25 Regarding the term “inland”, see note 33.

26 The difference in richness of finds is most probably due to differences in the methods and circumstances of excavation.

early Neolithic in Sweden, and they state (*ibid.*: 172) that “the various components of the subsistence economy of the first farmers in the Swedish part of the Scandinavian Peninsula cannot be ranked in importance”. Still they speak of farmers! They further state that “the poor data [on animal ecofacts] present a coherent pattern. Hunting, especially seal-hunting, and certainly fishing [...] formed a main part of the subsistence economy in all of South and Middle Sweden during the Early Neolithic. [...] it can be said, by way of summary, that hunting seems to have been of more importance than husbandry during the Early Neolithic in all of the area in focus as concerns the subsistence economy” (*ibid.*: 163). Also fish, presumably, “was a main part of the diet at many or most of the settlement sites during the Neolithic in the Scandinavian Peninsula” (*ibid.*: 161) In fact many of the historically known fishing methods were practised already in the Mesolithic (Persson 1999: 60, Segerberg 1999: 176-77).

Other findings indirectly related to subsistence have also been brought forward in the debate. According to Meiklejohn, Petersen & Alexandersen (1998: 207), the “transition from the Mesolithic Ertebølle to the Neolithic TRB is not associated with a clearly directional pattern of health change that might be expected at a major [dietary] transition”; and the comparison itself is difficult or impossible to make, since we “do not have sufficient knowledge of the variation within the Mesolithic for us to fully understand either the patterning within the period, or what occurs when the TRB finally makes its appearance” (*ibid.*: 208). Thus from this perspective, too, is it doubtful whether the people of the early TRB in South Scandinavia, and most probably Middle Sweden as well, really were farmers.

This impression is strengthened by Lidén (1995), who could not establish a high dietary reliance on cereals in the Neolithic, and she argues against the importance of cereal agriculture during the Stone Age. She considers cereals to be luxury or ritual items (bread, beverages or even the kernels themselves). Even in the case of the megalith builders of Middle Sweden (some hundreds of years later than the period we are considering), Lidén found, on the basis of nitrogen isotope values in bone collagen, the dietary reliance on cereals to be insignificant. Thus she questions Sherratt’s (1990) view that a greater degree of social complexity (supposedly expressed in the erection of

megalithic tombs) had its origins in cereal production. If this is questionable at that date, it may well have been even more so in the early TRB.

Lidén does find evidence for a somewhat increased reliance on domestic animals. According to Ahlfont *et al.* (1995: 161f) this would, in the early Neolithic, have been mostly cattle. The aurochs probably became extinct in Scandinavia ca 6000 BC, and no other bovine bones are known in the area until ca 4000 BC (Persson 1999: 51), when bones of cattle start to appear in the finds. This date, also marking the first appearance of the TRB over a vast area, can hardly be a coincidence. It may be tentatively ventured, therefore, that at least locally the TRB *is* associated with some kind of pastoralism, but the extent and nature of this is very uncertain.

One problem with discussing pastoralism in the Stone Age is that it is largely invisible archaeologically:

Many pastoral sites will not have substantial structures, and important equipment will often be of perishable materials. No substantial archaeological traces are apparent, and even finds of bones will often leave an ambiguous impression. The discussion concerning grain impressions in pottery and domestic animals on some Norwegian Late Neolithic and Bronze Age sites [...] is an example in case. Were such finds the result of stolen animals and bartered pots, or a culturally determined but marginal economic activity, or a “truly” Neolithic adaptation? Were they left by people with an agricultural or pastoral mode of production?

It could be argued that for the period after the introduction of domesticates, interpretation of archaeological material has been systematically skewed in a non-pastoral direction. (Prescott 1995: 74)

Exactly the same could be said about the Middle Swedish evidence, which is highly ambiguous and inconclusive. If Prescott is right about the relative invisibility of pastoralism, archaeologically speaking, this adds a further note of basic uncertainty to the ones already noted. The evidence as such, though, indicate that hunting, gathering and fishing were much more important than both grain cultivation and cattle-herding. But still (in Middle Sweden) grains and cattle *were* present to a limited extent. One should not embrace

the pastoralist option uncritically, however. In the Early Bronze Age the actual evidence for farming, including stock-breeding, in Sweden is still scanty (Kristensson, Olson & Welinder 1996). They write (pp 63-64):

In Danish archaeology, the stock-breeding component of the Late Neolithic and Early Bronze Age subsistence economy is regularly stressed as being of vital importance for the understanding of the society of the time [...]. The same tendency is to be seen now and then in Swedish archaeology [...].

It should be noted that [this] image of an Early Bronze Age society with its stress on cattle-breeding and sheep-herding and an ideology and social structure close to that of historically known nomads or pastoralists is not based on contemporary ecofact data. This is evident from our survey of the Swedish data, and the Danish data are just as scanty [...]. The importance of the various components of the subsistence economy cannot be ranked from production or consumption points of view.

We may conclude, then, on the basis of the meagre and ambiguous evidence for farming in the Early Neolithic and even later,<sup>27</sup> that it is quite possible that there did not occur any significant nutritional

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<sup>27</sup> Persson (1999: 55-71) critically discusses the amount of C13 found in late Mesolithic and Early Neolithic human skeletons, mainly from Denmark, thought to be an important indicator of the beginnings of farming. According to Tauber (1981) the amount of C13 reflects the relative proportions of various forms of diet. If the amount of *sea* food (e.g. fish) is large, the C13 amounts are higher than if non-sea sources of food are utilized. In Denmark there appears to be a rather marked difference between C13 amounts in the late Mesolithic and Neolithic, respectively, the amounts being lower in the Early Neolithic. This is taken to indicate a change from sea-based to land-based food resources at the onset of the Neolithic period, in turn interpreted as a new reliance on the products of farming (Persson 1999: 55). If this interpretation is correct it, taken in itself, seems to be at odds with the ambiguity of other subsistence indications from the Early Neolithic, supporting the notion that farming began in the Early Neolithic and that it contributed markedly to subsistence. As Persson's review shows, however, the inference from C13 amounts to *farming* is by no means straightforward (although it is not without substance).

change from the Mesolithic to the Early Neolithic, or, to put it more carefully, that we do not know if such a change really took place. Against this background, alternative interpretations of the evidence should, I think, be considered just as seriously as the “transition to *farming*” scenarios. The basis for hypothesis construction should perhaps rather be, that those people were not “the first farmers” but rather something else altogether. Even more, the very categorization of their activities *in terms of* “subsistence modes” of one kind or another may be what is at fault. The development of this critical idea will form an important theme in latter parts of this book. For now, however, we will continue along subsistence-oriented lines.

### c. Swidden Cultivation?

As we have seen, it has been assumed that farming in the Early Neolithic was based on swidden cultivation. How adequate is this assumption? First we should be clear about what we mean by “swidden cultivation” (Sw. *svedjebruk*). Engelmark (1995: 28) writes:

In archaeological and paleoecological literature which treats of pre-historic agriculture it has been generally assumed since the 1940s that agriculture was conducted as swidden cultivation already during the Stone Age. This assumption is based on an evolutionary way of thinking where swidden cultivation is regarded as a primitive way of producing grain and which therefore must be archaic. Indications such as the presence of charcoal or of regeneration phases in pollen diagrams have also been deemed to be sufficient as evidence for swidden cultivation. Alternative hypotheses have seldom been tested. Often explicit definitions of what one means by swidden cultivation are missing and it is common to comprise within the term swidden cultivation all kinds of fire culture, such as clearance burning for fields and meadows, for pasture or shifting cultivation [Sw. *kyttlandsbruk*].

Engelmark (*ibid.*) defines swidden cultivation as follows: “[It is] with the aid of fire to *make the nutrients of the forest ecosystem available* for cereal cultivation and when the nutrients have been depleted to let the swidden return to forest once again” (my emphasis). According to Lindman (1995: 51) swidden cultivation is, in archaeological

contexts, seen as “to fell or ring bark trees, let them dry, burn them and then grow crops *in the ashes* for one or two years” (my emphasis). She also states, as does Engelmark (1995: 34), that no empirical evidence exist for prehistoric swiddens. She claims, however, that finds of charcoal, under certain circumstances (*ibid.*: 59-60), *may* indicate the deliberate burning of woodland in the prehistory of western Sweden, as far back as the Stone Age. One of the criteria used to distinguish deliberate burning from natural forest fires is that the fires should have occurred in deciduous forests, since such forests are hardly ever subjected to natural fires. According to Engelmark (1995: 30), however, it is not much use to burn deciduous forest in order to obtain nutrients, since these are abundant enough in the soil itself. He regards remains of fires in such areas as having been caused by clearance burning. This should be distinguished from swidden cultivation, which is practised in order to grow crops in the ashes (something which is redundant in deciduous forests as far as nutrients are concerned). Clearance burning, then, is done for the purpose of reducing the forest canopy, either for the promoting of other plants (which need not have been cereals; *cf* below), for gaining access to the nutritious soil, or for the obtaining of grazing areas for certain wild animals or for domesticates. Engelmark (1995) and Segerström (1995) do not think that swidden cultivation was practised in Stone Age Sweden. Göransson (1995a: 67, 1995b: 86f) also dismisses the possibility that swidden cultivation was practised in prehistoric times. Furthermore, Tilley (1996: 94) notes that

[e]xperiments have shown that both the primitive wheats, einkorn and emmer, were much more hardy and disease resistant than modern varieties and could be grown for long periods of time without exhausting soil nutrients (Jarman *et al.* 1982: 139ff). A good yield could be obtained from a relatively limited labour investment that would be unlikely to disrupt foraging activities.<sup>28</sup>

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28 Incidentally this argues against Zvelebil’s (1996: 326) contention that a “balanced hunting-farming economy” would be unlikely to be of long duration because of “scheduling problems” and “labour costs”.

Midgley (1992: 364) is also critical:

Repeated burning where necessary of forest scrub for improvement of grazing, and the utilization of a number of coppice woods, are not the same as shifting settlement round the landscape in the never-ending search for fertile land. Indeed, archaeological evidence speaks firmly against such a view. [*cf ibid.*: 390-91, 393]

### d. Promoting “Wild” and “Domestic” Species

However, gaining access to the nutrients already present in the soil is, as has been indicated, only *one* possible reason for making forest clearings, and it will have to be evaluated in relation to the other possibilities in the face of known facts. As we have seen above several recent authors (*e.g.* Apel *et al.* 1995, Hallgren *et al.* 1997, Hallgren 2000a) have assumed the presence in the Early Neolithic of eastern Middle Sweden of occasionally moving swidden farms (Sw. *svedjegårdar*). This assumption is predicated on certain axe finds and their distribution. If the possibility of swidden cultivation in the strict sense defined above is excluded (*cf* also Sjögren 1994), the axes' presence will have to be explained by an alternative suggestion. The simplest assumption to make is that the axes were indeed used, among other things, for the clearing of forest. Whether this was accompanied by the burning of the felled trees is to a certain extent beside the point, if we also assume that one had no practical need for the ashes. One just wanted to reduce the amount of trees growing in that particular place. (The felled trees were probably put to good use; for example as building material for canoes or small houses, as firewood for warmth during the winter, and for cooking). Furthermore, the axes, and presumably their use for clearing purposes, was not a new phenomenon in the Early Neolithic. Therefore we also cannot assume that parts of the forest were cleared only for the purpose of cultivating imported plant species. What we can assume, however, is that certain indigenous plant species important for subsistence, notably hazel (*cf* Regnell 2001, Regnell & Ekblom 2001), would have been furthered by deliberately cleared forest areas. Hence the practical difference between caring for certain indigenous plants and imported wheat, for example, may well have been negligible.

The same goes for certain animals, especially wild boar and deer (Eriksson & Magnell 2001: 60, Tilley 1996: 26-27). The point is that the acts of *taking care* (in some sense) of plants and animals are in themselves probably not something new when foreign “domesticates” are introduced (Zvelebil 1994). The cultural meaning of the latter may well have been different, but this did not necessarily have anything to do with the necessity of consciously promoting them above other species (an activity which would have been familiar in principle). Arvidsson (1988: 206) thinks along the same lines:

Even though people at this time [8000 BP, uncalibrated; *i e.*, in the Mesolithic] did not cultivate cereals and other non-domestic crops it is still possible – and perhaps probable – that they in various ways promoted the wild plants they utilized. The production of nuts, for example, could be increased with simple clearings and thinnings out of the clumps of hazel. It is also possible that they in their wanderings carried with them seeds or sprouts to be planted for future use. [...] The traces of growings of this kind would be almost impossible to detect.

He mentions (*ibid.*: 207ff) many edible plants, many of which may have been utilized and promoted more or less systematically. Tilley (1996: 15) also stresses “the growing body of evidence that populations in the later Mesolithic did not passively live in [their] forested environment but actively manipulated and altered it”. As to the possible part played by plants in subsistence Tilley (1996: 25) mentions that “as many as 200-400 edible plant species would have been available”. He further notes that in “Mesolithic Scandinavia lagoons and estuaries, shallow lakes and fen carrs would have been extremely productive for gathering wild foodstuffs, especially rhizomes and tubers. It is precisely these areas that were favoured settlement areas” (*ibid.*). The settlement angle holds for the Early Neolithic as well. Welinder (1998a: 76-77) also joins in this view:

It can be difficult or impossible to decide whether a plant has been gathered as wild or has been cultivated. The cultural landscape of that time was considerably richer and more varied as to herbaceous plants than that of today, but the possibility that many plants may



have grown in something similar to kitchen or herbal gardens cannot be disregarded. [...]

Other plants may have been promoted in the cultural landscape without having been directly cultivated or planted. This could apply to hazel, sea buckthorn, crab apple, wild roses, lime and other useful trees or shrubs. They can be spared when clearing forest and be tended. [...] The limit between cultivation and non-cultivation is problematic.

Tilley (1996: 94) notes several finds of pottery impressions of wild apple, hazel nuts, sloe and other plants, in addition to those of cereal grains. This suggests that perhaps “wild” and “domestic” seeds were not perceived as belonging to difficult categories, but were regarded as of a kind. He remarks ironically (*ibid.*: 94):

Looking at the archaeological literature on the subject it is interesting to note that the presence of a handful of wheat impressions at a site are sufficient to suggest the presence of large grain fields, and wheat as a significant component in the diet. When apple pips are found no one suggests extensive apple orchards to be present!

These considerations mean that no conclusive time limit can be set for when the active promoting of certain plant and animal species began in Sweden (*cf* Zvelebil 1994). It seems arbitrary to set it at 4000 BC. It also means that the concept of “domestication”, in the Stone Age, is highly problematical. Whatever may have been the similarities and differences between husbanding “wild” plants and animals, on the one hand, and taking care of “domestic” plants and animals, on the other, it is not at all clear that in this sense the introduction of some imported “domestic” species as such constituted a radical novelty or were in any sense disruptive of earlier practices.<sup>29</sup>

The late Mesolithic coastal site Pärälängsberget in Södermanland (as discussed by Hallgren 1996) is a case in point. This site seems to have been used more for the gathering of plant food than for hunting (*ibid.*: 7). Here a saddle-shaped grindstone of a kind otherwise known

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<sup>29</sup> This matter will be further discussed in Chapter IV: 2.

only from Neolithic contexts was found (*ibid.*: 13), and this Hallgren assumes to have had something to do with incipient farming:

The traditional gathering activities may be assumed to have been complemented with the making of smaller clearings for the purpose of small scale cultivation [...]. In this way agriculture may have been introduced as a natural part of the traditional way of life, without being perceived as conceptually different from the harvesting of hazelnuts or wild strawberries (*ibid.*)

I certainly agree that farming practices can have been adopted “without being perceived as conceptually different from the harvesting of hazelnuts or wild strawberries”, and I think that this insight is of crucial importance. Consequently I find it difficult to follow Hallgren (*ibid.*: 24) when he says that “late Mesolithic society underwent a *complete* change with the creation of the Funnel-beaker culture” (my emphasis). If cereal cultivation really occurred in this area in the late Mesolithic (which is questionable; *cf* Welinder 1998b), this, according to Hallgren, would have been of a *different kind* from that practised *after* “an ideological Neolithization [...] with a totally transformed material culture, and an altered way of life [*i e*, the TRB]” (*ibid.*: 15). Thus, while recognizing, on the one hand, some continuity as to the practices and concepts of the Mesolithic gathering mode of subsistence and of the very first farming of eastern Middle Sweden, Hallgren insists, on the other hand, that the TRB (along with the imported domesticates) stands for something completely different. This assumed break is thought to have been “ideological” in nature but also importantly included a new way of utilizing the land (swidden cultivation), and new settlement locations (inland rather than coastal; *cf* next section). *Logically*, then, Pärälängsberget – somewhat incongruously – cannot for Hallgren represent an early phase of “farming” *as associated with the TRB*. But this incongruity crops up only if one assumes that the TRB represents such a total break as Hallgren and others think it does.

In the fen at Skogsmossen twenty-two intact and broken grinding stones were found (Hallgren *et al.* 1997: 70). This would seem to indicate cereal cultivation, assuming that these grinding stones were used for making flour. Grinding tools, however, are also known from

the Mesolithic, even though the Neolithic ones are generally bigger and more standardized (Lidström Holmberg 2000: 128). Such tools are also known from the period of the later Pitted Ware Culture (*ibid.*: 129), generally thought to have been hunter-gatherers (*cf* Section *b* below). Grinding stones are generally heavy and not easy to carry around. Thus such stones would also seem to indicate a settled way of life. As Lidström Holmberg points out, however, the itinerant aborigines of Australia – who were definitely not farmers – also used grinding tools, but they did not carry them with them when going from place to place (*ibid.*: 134). The mere presence of grinding stones, therefore, cannot be used conclusively to determine whether the people that used them were mobile or settled, hunter-gatherers or farmers. The changes in design of grinding tools in the Early Neolithic and onwards are noteworthy, however. Furthermore, the deposition of a large number (about 80) of grinding stones in Östra Vrå (*ibid.*: 138), and a fair number at Skogsmossen, may perhaps indicate an important symbolical role for vegetable food. Such riddles remain, whatever one's views are on the farming issue.<sup>30</sup>

### e. The Coast/Inland Problem

Apart from subsistence indications, an important part of the argument for farming in the Neolithic has concerned the location of settlements. Persson (1999) emphasizes this strongly:

*The most important argument for farming having had some significance in subsistence during early Funnel-Beaker time in Middle Sweden is, just like in South Scandinavia the presence of settlements not located at the shore. [Persson 1999: 107; my emphasis]*

Frotorp is one of the sites dated to the earliest period of Funnel Beaker Culture. [...] at the time of the settlement it was 10 km to the Baltic shore. Frotorp is located 1 km from the nearest lake. [...] The

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30 In West Sweden grinding stones from the Middle Mesolithic have been discovered which were deposited in a clearly non-random, deliberate way (R. Hernek, talk at *The Final Coast to Coast Conference*, Falköping 1-5 October 2002). This may indicate some Mesolithic-Neolithic continuity of conception regarding grinding tools, despite some differences in shape.

Östra Vrå, Hjulberga, Tjugestatorp and Skogsmossen sites have also been situated away from the shore, even though in these cases the distance to the Baltic Sea has been only a couple of kilometers. [*ibid.*]

We may note that there is only one site mentioned by Persson (Frotorp) which lies more than a few minutes walk from the sea shore.<sup>31</sup> This means, it seems to me, that the argument for agriculture on the basis of the “inland” position of sites (deemed “most important” by Persson) is rather weak. It is weakened further by considering the map in K. Knutsson et al. (2000: 103, fig. 8) showing the middle Mesolithic sites in northeastern Middle Sweden, where several sites are clearly *inland*. The Mesolithic Ertebølle in Denmark also occupied both coastal and inland sites, and some of the latter may have been occupied for long periods (Price, Gebauer & Keeley 1995: 108). Apel *et al.* (1995: 87-89) write:

Mesolithic settlement in northern Middle Sweden is characterized by settlements in three specific habitats: river mouth, archipelago and inland lakes [...]. The pattern is typical for a hunter-gatherer economy with seasonally bound migrations between seasonal settlements. At first sight the settlement of the Funnel Beaker Culture of the Early Neolithic north of Mälaren seem to form a similar pattern. All settlements known today are situated along the coast, at river mouths or on islands in the contemporary archipelago [...].

I find it surprising that the site Skogsmossen in Västmanland is viewed by Hallgren *et al.* (1997) as an “inland” site, although it was located less than one km from the coast. Fig. 9 in Segerberg (1999: 30) shows clearly that Skogsmossen can hardly be regarded as much of an “inland” settlement, the sea being quite close both north and south of the site. The also as an “inland” site regarded Skumparberget 2 (dated to the Early Neolithic)<sup>32</sup> was located approximately 2 km from the shore (Apel, Hadevik & Sundström 1997: 6). This is really not far from the coast and here too the designation “inland” seems

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31 Recently an early TRB site (Kallmossen in northern Uppland) has been discovered which is definitely an inland site (F. Hallgren, personal communication).

32 H. & K. Knutsson, personal communication.

contrived to me. Also at Skumparberget 2 bones from seal and fish were found, indicating some dependence on the sea, and the people there could hardly have conceived of their settlement as being very far from the sea shore.<sup>33</sup>

In the Danish Mesolithic more “permanently occupied and temporary settlements were integrated into a complex system of exploitation making full use of both inland and coastal resources. [...] The presence of dolphin ribs at the inland site of Ringkløster, 14 km from the coast, indicates coastal contacts” (Tilley 1996: 19). This contrasts sharply with the view of, *e.g.*, Persson (1999) who declares that in “connection with the beginnings of the Funnel Beaker culture a new type of settlement is established; settlements not tied to the coast” (*ibid.*: 162).

The osteological finds at Fågelbacken point to its being frequented mostly during the autumn, winter and early spring (Apel *et al.* 1995: 94). In Hallgren’s and others’ general hypothesis this is one basis for interpreting the Fågelbacken site as a communal settlement, frequented seasonally by the families which *supposedly* had their bases more inland, on “farmsteads” along the inland part of the Badelunda ridge. But the surmise of Apel *et al.* means that Fågelbacken may have been settled *at least half the year*, possibly longer, and the in some respects similar Early Neolithic site of Anneberg, also coastal, is thought to have been occupied more or less permanently (Segerberg 1999: 201). Segerberg (*ibid.*: 195) is also very skeptical towards the view of Hallgren and others regarding inland “farming sites”. She notes that different kinds of axes are dispersed from the coast and a fair distance up country, while on the contrary settlements are above all found at or near the coast, and writes: “For this reason the division of settlements into inland and coastal settlements feels somewhat absurd, even though the single finds indicate human presence farther up country”.<sup>34</sup>

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33 One could make the point that there is a difference between a site being located *at* the shore or *near* the shore (P. Persson, personal communication); the latter, then, would in archaeological parlance be an “inland” location, even if within easy walking distance of the sea shore. If that difference is deemed significant, the “inland” (then a misleading *term*, I think) argument is somewhat stronger than I have made it out here.

34 That the differentiation between inland and coast, based on settlement studies,

It seems like the “coastal/inland site hypothesis” regarding the Stone Age of Middle Sweden relies more on a theoretical presupposition than on clearcut data. And so it is in many cases (*cf* Persson 1999: 74ff). The theoretical basis, reasonable in itself, is called “site catchment analysis” or, more accurately, “site exploitation territory” (Renfrew & Bahn 1996: 242). The aim “is to calculate the proportions within the territory of such resources as arable or pastoral land, so that conclusions can be drawn about the site’s nature and function“; it “rests on the assumption that the further the resource area is from the site, the less likely will be its exploitation” (*ibid.*). It should be noted, however, that no unequivocal traces have been found of most of the assumed “inland settlements” discussed in various publications. They are hence only hypothetical. And if Skogsmossen, for example, is only 1 km from the sea, then it hardly required too much time and effort to walk to the shore with its abundant sea food resources. The same goes for most of the other sites mentioned above, and the Frotorp site was close to a lake and cannot be supposed to have *required* farming as a necessity for subsistence, just because it was 10 km from the sea. Persson writes further that what

is needed is to determine whether sites are located so that their location can primarily be argued to be due to the demands of agriculture. In practice this means that the settlement is not found at the sea shore or the shore of a lake

and furthermore:

It is not possible to determine with certainty whether the non-coastal settlements of the earliest Neolithic are characterized by an agrarian subsistence, on the basis of the material available today. [Persson 1999: 74].

It is hard to interpret this as saying anything else than that the case is still very much open.

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may give a distorted picture, has been argued by Lekberg (2002, Ch. 3) on the basis of a consideration of stray finds. If this is borne out, the inland/coast distinction loses much of its importance, as far as cultural interpretation is concerned (other categorizations will be warranted).

## f. The Mobile/Settled Problem

The coast/inland problem is closely related to the mobile/settled problem. It is often assumed that the Mesolithic peoples of Sweden were highly mobile, especially compared to at least some of the peoples of the Neolithic. This supposition seems to me to be highly doubtful. Tilley (1996: 21-22; *cf* p 53) comments very pertinently:

Both the Danish and the Swedish settlement evidence from the late Mesolithic is very diverse in character and it seems unwise in our current state of knowledge to compress it into a single model. In some areas, permanent habitation of a site with seasonally utilized locations in the vicinity seems likely. In others a regular pattern of seasonal movements of populations between coastal and inland areas is indicated. Whether the populations were sedentary or semi-sedentary, for all or part of the year, that which we can be absolutely certain of is that *the same locations were repeatedly inhabited over hundreds, and in some cases thousands of years.* [my emphasis]

If that was the case it must be assumed as virtually certain that people identified very strongly with certain places, and it makes no sense to regard them as simply “moving”, in contrast to “settled”. The contrasting concepts “mobile“/“settled” appear to be too crude to be able to fathom the lives of Stone Age people. Very probably some Mesolithic groups conducted seasonal movements, but such movements are attributed to TRB people as well (*cf* Apel *et al.* 1995). As to long-distance movement, it seems unlikely that entire groups engaged in such activity. Such movement can be assumed to have been the prerogative of certain people only, in the form of “task groups” of one kind or another – for purposes of maintaining interregional bonds, or simply for adventure. Another kind of long-distance but one-way movement could have been that of women exchanged in marriage (Hallgren 1996, 2000b).

I think it is important to beware of global presuppositions about moving and settled ways of life during these prehistoric times. According to Pedersen & Widgren (1998: 239ff) it is not until the late Bronze Age and the early Iron Age that one can speak of people in Sweden as becoming really settled in a way we would recognize as

such (*cf* Segerberg 1999: 187-88). This seems to compromise the view that Neolithic “farmers” were settled, *in contrast* to Mesolithic “foragers”. What really needs to be discussed here is our notions of settledness and mobility. As Segerberg (*ibid.*: 188) points out “it is not self-evident to divide the life of [Neolithic] people into settled and moving ways of living, since we do not know how important agriculture was [...] nor how the earth was tilled”. To this we could add that neither is it self-evident that people who we categorize as hunter-gatherers were not settled, since they probably lived for prolonged periods at the same place, or perhaps moved between two or three places only. Kaliff (2000: 144-45) says concerning the oldest known settlement of Östergötland (Mörby, dated to the end of the ninth millennium BC) – an inland settlement – that it may well have been occupied on a more or less permanent basis. Where more or less permanent fishing installations were in place people in the Mesolithic may have occupied strictly defined sites for significant stretches of time (Mårtensson 2001). Generally speaking, a truly itinerant way of life may well have been an exception all through the Mesolithic.

One question which is connected with that of how mobile or settled people were is the question of “exchange networks”. Hallgren (*e.g.* 1996) has proposed a model in which exogamous relations comprise all of southern Scandinavia in a network of contacts. Such a possibility seems quite likely. To my mind the very suddenness of the appearance of TRB artifacts over a wide area (see next section) *in itself* indicates that there must have existed established contact networks *before* these events. According to Larsson, Lindgren & Nordqvist (1997) there existed during the whole of the Mesolithic period in eastern Middle Sweden contacts with people of southern Scandinavia. This is apparent from the presence of flint implements which seem to have been brought there ready-made. This strongly indicates that the peoples of Scandinavia have always known of each other and have had more or less regular contact.

Lindgren & Nordqvist (1997, see especially pp 67-68) have found indications, in the late Mesolithic and early Neolithic periods, of what they regard as a supraregional “decentralized exchange system” between western and eastern Sweden, consisting of several small regional units (populations). Larsson, Lindgren & Nordqvist (1997)



also speculate that the exchange of goods and information presupposed some kind of synchronization of the activities of different groups of people over large distances. In other words, the people of South and Middle Sweden (and of Denmark and maybe other areas, like southern Norway) seem to have constituted a well-connected social network, perhaps interacting periodically by means of certain common ritual gatherings of representatives of the otherwise scattered groups. As Larsson, Lindgren & Nordqvist (*ibid.*: 50) point out, this does not exclude regional “identities”, but rather the reverse: it may well have served as an impetus for stressing various local distinctions as well. If that was the case, one must admit the probable existence of different levels of sociocultural organization which in certain respects can be analyzed independently.

Persson (1999: 189), however, does not regard it as likely that the archaeological cultures recognized from the later Mesolithic of south Sweden<sup>35</sup> comprised “integrated units”, and thinks, furthermore, that their simultaneous presence indicates that no uniform Mesolithic culture existed in Sweden prior to the introduction of the Funnel-beaker culture (which was not uniform either). Hence he finds it “very improbable that internal processes would go on in a synchronized fashion so that they simultaneously led to the introduction of agriculture all over North Europe” (*ibid.*). If this judgment is accepted an integrated explanation for the TRB’s sudden appearance becomes very difficult indeed. We seem then to be confronted with a patchwork of relatively small groups who may have been very conservative, each in its own way. What is not known, however, is the extent of this distinctiveness. If we follow Larsson, Lindgren & Nordqvist we may hold tentatively, that the distinctions recognized were *not* a symptom of some kind of “isolation”. These groups may all have revealed their respective identities in certain ways (*e.g.* by means of certain minor artifact peculiarities, which is all the evidence we have in the matter), but this does not necessarily mean that they did not regularly join with other groups for some larger purpose.

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35 Lihult (western Middle Sweden), *Trindyxe* (eastern Middle Sweden) and Ertebølle (southern Sweden, Denmark).

It seems to me that Persson here makes too strong an identification of archaeological cultures with distinct groups of people. Along with Larsson, Lindgren & Nordqvist I do not think that the existence of “materially culturally” distinctive groups, both on a smaller and a larger scale, a priori excludes a synchronized pattern of contact at some level, probably related to astronomical (and hence biological) cycles. It follows that it is not unreasonable to assume that these people(s) basically shared a common cosmology. As I have already said, all in all the relatively sudden appearance of TRB artifacts *in itself* indicates a great degree of commonality.

What all of this means in relation to the problem of “moving” versus “settled”, is that if peoples of the Mesolithic and Neolithic in Sweden were “bound up”, by interregional patterns of contact between clans (or whatever the appropriate social unit may have been), then it follows that there existed certain *restrictions*, the nature of which we can only guess. In other words, the image of freely moving hunter-gatherers who because of “Neolithization” were inadvertently “forced” into a settled way of life may be a little too romantic to be true. It may well be that they, in a sense, were already relatively “settled”. And it is also possible, that the people who produced TRB culture in the same area did not change particularly on that score, one way or the other.

### **g. The Archaeological TRB Culture**

The Funnel-beaker or TRB culture has already been mentioned many times. It is commonly thought to represent the first traces of “farmers” in Scandinavia, and although this is open to doubt, it by no means follows that the enigma posed by the TRB has disappeared. It just appears in a different light. In this section I will focus briefly on some of the characteristics of and questions regarding the first appearance of this archaeological culture.

The TRB is primarily characterized by its pottery, although Persson (1999: 147) thinks that the distinctiveness of the latter is rather vague and therefore finds it difficult to provide a strict definition of the TRB on this basis. This vagueness (amounting to regional “variations”) can be used to argue either for a spread from a point of origin leading to “differentiations”, *or* for the possibility that the TRB did

not have a place of origin but represents rather the signs of the similar (and largely simultaneous) indigeneous “responses” of different Mesolithic groups to certain – to them – new ideas, artifacts and practices. Taking into account several kinds of artifactual remains that seem to go more or less together, however, it is possible to single out some unquestionably distinctive items of the early TRB, which seem to have occurred over almost its whole area of distribution. Persson (*ibid.*: 147ff) specially mentions four of them: collared flasks, clay discs, long mounds (barrows) and polygonal battle axes (Sw. *mångkantyx*). These are so distinctive that it seems reasonable to assume that they all originated at a single (not necessarily the same) place and time and spread from there. All of them seem to appear about 4000 BC over the whole TRB area (*ibid.*), comprising, apart from southern Scandinavia, all of the North European Plain. Long barrows, and later megalithic graves, spread also to Britain, but the other items did not. Persson (*ibid.*: 153) interprets the whole phenomenon as evidence for a heavily increased “acculturation” of Scandinavia after 4000 BC with influences from several directions.

It now seems to be generally accepted that the first appearance of the TRB in southern Scandinavia was more or less synchronous<sup>36</sup> over the whole area. Persson (1999) has critically reviewed the C14 datings performed on relevant finds from the period in question, and concludes, that it is impossible to detect any significant time lag between the first appearance of TRB material in the south (Denmark, Scania) and in the north (eastern Middle Sweden, and probably other parts of Middle Sweden as well). Its beginnings in the south can be dated to between 4000 and 3950 BC (*ibid.*: 87). In eastern Middle Sweden Persson fixes its beginnings at between 4000 and 3900 BC (*ibid.*: 101). Consequently, no significant temporal difference is discernible between the first known appearances of the TRB over a quite large geographical area. According to Persson (*ibid.*: 110-11)

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36 That does not mean that it was actually and absolutely synchronous, but that it was “roughly” or “relatively” synchronous, given the limited resolution of C14 datings. Anything shorter than 50-70 years is “sudden” in archaeological terms. And if no reliable differences in dating are obtainable from the archaeological finds, this means that the occurrences in question will have to be treated (theoretically) as occurring rapidly, *i.e.*, within the lifetime of a single long-lived person.

there exist no datings for TRB artifacts south of Denmark which are as reliable as those from Scandinavia. Still, he remarks, if a comparison is made with the datings given by Midgley (1992), it is apparently the case that the TRB starts to appear *over its whole distribution* on the North European Plain *at about 4000 BC*. If this should indeed prove to be the case, the enigma posed by the relatively synchronous appearance of TRB type artifacts is clear. What could have caused the relatively sudden appearance of recognizably similar new kinds of artifacts over such a vast area and how did it happen?

Persson's review of the datings pertaining to the beginning of the "Neolithic" in Scandinavia, if it holds up, seems finally to dispose with the immigration hypothesis (Ammerman & Cavalli-Sforza 1971, Becker 1947, Hultén & Welinder 1981, and others)<sup>37</sup> of the origin of TRB in Scandinavia. As he notes (Persson 1999: 162), if no local area within the total TRB distribution can be dated earlier than any other local area, then it is impossible to single out a place of origin for the supposed immigrants. There exist signs of influence from the south on early TRB in South Scandinavia (*e g* clay discs), but the latter area also shows distinctive characteristics of its own, not present in the south. Persson (*ibid.* 162-63) mentions funnel beakers with horizontal rows of cord impressions (M. Larsson 1992: fig. 71), and large polished thin-butted flint axes.

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37 K. Kristiansen is among those who still argue for some kind of "invasion" of farming people from the south. Among the arguments for that position are ethnographic analogies, indicating that "inveterate" hunter-gatherers have great practical difficulties in making farming work properly, should they decide to try it (K. Kristiansen, personal communication). In the Stone Age, more or less regular farmers would have to have come from the Middle European LBK area, and what to my mind seems most strange in that regard, is that they – if they came – did not bring their customary artifact styles with them. Instead we find a different set of styles, the TRB, which, moreover, is more variable than the homogeneity of the LBK (Price, Gebauer & Keeley 1995: 97). Furthermore, if "farming" was of very marginal importance in Sweden, subsistence-wise, at least in the Early Neolithic, any practical difficulties would not count for much, especially if farming-like practices were already employed in relation to certain indigenous species. The only room left, as I see it, for the "invasion" hypothesis, is to discard the thought of immigration of whole groups of people, and to think instead of the "intrusion" (or perhaps even *invitation*) of certain esoterically knowledgeable people from the south, whose conceptions made a strong impact on local elders, let us say.

It is clear, however, that the relatively synchronous datings do not as such contradict most of the other proposed explanations of the TRB's sudden appearance. According to Kihlstedt, Larsson & Nordqvist (1997) the following suggestions have been most prominent in the debate: that TRB culture is a development of Ertebølle culture (Troels-Smith 1953), or at least that Ertebølle is in some way central to an understanding of the TRB (Andersen 1973). The assumption is that population pressure was of paramount importance for the "transition". This is also the view of Rowley-Conwy (*eg* 1985) and Paludan-Müller (1978). Florin (1938, 1958) saw the Middle Swedish TRB as a local adaptation to influences from the south. Another main contesting explanation (not that they necessarily exclude one another) is exemplified by Jennbert (1984) and Fischer (1982), according to whom social relations and the exchange of gifts (prestige items) between different groups was crucial to the changes in question. Currently this latter view has become widely adopted. The hypothesis of population pressure, to the contrary, does not seem to agree with what facts can be at least roughly ascertained (Persson 1999: 165ff).

Price, Gebauer & Keeley (1995), after mentioning the new items characteristic of the TRB, note the equally obvious signs of continuity (in the Danish case) with Ertebølle (*cf* Petersson 1999):

Utilitarian, undecorated body sherds from the TRB period, for example, cannot be distinguished from those of Ertebølle ceramics. Lithic materials show generally strong continuity in the basic categories of tools and techniques. It is almost impossible to distinguish late Mesolithic and early Neolithic stone tool assemblages, with the exception of polished flint artefacts. Although domesticates are present in the early Neolithic and cattle appear to be more important than plants, there are generally similar patterns in the exploitation of terrestrial animals across the transition. (pp 115, 118)

Burial patterns also demonstrate some continuity. Nonelite burials in the early Neolithic [...] closely resemble in form and style those known from late Mesolithic cemeteries. [*ibid.*: 118]

Site location is not dramatically different. [*ibid.*: 119]

It can be argued that [this transition] primarily represent[s] ideological changes and perhaps some social restructuring. [*ibid.*]

This echoes Zvelebil's somewhat dejected question, already quoted in the previous chapter:

If the postglacial hunters of the temperate zone can really be characterised by logistic, rather than residential mobility, storage, intensive resource-use strategies, non-egalitarian social organisation and the use of pottery, polished stone and other technological innovations traditionally associated with the Neolithic, what is left of the difference between the Mesolithic and the Neolithic? [Zvelebil 1986: 168]

Signs of continuity also appear in the Swedish finds. For example, polished *flint* axes appear in Middle Sweden at the beginning of the Early Neolithic (*e.g.* Segerberg 1999: 100), but polished axes made of *stone* (other than flint) appear in South Scandinavia already about 7000 BC (Persson 1999: 140). And most of the Middle Swedish Early Neolithic axes were manufactured out of local stone (Segerberg 1999: 101), as were those of the Mesolithic. It seems clear that whatever changes are signified by TRB items, these were by no means of a holistic nature; there was no complete change.

The only category of artifacts that was really new in the Early Neolithic of Middle Sweden was pottery: “the only major difference between the late Mesolithic settlements and the Funnel Beaker settlements [in eastern Middle Sweden] is that pottery occurs at the latter” (Persson 1999: 164). The presence of pottery in itself, however, must not automatically be regarded as an indication of “farming”. The Ertebølle Culture of Denmark (which produced the first pottery in Scandinavia) is generally regarded as being the product of hunter-gatherers, since there exist no certain indications of domestic plants or animals from the Ertebølle period.<sup>38</sup> Thus the most important thing which *in principle* distinguishes the early TRB of Sweden, from the Danish and Scanian Ertebølle, is the very few finds of cereals and/or bones of domestic animals, some of which are of uncertain date. (Pottery was new in eastern Middle Sweden but not in Scania.)

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38 Persson (1999: 46) strongly criticizes Jennbert's (1984) opinion that some potsherds from Lödöborg containing grain impressions are from the Mesolithic Ertebølle.

Against this background, it is noteworthy that Persson (1999: 108), after having found few actual traces of domestic plants and animals, bases his assertion that *agriculture* was present in eastern Middle Sweden from about 4000 BC onwards, almost entirely on the presence of TRB *pottery*. Hence the presence of TRB artifacts is by him actually *identified* with the presence of agriculture. This is indeed customary, but I think there is great need for caution here. Tilley (1996: 94) is surely exaggerating when he says that “the evidence [shows] that there is a systematic linkage between the preparation and processing of grain and pottery manufacture”. What about the impressions of apple pips which he himself mentions? And what about all the non-Neolithic, pre-“farming” pottery? In fact pottery as such is not at all unequivocally tied to agriculture, as is clear from Persson’s (1999: 133-34) own text:

Pottery starts to appear simultaneously [about 5000 BC] in an area stretching from the coastal areas of Holland in the west across Schleswig-Holstein and northern Poland, further to Finland and maybe also into Russia to the east. Over this whole area groups whose main subsistence is hunting-catching-gathering are involved and over the whole area the type of vessel involved is also basically the same. [...] It is not possible to indicate an area of origin. [...] In Sweden north of Scania no pottery whatsoever seems to occur during the late Mesolithic.

This means that the developments in Sweden north of Scania are in some ways independent of or different from developments in the area mentioned above, but it can also be interpreted to indicate that the spread of pottery in itself is *not* indicative of agriculture. The Pitted Ware culture, which seems to have come after the TRB (in Sweden), is widely thought to represent a “return” to hunting-gathering, but it had plenty of pottery.

The skeptical note sounded here is by no means absent from the archaeological discussion. Welinder (1998a: 46), for example, writes: “There are really very few found objects which can be indubitably tied to farming. Sickles can be used to gather reeds and grass or other wild plants. Grinding stones can be used for grinding or crushing gathered seeds, not necessarily grain”. And Persson (1999: 78) re-

marks concerning sickles that they “are so rare in the finds that it indicates that grain must have been harvested in another way than by cutting the straws with flints”. Or else there was not much to harvest. On the basis of her analysis of sickles from the Stone Age in Denmark Juul Jensen (1994: 157) concludes that from the Early Neolithic there is “very limited evidence for harvesting activities”. Also, studies in southern Norway “clearly document that the presence of Neolithic artifacts, at least in the EN and MN does not necessarily indicate the presence of agricultural economies” (Boaz 1998: 61; cf Prescott 1996). And Price (1996: 358) concludes rather definitely: “In spite of certain innovations in the early Neolithic, such as new types of pottery and burial practice, the overall impression is one of continuity”.

What is truly noteworthy about the whole discussion, as I see it, is that despite all of these reservations one still persistently continues to speak of late Mesolithic and Early Neolithic occurrences *in terms of* “the transition to farming”. In the last chapter I referred to this phenomenon as the conceptual captivity of the “Neolithization” debate. In this chapter’s short review the incongruence of this conceptualization in relation to widely accepted evaluations of the empirical material, has by now become blatant. No wonder Persson (1999: 190) in the end exclaims: “The situation is dismal when it comes to theories about the causal connections”. But we should not forget that the TRB represents actual changes; there is no question about that. It is rather the nature, extent and causes of these changes which is enigmatic, too enigmatic in fact to be adequately conceptualized in terms of a simple evolutionary scenario with or without perfunctory caveats.

There is a considerable overlap between the datings of Mesolithic-type and Neolithic-type finds for all of the period between 4000 and 3000 BC (Persson 1999, fig. 45). This seems to indicate that there was no abrupt alteration across the magic threshold artificially separating the Mesolithic from the Neolithic. A similar overlap in the datings occurs in South Scandinavia (*ibid.*, fig 36, 37). Petersson (1999) finds good reasons to assume that “the same social group may have made and used both Ertebølle vessels and Funnel Beaker vessels” (*ibid.*: 67). Consequently, the TRB artifacts represent *something* new, but they need not be interpreted as indicating a wholesale



change of everything from subsistence to the treatment of the dead. Nordqvist (in Kihlstedt, Larsson & Nordqvist 1997) also stresses the diversity of the phenomena accompanying the introduction of the TRB rather radically. He points out (*ibid.*: 106) that in western Middle Sweden the introduction of “agriculture” (really TRB culture) takes place in a multiform way:

It seems as if Neolithization did not touch whole regions at one sweep and that it was not necessarily the same uniform process which “rolled over” whole areas. Probably the introduction of agriculture [which he identifies with the appearance of the TRB] took place by stages and was *a different kind of process in different parts* even in a proportionately limited part of the country like West Sweden [my emphasis].

In view of the above we may tentatively conclude that, on the one hand, the TRB constitutes an enigma in its sudden appearance in the archaeological record, and, on the other hand, that the relatively strong continuities with what went before indicate that the “extent of impact” of the novelties is obscure, and cannot be tied to farming as conventionally understood.

### **h. Pitted Ware Culture**

In concluding this chapter I would like to point very briefly to one final symptom of the illogicality and incongruity of the “transition to farming” scenario of the Early Neolithic of southern Scandinavia, *viz.*, the treatment of the so-called Pitted Ware Culture. In accordance with his view of the early TRB culture as indicating a farming economy, Hallgren sees the subsequent archaeological culture of eastern Middle Sweden, Pitted Ware Culture, as being again radically different. The people who produced the Pitted Ware Culture have traditionally been regarded as hunter-gatherers, and consequently their appearance is logically interpreted as a “de-Neolithization”, if “Neolithization” is taken to be the same thing as “agriculturalization”. Hallgren (2000a: 17) writes:

It [...] seems as if the Funnel Beaker society in central Sweden was characterised by an almost static stability throughout its existence. When a change finally occurred, with the creation of the way of life of the

Pitted-ware Culture, *the whole society was transformed*. The farmsteads in the interior were deserted in favour of coastal settlements, where the main livelihood was fishing and sealing. [my emphasis]

This makes it seem as if the appearance of the Pitted Ware Culture is as much in need of an explanation as the earlier appearance of the TRB is. However, the conventional view of the subsistence bases of the TRB and Pitted Ware Culture respectively, does not seem to be consistent with the actual evidence, as discussed above. What if the TRB did not rely on a new kind of subsistence, compared to the one prevalent in the Mesolithic period? Then the Pitted Ware Culture (which also includes some finds of “farming” ecofacts) does not amount to a “return” to hunting and gathering, and the problem of explaining the appearance of Pitted Ware Culture *in contrast* (and in terms of subsistence) to the TRB disappears.

The pottery of the TRB and Pitted Ware Culture, although sometimes distinct in design, are – according to Segerberg (1999: 68) – instances of the same kind of pottery technology, and “no distinctive difference between Pitted Ware pottery and Funnel Beaker pottery has [...] been reported”. Furthermore the “Pitted Ware sites in eastern Middle Sweden contains pottery in large, sometimes incredibly large amounts, while on the contrary the Early Neolithic Funnel Beaker settlements present proportionally less pottery. The causes behind this state of affairs have been too little discussed” (*ibid.*: 61). This is quite remarkable in view of the fact that the Pitted Ware people are commonly regarded as “hunter-gatherers”, while the TRB people are regarded as “farmers”, largely on account of the presence of pottery. There is something here which simply does not make sense. In other parts of Sweden where Pitted Ware Culture is thought to occur, there exist very few pottery finds (including TRB pottery). Here other criteria for studying this culture as “different” from the TRB, and as an instance of a supposed “de-Neolithization”, have to be used (Persson 2000: 266); Persson gives a good picture of the great uncertainties involved. Ahlfont *et al.* (1995: 136), among others, also in fact ask “whether it is possible and recommendable to uphold a defined Pitted Ware Culture” (*cf* Edenmo *et al.* 1997).<sup>39</sup>

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39 A. Strinnholm states bluntly: “Pitted Ware Culture does not exist” (talk at *The Final Coast to Coast Conference*, Falköping 1-5 October 2002; *cf* Strinnholm 2001: 123).

### i. Conclusion

The case of Pitted Ware Culture – and the problems, uncertainties and ambiguities connected with this concept – appears to me once again to accentuate the kind of conceptual and explanatory conundrums, which follow in the wake of insisting that the TRB people were farmers. I think it would be simpler, and no less in accord with the evidence, not to be so insistent on the “transition to farming” scenario, and to keep an open mind to the effect that we have really very vague and uncertain ideas about what went on at the time.

As we have seen, the empirical evidence indicates that the contrast between Mesolithic “hunter-gatherers” and (at least Early) Neolithic “farmers” cannot be upheld in any clearcut fashion. The data summarized by Midgley (1992: 355-405) for the whole of the TRB on the North European plain retain, in my opinion, the same ambiguous aura as does the Swedish evidence reviewed by, *e.g.*, Ahlfont *et al.* (1995) and Persson (1999). There is no question that cereals were grown here and there, nor that domestic animals were kept. But the overall impression remains that in general “farming” was only one ingredient in locally varying subsistence patterns. As far as the evidence goes, definite *dependence* on agriculture (in the way we usually think of farming economies) was probably an exception within the TRB area, if it occurred at all. Furthermore, nothing that is known of the late Mesolithic/Early Neolithic subsistence practices ties in unequivocally with a settled rather than an itinerant way of life, or vice versa. In the case of pastoralism (if the few cattle finds indicate such), one could argue for a somewhat nomadic way of life, while, to the contrary, a subsistence based on fishing could have been more settled. The evidence for or against settledness in the Early Neolithic of eastern Middle Sweden and elsewhere must be regarded as not very decisive one way or the other.

The question implied can tentatively be put like this: Is it at all adequate to think of any people in the Swedish Early Neolithic (particularly in Middle Sweden) as having been farmers, *in contrast* to hunter-gatherers? When studied further this question implies an even deeper one, because of the conventional and very deeply rooted association of hunter-gatherers with “nature” and farmers with “culture”. In the archaeological literature one finds that natural ecology

is often regarded as more important in relation to hunter-gatherers, while human sociality is more relevant when speaking of Neolithic farmers. In the words of R. Bradley, commenting in 1984: “in literature as a whole, successful farmers have social relations with one another, while hunter-gatherers have ecological relationships with hazelnuts” (quoted in Zvelebil 1998: 4). This has not changed much since, in the sense that the perspectives of ecology and human sociality, respectively, are almost never conjoined, and if so only on natural ecology’s terms. The problem here is not only the implicit assumption that any interesting sociality is a property of farmers only, or of “complex” hunter-gatherers on the verge of adopting farming, but a more deeply buried assumption concerning the nature of sociality itself. This assumption states that “society” (and with it sociality) and “ecology” are two quite different kinds of things. Wherever we turn, in fact, it seems like the concepts Mesolithic and Neolithic, hunter-gatherer and farmer, nature and culture, ecology and society constitute a closely related complex of contrasted ideas, each pair of which implies every other in ways that are very seldom spelled out.

These larger issues will be dealt with in depth in Part III, but first the ground for that discussion needs to be prepared some more. In the next chapter we will discuss a couple of general explanations and interpretations of the “Neolithization” of southern Scandinavia. Thereafter Part II will be concluded with a chapter on “the lure of origins”, which I think lies at the heart of misplaced evolutionary thinking on these and similar issues. As before, I refer only to some recent works dealing with southern Scandinavia, and the reader is advised to bear this in mind. And, once again, my purpose is not to provide a comprehensive review, but only to highlight certain assumptions “behind” the discussion which I think are worthy of critical note.

## “Neolithization” in Scandinavia: Some Proposed Interpretations

### a. Social Complexity in the Stone Age

One route to an explanation of the “transition to farming” that appeared a few years ago proposes an “increased complexity” in Stone Age societies towards the end of the Mesolithic (Price & Brown 1985, recent examples include, *e.g.* Zvelebil 1996, Price, Gebauer & Keeley 1995). The last mentioned authors (*ibid.*: 120) define complexity

by greater diversity (more things) and integration (more connections). Technology developed toward greater efficiency in transport, in tools, and in food procurement. Mesolithic settlements were generally larger, of longer duration, and more differentiated than those of the preceding Paleolithic. Food procurement was both more specialized and more diversified – specialized in terms of the technology and organization of foraging activities and diversified in terms of the number and kinds of species and habitats that were exploited

I think there is a certain confusion here between a universal definition of what is conventionally understood by “complexity” (more things, more connections), and the specific historical conditions of North European peoples. The pre-Mesolithic, we may call it, in this area was characterized by the conditions created by the retreating ice sheets at the end of the Ice Age. If now a certain “increase in social complexity” towards the Mesolithic can be surmised from archaeological data, this seems to go hand in hand with gradually increasing ecological complexity once the ice was gone. And if so, then the increasing socioecological complexities of the Mesolithic do not necessarily have anything to do with the “transition to farm-

ing”, neither positively (as “preparation”), nor negatively (as “holding off” agriculture as an “unnecessary” subsistence option for a long time). These complexities may just have been the “natural” outcome of increased general ecological complexity.

The emphasis on “complex foragers” is, however, usually coupled to a view which stresses increasing “social competition” in the late Mesolithic. Price, Gebauer and Keeley (1995: 125) give expression to this view as follows:

Indigenous adoption [of domesticates] by complex foragers in areas of substantial resource abundance suggests that something other than natural or biological factors must be considered. It is, indeed, aspects of social competition and demand that appear to be responsible for the adoption of *farming* in southern Scandinavia. [my emphasis]

This still focuses very much on the subsistence aspect of the problem. The social complexity (in the sense of increasing “competition”) postulated by Price, Gebauer and Keeley is not treated as a debatable problem in its own right, but is seen in relation to the “transition to farming”, as if social competition, somehow, *entailed* this transition, and as if the latter (as we tend to see it) was what was important.

We concluded the last chapter by saying that it is probably inaccurate to speak of “farming” or “agriculture” in the Early Neolithic, and perhaps later as well. Whatever it was, if anything, that conveyed prestige it cannot have been *farming*. But what about artifacts? Price (1996: 358) comments: “It is very striking that the first evidence of the Neolithic, confirmed by radiocarbon dates and the presence of TRB pottery, comes from *objects* [artifacts] and activities that are more clearly associated with status differentiation, exchange and exotic materials, than with changes in subsistence and settlement” (my emphasis). And Tilley, although he thinks that there “is little to suggest that early Neolithic social groups were, initially at least, any more stratified, complex or hierarchical than in the Ertebølle” (1996: 113), in fact proposes a Darwinian-type cultural selection process<sup>40</sup> at the group level:

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40 This is noteworthy in view of his negative stance towards both cultural and biological evolutionary theories elsewhere (*e.g.* Shanks & Tilley 1992: 53ff), but it

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## “Neolithization” in Scandinavia: Some Proposed Interpretations

A difference does seem to develop, however, between social groups in that some constructed large monuments, and others did not, and some were able to produce more ritually important domestic food than others. [...] Those more successful in growing food and building large mortuary structures would be able to claim closer ties with the spirit world. [...] The mounds symbolized group rather than individual identities and became foci for group competition and prestige carried out through an emphasis on the size and dimensions of the mounds and the periodic ceremonies involving feasting on domestic food enacted around them.

The basic problem in all of this has to do with the notion of complexity. To think simply in terms of “more things, more connections” begs too many questions. Complexity seems to be a highly intuitive concept that is difficult to pin down. Also the whole discussion of “social complexity” is intimately bound up with evolutionary considerations. We can ask here about *the baseline*, for example. Kelly (1995: 335) notes that we “do not know when and where human society or culture as we know it originated”, nor “if the appearance of biologically modern humans also signals the appearance of *behaviorally* modern humans.” He thinks, however, that the latter certainly occurred 40,000 years ago and perhaps 120,000 years ago. If so, “modern” human beings have existed for a very long time indeed, and Kelly asks rhetorically: “When in this vast expanse of time and space is the original human society to be found?” (*ibid.*: 336). His own view is “that *there is no original human society*, no basal human adaptation [...]. We should accept it as highly possible, even likely, that modern diversity stems from original diversity” (*ibid.*: 336-37; my emphasis). He submits, furthermore, that

*there is no reason to suppose that human nature will be drawn more clearly in modern foraging societies than among modern industrial societies.* There is additionally no reason to suppose that as we go backward in time to an alleged original human society (even if it did exist) that human nature would become more apparent. [*ibid.*: 338; my emphasis]

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confirms Maschner & Mithen’s (1996) view that post-processual and Darwinian archaeologies have much in common.

This amounts to saying that human nature (if this is a viable concept – I think it is) will have to be sought elsewhere than in the more or less distant *past*, or in some kind of simply *historical* continuity.<sup>41</sup> It can not be taken for granted that earlier humans are closer to “original” human nature than we are. Gamble (1999) has made a comprehensive review study of the Paleolithic human societies of Europe. He dates the emergence of “complicated social life” to 60,000–21,000 years ago, but at the same time he warns that “we must reject the impulse to raise the curtain at this moment on the first act of civilization” (*ibid.*: 425). By the time mentioned, the evidence surveyed make Gamble conclude that the extended social networks that seem to have been present in this period were “used by individuals to negotiate their social position as well as those of others who [were] bound into their intimate and effective spheres” (*ibid.*). Since this is long before the Mesolithic, it argues against the *novel* importance of “social complexity” in the latter period. It also confirms Kelly’s standpoint.

More locally, it ties in with the observation of Meiklejohn, Petersen & Alexandersen (1998), that “variability” (*i e*, in effect, sociocultural complexity) is present already in the Kongemose period in Denmark (about 8000 years ago). This undermines the attempt at making “social complexity” (as a causal factor) relevant as such for understanding the “transition to farming” in Scandinavia. As they (*ibid.*: 209) put it:

This raises serious questions as to whether we are looking at a trajectory or sequence that meaningfully prefigures the Neolithic. The picture seems more to stress variation itself, rather than direction. This variation might also suggest a Mesolithic culture that had very little to

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41 Kelly bases his conclusion on the contention that “[e]ach chapter of [his] book has demonstrated variation among ethnographically known hunter-gatherers, variation that can be related, in large part, to environment and demography. If humans lived in various environments, then we can expect them to have lived in various kinds of hunter-gatherer societies” (*ibid.*: 336). With reservations as to the meaning of “environment” (see Part III), my view is compatible with this. However, variation (or relativity) can be over-emphasized, too, and for my part I find a concept of a common human nature, “over and above” differences, to be essential (see, again, Part III).



learn from the encroaching farmers to the south, at least in the sense that we have previously viewed the shift from Mesolithic to Neolithic as a move from the simple to the complex.

### b. “Neolithization” – A Matter of Ideology?

From Price, Gebauer & Keeley (1995) so much is evident, that the possible social competition in the late Mesolithic and Early Neolithic, is associated more with “ideology” than with subsistence. And in advocating “ideology” as an important factor behind “Neolithization” they are far from alone. In recent years many authors have come to stress the importance of “social” and “ideological” causes, over against subsistence-related ones, as having lain behind the initial “Neolithization” of Sweden.

Let us examine a couple of examples of authors advocating the “ideological” approach. One reason given by Kihlstedt, Larsson & Nordqvist (1997) for the importance of ideological factors is that the settlement pattern of the early TRB was not much different from the one of the late Ertebølle (*ibid.*: 98). The same seems to apply to the Middle Swedish finds, where the foremost indication of change is the sudden appearance of typical TRB artifacts (notably pottery). Kihlstedt, Larsson & Nordqvist regard these artifacts as “ideological markers”, and not primarily as utilitarian implements. A basic thesis of theirs is that the fundamental preconditions of the “Neolithization” of Sweden are to be found in late Mesolithic societies. That is, the ground-breaking events and choices occurred and were made well before full-blown “Neolithic” societies emerge in the archaeological record (the time span here might be as much as 2000 years). Here Nordqvist’s summary (in Kihlstedt, Larsson & Nordqvist 1997: 109-10) of his general view of the character of “Neolithization” in West Sweden is relevant. He sees it as

a spiral of perception where the process of change is an interactive relationship between the prevalent conceptual world and the physical environment. Changes in the basis of thinking and material level continuously creates new preconditions for change. The basis for this hypothesis is a gradual mental process and a rapid material change. [...] The theories of Fischer and Jennbert concerning an exchange

between the fully Neolithicized groups and the Ertebølle society creates the precondition for change by means of ideas, thoughts, interchange of experience, knowledge and objects. Exchange is the basis for a change in the mental sphere. When the change has matured mentally, however, the process occurs rapidly from a physical point of view. It is this phase which M. Larsson and others describe in their hypotheses concerning a rapid shift between Ertebølle and TRB, a shift which leads to the adoption of domesticated plants and animals.

In other words the apparent rapidity of the spread of TRB culture (and with it “agriculture”) is in a sense illusory, since it, in Nordqvist’s view, is only a visible “symptom” of changes already well underway for quite some time. (This reminds me of Madsen’s (1986: 237) view of the “Neolithization” processes as a “black box“; what Nordqvist is in fact suggesting is a glimpse into that darkness.)

M. Larsson (in Kihlstedt, Larsson & Nordqvist 1997: 94) takes as his starting-point that the change from Ertebølle to Funnel Beaker Culture in Denmark (and Sweden) was very rapid. The time span is said to be 70 years, *i e.*, at most two generations, which agrees with Persson’s review of the C14 datings. It seems entirely possible that whatever occurred happened within the life-times of single persons. Then Larsson, without explaining himself further, makes a distinction between the “ideological sphere” and the “social level”, and argues that the motivations behind the change from Ertebølle to TRB must have been “ideological” rather than “social”. The main reason for this argument is, as already said, the initially great similarities between the settlement sites of the Ertebølle and TRB cultures, respectively. According to Larsson, a receptivity to new incentives, possible to adapt to dominant local “ideologies”, was decisive for the turn of events (*ibid.*: 98).

In particular, Larsson takes the wild/tame dichotomy to be of basic importance. He thinks that “obviously there existed among the early Neolithics a striving for control over nature” (*ibid.*: 1997: 98). Taking this as “obvious” Larsson is led to postulate, without further comment or argumentation, that “the erection of the long-mounds can be seen as a part of such a striving” (*ibid.*: 98-99). (This is derived from Hodder’s (1990) ideas about Neolithization.) Larsson’s central point is that the long-mounds indicate the presence of a quite

new “ideology”, which sets the society which built them apart from their still effectively “Mesolithic” neighbors. In other words, the long-mounds are symptomatic of “Neolithization” proper, which must then be defined in relation to “ideology” rather than to subsistence (since mounds do not seem to have any economic significance, I guess). And if that is the case, then the “Neolithization” processes must themselves have been of an ideological nature. According to Larsson the character of the new “ideology” can be summed up like this: “The long-mounds can be seen as part of an emergent elite’s way of shaping their environment in dichotomies, e g, wild/tame, life/death and light/darkness” (*ibid.*: 99). Larsson does not say what these dichotomies have to do with the long-mounds. His only hint is that the long-mounds seem to have been built *before* the economic expansion of agriculture and, with this, food surpluses. I can imagine this having something to do with elites, but it remains obscure how the cited dichotomies enter the picture.

The wild/tame dichotomy is also said to be “expressed” in the commonly found depositions of axes in wetlands. The locations of these depositions (covering a long time-span) are said to indicate that “Neolithic” people sought in various ways to “show their presence in the landscape” (*ibid.*: 99) – to themselves presumably, although this seems to be a somewhat redundant behavior, and strange to boot, since once deposited the axes were invisible. He also states confidently that what was decisive in the localization of these “votive sites” – and also of monuments, like long-mounds – was “the inherent power of the landscape and the meaning of certain places for people” (*ibid.*, referring to Bradley 1993:17). He does not explain what “inherent power” is, and consequently its link with the supposed “ideology” remains obscure. Had the landscape’s “power” changed? Or had it not been recognized before? Or...?

Tilley (1996) also bases himself on a variant of the wild/tame dichotomy, although he makes no distinction between the “social” and the “ideological”. He does not think (*ibid.*: 96) that the evidence “indicates the presence of large herds of cattle or pigs or flocks of sheep roaming around in the Early Neolithic landscape”. He also thinks that cereal cultivation was of minor importance. In his critique of the subsistence fixation of much Neolithic research (*ibid.*: 1996: 70ff), he stresses instead the role of new ideas in trying to

account for the perceived changes, including the introduction of foreign domesticates. He summarizes his view in this way (*ibid.*: 111):

It is my contention that the major reason for producing domestic food was its social and ideological significance in connection with ceremonial practices at the tombs and the bogs rather than for any “purely” economic reasons. Domestic food was eaten for ritual and sacrificial purposes. In subsistence terms it may well have been very much an optional extra, in symbolic terms food production became vital for ritual practice. This had the effect of altering relationships between people, game and the forest.

A major problem with this has to do with the last sentence: Why? Why would a few domesticates have altered “the relationships between people, game and the forest”, assuming, as Tilley does, that this change was quite deep? Did they cease to hunt game? No. Were the forests altered significantly? No. Are there any indications that people significantly changed their subsistence practices? No (as Tilley himself points out at some length). But perhaps the people were changed mentally and for some reason started to view (rather suddenly) their environment in a different light? This seems to be a reasonable interpretation of what Tilley is saying. The reason for the different outlook had, he thinks, something to do with the very process of herding cattle and growing cereals, even if this was practised only on a very limited scale. Because of their ritual importance these plants and animals became religiously (and hence socially) more important than game, fish and indigenous plants, even though the latter were much more important subsistence-wise. The key word in the quote above is “food production”; Tilley writes (*ibid.*):

The forest rather than being a life-giving and benevolent force in the symbolic reproduction of social life, as in the Mesolithic, rapidly became reconceptualized as a threat and as an enemy to the small fields of grain and the domestic animals that could not thrive in it – sheep, goats and cattle.<sup>42</sup>

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42 Interestingly, he forgets pigs whose bones are found at archaeological sites, but which it is difficult to say whether they are from wild or domestic pigs.

I have grave reservations about this view regarding “the wild” and “the tame”. One way of beginning to doubt the seeming “self-evidence” of the opinion that the Mesolithic-Neolithic “shift” or “transition” involved some kind of estrangement from “nature”, is to consider the discussion in the last chapter of probable plant- and game-managing practices in the Mesolithic, practices which were most probably continued into the Neolithic. If people were accustomed to managing their environment already, before the introduction of “domesticates”, why would the management of the latter – on a small scale at that – have constituted, as such, any significant change in outlook?<sup>43</sup> To me the whole point seems quite contrived, being a curious mix of, on the one hand, conventional assumptions regarding the “world-views” of hunter-gatherers and farmers, respectively, coupled to a basically social evolutionary framework, and, on the other hand, a novel (to Stone Age archaeology) emphasis on the importance of “ideology” for understanding social and economic change. It is not clear, however, that there are any essential mental differences between “managing”, *e.g.* hazel, and “farming” cereals on a small scale.

A similar rejoinder comes from Whittle (1996: 207): “But people had known how to clear woodland by axe, ringbarking or fire right through the post-glacial period.” He also points out that archaeologists often make the untestable assumption “that early forms of cereal cultivation, when and however they appeared in a given region represent an intensification, in terms of labour for clearance, planting, tending and harvesting” (*ibid.*) This seems to be exactly what Tilley is assuming. Even though Tilley’s view, on one level, centers on Neolithic “ideology”, he still depends, for his more general position regarding the nature/culture issue, on an emphasis on *farming practices* and their (rather immediately) radical consequences.

In general, it has just been assumed that *the* most significant change was “farming” (or crucially had something to do with farming). But the evidence points to “farming” having been insignificant in scale. In this Tilley, along with several other authors, concurs. He then tries to resolve this problem by stating that even though farming was

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43 An alternative view of “wild” and “domestic” species will be discussed in Chapter IV: 1.

a very small-scale affair, it became very important “ideologically”. But even if that was the case (it may well have been), it begs the question as to why this “importance” should have altered people’s general relationships with their living environment. On the face of it, and on the basis of considerations to be discussed in depth later on, I find this unlikely for the following reason: If people were still heavily dependent on fish, game and wild plants for their sustenance, would it not have been very important to them to maintain a good relationship with these entities? And if so, is it really likely that people’s relations to their living environment changed deeply, and comprehensively, in the Early Neolithic?

Furthermore, if one thinks of farming as constituting an “intensification” in one way or another, then this presupposes a strongly perceived *need* for such an intensification.<sup>44</sup> But in terms of subsistence there is nothing to suggest such a need (Persson 1999: 173-75). And if a need arose for an “ideological” intensification of the attending to certain newly imported plants and animals, why would this need *for care* have been any greater than the need for attending to certain indigenous plants and animals before that? Only a perceived crisis of some kind, it seems, can account for a presumed “intensification” of an ideological nature. But this supposed crisis cannot have had anything to do with subsistence needs. Therefore, it must *as such* have been “ideological”, which takes us back to where we started. So, Tilley’s view amounts to what is at once an incongruence or contradiction (indicated above), and possibly a circular argument, since he presents no independent evidence for what the respective “ideologies” may have been.<sup>45</sup>

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44 Tilley thinks that an economic intensification of a subsistence based on marine resources took place in the earlier Ertebølle (1996: 56). Hence perhaps the most important changes in southern Scandinavia took place in the Ertebølle period rather than in the Early Neolithic (this is argued by Petersson 1999). One might ask whether there was any Ertebølle-like phenomenon going on in eastern Middle Sweden – it seems not, on the face of it.

45 This should not be taken as a dismissal of the idea of an “ideological intensification”, however. I am sympathetic to the thesis in L. Sundström’s forthcoming dissertation (*A Collective in Peril*), that “Neolithization” may indeed have been a response to a social/mental crisis of some kind in Mesolithic societies.

### c. The Culture and Artifacts Problem

Talk of “ideology” is also (apart from the new kinds of living entities) associated with the new artifacts of the Neolithic. So, we may ask, did the known *material culture* changes of the Early, or even the whole, Neolithic in Scandinavia have any significant bearing on the relationship of those people to “*nature*”? Since the evident material culture changes are most often associated with the belief that the people in question “became farmers”, it is also, almost as a matter of course, assumed that human-nature relationships underwent a corresponding “shift”. But if we, for the time being, ignore subsistence per se, what are we to say of this question when the artifactual novelties are taken into account?

Whittle (1996: 209) suggests that “[f]oragers became ‘Neolithic’ when they accepted a sense of identity more tightly framed by the cultural” (by which he means, in effect, the artifactual). A new kind of emphasis on making and using artifacts may eventually have led to a “reordering of the world by reference to things made by people”. As he himself says this “is more subtle than a conceptual shift from ‘wild’ to ‘tame’, a dichotomy which seems far too crude to do any justice to either the knowledge or the world view of foragers” (*ibid.*). Here we may note this very interesting observation of Price, Gebauer and Keeley (1995: 121): “Survey information from the Saltbaek Vig area shows that Neolithic sites tend to be richer in terms of artifact density and more diverse in settlement size, whereas some of the Mesolithic sites surpass the largest Neolithic sites in actual size.” In general the proliferation of more elaborate and also new artifacts in the Neolithic is indeed quite striking. Many artifacts of different kinds were deliberately deposited in special places, either natural or constructed. Different new styles were developed and maintained. Hence Whittle’s idea of a new role for artifacts in the societies of the Early Neolithic and later is certainly not without substance. But the contrast to the Mesolithic should perhaps not be overly emphasized, as this comment by K. Knutsson *et al.* (2000: 112) may suggest: “The current state of research of the Mesolithic in Eastern Central Sweden demonstrates considerable technological variation, rather than variation in formal tools over time and space. There seems to be a more complex pattern of technological varia-

tion during the Mesolithic than during the Neolithic.” What this might mean is uncertain, as the authors acknowledge, but in any case it serves as an indication of the complexity of the problems involved in discussing the meaning of artifactual changes from the Mesolithic to the Neolithic.

Many wooden artifacts from the Mesolithic have been recovered from Tybrind Vig in Denmark: fishing spears, bows, arrow shafts, a fish weir, broken ash shafts, dugout canoes (one was 9.5 m long), paddles (two richly decorated); parts of fabric and textiles were also found (Tilley 1996: 30-31). Furthermore, a wide variety of highly decorated artifacts made of bone, antler and amber are known from the Mesolithic (*ibid.*: 44ff, Nash 1998). Otherwise, in general the most commonly found material from the Mesolithic consists of microliths, which were used for various composite tools the variety of which we can only imagine. Consequently the seemingly richer artifact “flora” of the Neolithic *may* (in absolute terms) be an illusion stemming from the fact that stone and pottery are more likely to be preserved and recovered than other kinds of artifacts. When compared to the relative paucity of recovered Mesolithic artifacts the Neolithic ones tend to stand out, but if they could be viewed against the full spectrum of artifacts made out of organic materials, which certainly existed, they would perhaps not stand out that much.<sup>46</sup> As has been mentioned the only really new artifact *kind* in the Middle Swedish Neolithic was pottery, but not even that was new then in Scania, Denmark and other areas.

It may be the case that what changed in the Neolithic period consisted not in the use and richness of artifacts per se, but in what kinds of artifacts were socially emphasized, for some reason. But such a change does not in itself say anything directly about the underlying cosmological conceptions. These may have changed, but it may also be the case that old conceptions were transferred, as it were, to new media. This, in turn, may subsequently (and unbeknown to the original “perpetrators”) have altered the relative significance of certain ideas, thus effecting sociocultural change. But this is mere

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46 There are indications that decorated bone and antler artifacts were “replaced” by decorated pottery in the later Ertebølle (Tilley 1996: 44), but he also notes that many decorated pieces cannot be dated with any precision (*ibid.*: 46).



speculation at this stage. Now, if we still assume that the world of artifacts really became richer and more important after the Mesolithic period, does that mean that the world of the earlier foragers was “less cultural” (as Whittle implies) than that of the incipient “farmers”? This is possible, as long as we are talking of “material” culture (*i e*, artifacts), but hardly in any other sense. There is no reason to assume that Mesolithic (or Paleolithic, for that matter) hunter-gatherers were generally any less cultural than their Neolithic descendants. The former were not “closer to animals” in a biological sense than the latter. What, then, would be the difference between being “non-artificially cultural” (or whatever one wishes to call it) and being “artificially cultural”, and how might a change from the one to the other have been effected? To put it another way, are social relations by means of artifacts very different or just a little different from social relations by means of animals and plants? How, in general, can such seemingly strange questions be approached in a rational manner? The very nature of Whittle’s kind of proposal (if we take it seriously) and the kind of questions it raises, indicates, I think, that we should consider abandoning the conventional categories of thought which dominate archaeological (and not only archaeological) research into these matters. After the ontological discussions in Part III, we will return, in Chapter IV: 1, to some of these matters.

## The Lure of Origins

### a. The Paradoxical Emphasis on Farming When There Was None

Time and time again we have seen how the archaeological TRB culture is semi-automatically *identified* with farming, and this is something which has been taken for granted by most researchers. Consequently the terms “Neolithization”, “farming”, and “TRB culture” have in practice become synonyms of each other in the context of Scandinavian Stone Age research. Understanding the TRB is commonly regarded as the key to understanding the beginnings of farming in Sweden, and *vice versa*. Consequently, the process of “Neolithization” is conceptually understood accordingly. Obviously I do not share this view. In this chapter I will develop this dissent some more.

Welinder (1982) was the first to stress the importance of hunting-gathering in the Middle Swedish TRB. Earlier Skaarup (1973) had said the same of the Danish TRB. Despite this and despite later studies indicating the same thing, the people of the Neolithic are – as we have seen – still regularly, and in quite strong terms, thought of as farmers, and as almost literally planting the germs of what (much) later became full-blown agriculture. Segerberg (1999: 167) records her surprise (“it was unexpected”) when finding a Middle Swedish TRB site (Anneberg) to have been almost entirely based on fishing and hunting-gathering, as to subsistence. Other authors express similar reactions. In my opinion this reveals how entrenched the wholesale identification of the TRB with agriculture is.

That “farming”, paradoxically, remains a basic issue is revealed even at the very moment when, for example, Price (1996: 357) stresses the “secondariness” of subsistence for understanding “Neolithization”:

Most models of agricultural transitions are still governed by assumptions about the pre-eminence of technology and subsistence. Archaeologists, still perhaps constrained by the Three Age Model, tend to regard the Mesolithic and Neolithic as separate entities and to assume that boundaries between them mark a threshold across which all aspects of social and economic life were transformed simultaneously [...]: wild became tame, flaked became polished, mobile became sedentary, foragers became farmers.

Rather than follow this traditional view for northern Europe, one can interpret the shift to agriculture as a four-part transition that took place over several millennia from foraging, to contact, to first farmers, and finally to a fully Neolithic way of life [...] From this perspective, there was no sudden change from foraging to farming, but rather a gradual incorporation of imported tools and weapons, prior to the adoption of domestic plants and animals, and the eventual dominance of these products in the diet.

To me it seems clear that Price here, in his mode of expression, *still* inadvertently emphasizes the subsistence aspect. If this kind of farming-focused mode of expression (*even when* technology and subsistence are said to have been overly emphasized) is carried over into the speculations concerning the operative factors behind the social and cultural changes evidenced by the appearance of the TRB, then the search for these operative processes are *logically subsumed* under the subsistence factor. In other words, subsistence is still assumed to be the primary consideration *for us* when we try to make sense of the archaeological finds and the changes they indicate.

A similar (but not identical) discrepancy appears within Hallgren's view of the Early Neolithic. On the one hand, the appearance of the TRB is regarded as more of "an ideological change than an economic one" (Hallgren 1996: 5; summary). On the other hand "late Mesolithic society underwent a *complete* change with the creation of the Funnel Beaker Culture" (*ibid.*: 24; my emphasis). The reasoning behind the first viewpoint is different from and sometimes at odds with the second viewpoint; they are, however, treated as rather unproblematically fitting together. An important component of the second viewpoint is the assumption that the TRB people were actual farmers, as distinct from their hunting-gathering Mesolithic fore-

runners. So, even if the “transition to farming” was ideological, it was a transition to *farming*. As we have seen, this (for Hallgren and others) also entails that when the descendants of these very people became the creators of Pitted Ware Culture, they were “de-Neolithized”, *i e*, they were *no longer* farmers. The latter change, too, is regarded as “complete” within Hallgren’s view. This ambiguity returns again and again in much of the literature on the “Neolithization” of Scandinavia.

Such conceptual difficulties could, I think, be cleared up if one starts from the alternative assumption, that the TRB people of Middle Sweden, and probably of many other regions, never really became farmers. This removes the explanatory difficulties associated with more or less abrupt “transitions”, first in one direction and then in the opposite direction. It leaves to be explained the material culture changes and the limited presence of cereals and domestic animals, but it does not lead us to assume that we are confronted with any “complete change” in the way of life. The explanatory burden is shifted from trying to make sense of a baffling series of “shifts”, to paying more attention to the local cultural background to the changes (which must be speculatively reconstructed in theoretical terms).

For one thing, it must not be assumed that the processes involved occurred on the same time scale, or that changes in one context automatically effects changes in the other contexts. In other words one should beware of an uncritically conceived holism. In the Swedish Stone Age case, if what is known as TRB culture was adopted by some groups very rapidly, while the introduction of an agricultural mode of subsistence (dependence on farming) was very slow – as many authorities think – this may in fact mean that the latter *may have been only incidentally connected with the TRB*. When Price, Zvelebil and others regard the “transition to *farming*” in Scandinavia as a very slow occurrence, this implies that all phenomena deemed pertinent to this (especially including the TRB) were also all the time “*about*” farming. This view confuses the observed (or rather assumed) long-term “outcome” with the reasons and causes behind it. Above all it presupposes a holistic view of just what kind of process it was, a view which is not grounded in evidence but is only a logical consequence of the adopted (evolutionary) framework. It also neglects the possibility that what *we* conceptualize as “farming” may, in each

historically and geographically specific case, in fact have been of very different kinds, or even something *else*, if viewed in their respective social contexts.

In short, we do *not* actually know that what occurred in the Early Neolithic *was* a matter of farming. What should be proved is assumed from the outset, and alternative possibilities are logically excluded, even when the empirical evidence can be interpreted differently. To think that what *we conceive of* as the first signs of farming, were *in fact* the germs of just that kind of farming (as, *e.g.* Burenhult 1999 and Persson 1999 assume), is in effect the same as saying: “We already know largely *what* happened; now we need to establish *how this (i.e., what we assume we know) happened.*” But do we really know what happened, even in principle? I do not think so. The mere presence of cereals and cattle in the Stone Age means, on the face of it, only that these items existed, and for some reason were brought in, but nothing more. It does not follow that there have existed unbroken *and coherent* causal connections between then and, say, the age of the Vikings. There is no a priori reason to assume, that the many different socioecological and historical contexts *of several thousand years* will have been continuous and coherent in the way the evolutionary view logically entails. In fact, many authors agree that North European Stone Age history is unique, that it must not be unilaterally tied to earlier developments in southeastern and central Europe, but must be studied and evaluated in its own right (*e.g.* Thomas, Zvelebil, Midgley, Price and others). Logically this should *also* lead to the conclusion, that it is highly doubtful whether there has existed a coherent kind of process *into the future* of northern Europe (into the late Neolithic and onwards).

### b. Seminal Origins?

The *lure* of origins, then, manifests itself above all in the assumption of a holistic view of continuous history from the Early Neolithic onwards, and before for that matter.<sup>47</sup> Importantly, such a view an-

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<sup>47</sup> Social evolution has been a target of criticism for years now, and I make no claim of being original on this point. In any case my criticisms are focused around the fixation on farming and its origins, in the specific case at hand, and a critical stance

swers a self-centered, temporally conceived question of “our past”. As I have made abundantly clear, I think we would do well to be highly suspicious of this whole conception, and also of the interest that motivates it. Most of the discussions on “Neolithization” have been conducted in relation to the “absolute” origins of agriculture, especially in the Middle East. What has been said in this context about different or changing human-nature relationships has, however, also commonly been transferred to discussions about the cases where agriculture was imported rather than locally invented, developed or evolved. This means that *all* different ways of becoming farmers, as distinct from hunter-gatherers, are thought of in the same terms. In connection with the “Neolithization” of Denmark, for example, we find Grøn (1998: 181) writing that the

introduction of agriculture is one of the most fascinating events in prehistory. It seems connected to important changes in ideology and social organization, which in turn made possible the development of a modern industrial culture – called by some ‘civilization’.

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towards evolution gets dragged in along the way. The ontological perspective I will suggest also has non-evolutionary implications.

I note, however, that there has as yet not emerged any really satisfactory alternative to evolution, which does not result in a disintegrated view of unfathomable “diversity”. Also there has, in the critical literature, been perhaps too much stress on the ideological side of the problem. Shennan (1993: 53) writes quite rightly: “Acceptance of the view that social evolutionary approaches are fundamentally ideological has considerable implications [...]. In the specific case of non-state societies it helps us to escape from the deeply ingrained view that they are evolutionary stepping stones, and from the associated tendency to look at them from an unsatisfactory teleological point of view as containing the seeds of future states.” But my stance differs from the one implied here in that it is based on ontological, not ideological considerations. Consequently I can not wholeheartedly agree with the hopeful note sounded in the following passage: “The theoretical tools to cope with the vacuum left by the rejection of evolutionism have begun to emerge from recent work on the nature of power deriving from a variety of theoretical perspectives” (*ibid.*). Social evolutionary thought patterns still very much structure thinking about prehistory and “primitive” cultures *implicitly*, as we will see more examples of, the main reason being, perhaps, that there does not really exist any widely acknowledged alternative among the critical parties, deep enough to be able to answer the very basic questions about human life that evolutionary thought claims to answer.

What is most striking here is the very idea that the “Neolithization” of Denmark (and of the rest of southern Scandinavia) has anything *at all* to do with “modern industrial culture”. Some kind of connection follows logically, to be sure, from the general evolutionary worldview itself (which most people knowingly or unknowingly adopt), but there is more to it than that. It has an existential dimension. In order to take an interest in the Stone Age at all, we must feel some kind of connection with these long dead people, and this means that “the origins of farming” (whatever that is taken to mean) *must* stand in a relationship to our world. But what if it does not? What if there *is no* connection, apart from those provided by modern day mythologies, or – uninterestingly – by the very passage of time? Would we ever care to know? And if such a conclusion came to seem plausible, what would *that* mean for us? The common way of fantasizing about the whole thing runs, I think, something like this (to be read in an appropriately breathless tone): “Imagine that we once were hunter-gatherers, but now we drive cars and fly in planes, and the transition from one extreme to the other involves the events and drama of Neolithization!”

What makes us think that the archaeological finds from the Stone Age of Sweden are traces of “*our* history”<sup>48</sup>? There is no factual basis for this assumption, but it proceeds from the idea of general evolutionary progress. Trigger (1998) shows how the idea of evolution, also before Darwin, has been the most important concept guiding social science thought over the last 300 years (*cf* Sanderson 1990). In fact neither history, archaeology nor anthropology in their modern guises, would be thinkable without some idea of evolution. The concept of evolution, because of its etymology, metaphorically evokes preformationist and teleological notions. Hence the close fit between the idea of evolution and the idea of progress (Ruse 1996, Trigger 1998). Something is thought to “evolve”, and that something, it is unconsciously (perhaps inadvertently) assumed, must therefore have existed seminally in some form before the the evolution of that thing “began”. The evolutionary progress then consists in the

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48 By “our” here, I do not mean “we Swedes” or something to that effect (*i.e.*, I am not speaking of ethnicity), but rather, more generally, “we who are living now, in the modern world”.

unfolding of this seminally present “something”. The unfolding realizes some latency or potential, and when evolution has reached its “end”, the entire form behind it has been revealed at last.<sup>49</sup> Consequently, if modern civilization is perceived, say, as “unnatural” in relation to biologically evolved capacities and characteristics of human beings, then it becomes necessary to pinpoint and study the historical origin of this “unnaturalness”.<sup>50</sup> Or, inversely, if modern communications technologies, for instance, are regarded as a “natural” extension of communications capacities of much more ancient provenance, then a seemingly different kind of origins problem arises, having to do with how there can be historical continuity (as distinct from logical or conceptual relatedness) in what seems to be quite different phenomena. Both these perspectives (“break” versus “continuity in difference”), however, share virtually identical preoccupations with historical origins *per se*, which are “self-evidently” regarded as very important, as betrayed by the often grand terms in which questions are asked, or intellectual contexts established (*cf* quote from Grøn 1998 above).

We may note, however, that within a general evolutionary framework, all the existentially important answers are in principle already given. Since the 18th century they have more often than not been centered around one thing: the seminal importance of *agriculture* (and, in the late modern extension of the scenario, *industry*). A subtle moral overtone is often present; either these developments are “good” or they are “bad” (or maybe both, but this is a little too complex for this mythology to encompass properly), but either way an intense inter-

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49 This is really an Aristotelian notion and not Darwinian at all. We have, consequently, and given that evolutionism and Darwinism are often identified, a confusion at the very heart of the conventional notion of social evolution. A strictly Darwinian view of cultural history is basically very different from the one criticized here (*cf* O’Brien & Lyman 2000). Johnson & Earle (2000: 2-37) also rightly point out that social evolution (as a research problem) cannot be identified with the notion of social progress, but they clearly adhere to a paradigm in which the “evolution of human societies is an upward spiral” (*ibid.*: 29), albeit of a more complex kind than the simple stages typology of earlier days.

50 “Unnatural” here may connote anything from “morally corrupt” to “unique to the human animal species”. Whatever one thinks of, the character of the problem remains the same.



est will accrue to *historical* origins (as distinct from *causal* origins). And in the general evolutionary scenario it is inevitably the case that hunter-gatherers, whether contemporary or prehistoric, are regarded as being “closer to nature”, more bound to ecological circumstances, and even as more like chimpanzees than farmers are. Comparative pongid/hominid behavioral studies, within an evolutionary framework, are rarely made focusing on agricultural or, even less, industrial people, if not in terms of contrast (*e.g.*, by saying that we modern Westerners are not “biologically adapted” to the life we lead). Apparently many people, including scientists, unquestioningly perceive themselves as very different from both hunter-gatherers *and* chimpanzees.<sup>51</sup> This difference is then conceptualized as being laid out on a line of temporal progression, where “pre-humans” (rather like chimpanzees) are gradually but, in theory, seamlessly followed by “forager” or “hunter-gatherer” humans (or “anatomically modern” humans; *cf.* Ingold 2000: 185, 388). At the far end “industrial societies” appear, and somewhere *in between* these and the foragers agriculture appears. Some way or another the latter is then viewed as a decisive break with or transition from what went before, and, inevitably, “primitive” hunter-gathers come to appear closer to hominids and chimpanzees than to “advanced” farmers and industrialized people.

Some of us may feel that “deep down” we are still Stone Age humans, severed, as it were, from our true selves by the accretions of culture (originally springing from the invention of agriculture).<sup>52</sup> But this merely introduces a more or less gradually appearing ontological duality into the basically temporal scheme; it does not alter or challenge the basic presuppositions. Hence the “distance” between “us” and “them” can, somewhat paradoxically, be construed either in temporal (evolutionary/historical) terms or in existential and ontological terms, but in both cases the long sweep of the evolutionary scenario is basic; the existential “distance” is not only ontological – it is *also* temporal, and because of this all the more impossible to cover, it seems, for good or ill.

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51 Alternatively, one may see oneself as rather *similar* to a chimpanzee (*e.g.*, de Waal 1996); then the artifactual ambiances of human cultural life become problematical, or are abstracted from the discussion.

52 *Cf.* H. Knutsson (1998) for this view in connection with Scandinavian Neolithization studies; her basic assumptions are briefly discussed below.

Consider the supposed “break” somehow provided by the appearance of agriculture. Both before and after the point(s) of origin of agriculture (especially in the form of “the great civilizations”) we find it easy to think in terms of evolution, mostly biological before agriculture, and mostly cultural or social after agriculture. We thus come to have *two continuities* rather different in kind – one connected with the animal past, the other with the technological future, and these two “evolutions” are, in a rather troublesome fashion, separated by the seminal event of agricultural origins. The trouble stems from the fact that the two continuities are generally conceptualized in basically different terms – the first in terms of evolutionary biology, and the second in terms of cultural and social history. On these dual continuities Ingold (2000: 389) comments:

We thus have two distinct continua, one evolutionary, leading from ancestral pongid and hominid forms to ‘anatomically modern’ *Homo sapiens sapiens*, the other historical, leading from our presumed hunter-gatherer past to modern science and civilisation [...]. And it is the intersection of these continua that sets up a point of origin, without parallel in the history of life, at which our ancestors stood on the threshold of culture and, for the first time, came face to face with meaning [...]. This point is believed to mark the emergence of what is sometimes called ‘true humanity’ [...]. This kind of man, equipped anatomically for life as a hunter-gatherer, was possessed of a mind that would eventually enable him to reason like a scientist.

Now, *how can biology turn into human history?* The existential force of this question is, I venture, what lies behind the fervent scholarly and public interest in “Neolithization” and other origins questions of equal stature. One does not necessarily have to focus on agriculture per se (although many do). The focus may be on an earlier time, generally connected with the appearance of *language* and/or *tool use*. But the troublesome nature of the transition remains, whether one places the decisive events earlier or later, more on the evolutionary (biological) side, or more on the historical (cultural) side. The view of agricultural origins, in relation to other things deemed to be important, may differ, but the general evolutionary plus historical world view will be basically the same, and the extreme ends of the time-

line will retain their alienness in relation to each other, virtually *forcing* the attention of thinking people to the question of historical origins which are then thoroughly confused with causal origins.

### c. Three Brief Examples

Let us briefly examine examples of how it all works out in rhetorical practice. Books speculating on the biological origins of “modern man” are very numerous. One recent example is *The Prehistory of the Mind* by the archaeologist S. Mithen (1998). This is an attempt to view the evolution of the mind in a new way, much inspired by the evolutionary psychology of Cosmides & Tooby (1992, 1994). However, it also preserves much of the conventional view of the origin of modern humans, in that it emphasizes the essentially genetic, anatomical and physiological character of this evolution. It seriously underplays the significant impact of material culture as such in more recent history, not to speak of other cultural entities such as stories. Consequently it skips the problem posed by “the great civilizations” and transfers their import (that of signifying a transition) to an earlier date. According to Mithen, the significant acts in the drama of the human mind have already taken place when wholesale agriculture and other characteristics of high civilization make their appearance. In the opinion of Cosmides & Tooby, which Mithen endorses in his own reasoning, “the [modern] human mind evolved under the selective pressures faced by our human ancestors as they lived by hunting and gathering in Pleistocene environments [...]. As that lifestyle ended no more than a fraction of time ago in evolutionary terms, our minds *remain* adapted to that way of life” (Mithen 1998: 42-43; my emphasis). As individuals, then, we act and react as if still living in the ancestral environment of some 40,000 years ago or so. Later developments therefore cannot be even nearly as important as what Mithen calls the “big bang of culture” in the Pleistocene (*ibid.*, Ch. 9). Such extremely recent occurrences as the scientific and industrial revolutions are not even mentioned in this context, probably because they are seen as too recent to have been able to make any significant impact on what Mithen regards as “the mind”. Judging from his scenario we are basically still Stone Age hunters living in a hi-tech world.

This assumption is typical of works focusing on the “evolution-

ary origins of modern humans”, and it, again typically, skirts the biology/history issue by converting, in effect, everything to the direct or indirect consequences of our genetic heritage. It implicitly or explicitly implies that cultural items (whether apparent “tools” or not) are to be categorized as phenotypic traits basically tied to genetic variation, however loosely (*e.g.* Wilson 1998, O’Brien 1996). In the latter volume R.C. Dunnell, for example, states categorically: “Artifacts are the hard parts of the behavioral segment of phenotypes” (*ibid.*: 94). Wilson holds on to the concept of the “genetic leash” (Dunnell 1996: 157f; *cf.* Wilson 1979) and the principal question which remains is: how tight was the leash when civilization emerged and diversified? No matter how loose this leash the explanatory basis remains that of biological evolution, not human history, since in the long run the natural selection of genes has been (and still is) decisive. However, in this perspective culture, even if in the end viewed in functional terms, also assumes a certain *relative* autonomy in the short run, quite enough for the “discrepancy” to be *felt*. This is acknowledged by Wilson (1998: 158): “Culture can indeed run wild for a while, and even destroy the individuals that foster it” (*cf.* Lorenz 1983).

In the context of Swedish Neolithization research, H. Knutsson (1995) adopts a variant of this perspective emphasizing the threatening possibility mentioned by Wilson, particularly as centered around the issue of emotions. The discrepancy is between a biologically evolved human nature and a historically developed cultural environment. Early on in the introduction to her work (*ibid.*: 11) she asserts that it has long ago been “realized that a gap exists between our biological constitution (both physically and psychologically speaking) and the culture which goes on around us”. She refers here to S. Freud, K. Lorenz, C.G. Jung, C. Merchant and I. Eibl-Eibesfeldt. Her main focus, however, is on biology, especially ethology interpreted in a psychologizing way. She ventures that the mentioned “gap” consists in

a break in connections between the conscious and the unconscious, or the suppression of emotionally directed decisions in favor of decisions directed by cognition. An intuitive communication of knowledge was replaced by a cognitive one, which transmitted a special-

ized but also fragmented knowledge. The broken connections led to a false and unnecessary hierarchization of all of human society. The fragmentarized transmission of knowledge then made it possible to sustain “inhuman” structures in a human society. [*ibid.*]

On this issue she relies heavily on Ljungberg (1991). His explanation for the origin of the discrepancy, as summarized by Knutsson (*ibid.*: 26-27), is centered around optimal foraging, encouraging the adoption of agriculture under certain circumstances, and population increase, hostilities and warfare in the wake of agriculture’s inception. This is then evaluated in terms of psychological consequences.

It is clear that to H. Knutsson this is not just a scientific issue. Over against the “cognitive”, “fragmented” and “inhuman” kind of communication that she thinks appeared as a consequence of agricultural social developments (reminding one of negatively critical accounts of modern society), she sets an idyllic view of hunter-gatherers, who have to this day “maintained a more harmonious way of life” (*ibid.*).<sup>53</sup> From such considerations arises Knutsson’s main objective which is, first, to investigate, in general, whether hunter-gatherers are systematically different from other cultures, and, second, to investigate, in particular, whether such differences as may exist, are relevant for understanding the archaeologically visible differences between Mesolithic and Neolithic people. All of this is framed within the supposedly biologically based supposition that hunter-gatherers, *because of their way of life*, are closer to nature (meaning, essentially, the environment of the “original” humans), and, therefore, more in touch with their emotions. What, in H. Knutsson’s view, distinguishes hunter-gatherers from the rest of us, is not that we are intrinsically different (since we share the same biological constitution), but that we, as living in farming and industrial societies, have *lost contact* with our biological well-springs. We have become artificial, so to speak, lost in elaborate cultural constructions (literally speaking) and enormous social complexities. Clearly, Knutsson has a benign view of

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53 Cf. Tilley (1996: 68): “I believe that if the nature of late Mesolithic society in southern Scandinavia could adequately be described by a modern political term, ‘primitive communism’ might still be very apposite. I am politically old-fashioned enough even to want to describe it as a kind of Garden of Eden before the fall.”

what is thought to be original (biologically evolved) human nature (*cf* de Waal 1996), and a malign view of modern society, the *roots* of which she sees as lying in the appearance of farming societies in the Neolithic and onwards. Hence a definite contemporary relevance of a largely existential nature becomes attached to “Neolithization” studies: if we understand these supposed historical roots of our contemporary miseries, then perhaps we may find ways of mitigating them.

But are we really Stone Age hunters (in a biological evolutionary sense) living in a hi-tech world? This kind of reasoning proceeds from two basic assumptions which I think are both false: first, the notion that historically conceived origins (however distant in time) are more important than present causes for understanding our *current* selves; second, the notion that “the mind” is solely organismic and a product of biological evolution. Mithen’s (and also H. Knutsson’s and many others’) concept of mind is the conventional one which regards it as being located in the individual human brain. Since the individual is first and foremost a biological organism, it seems to follow that the genetic evolution of this organism, most particularly its brain, holds the key to understanding the mind. At the same time, Mithen (1998: 6) – quite representatively – emphasizes the crucial role to be played by archaeology in unravelling the mind’s origins. But archaeology is first and foremost concerned with artifacts, not brains. Thus he in fact proposes to study the brain/mind through artifactual, not biological evidence. Strangely he does not deal at all with the conceptual discrepancy entailed by the different kinds of evidence, and in fact this problem is much neglected.<sup>54</sup>

The above examples both proceed from the biological side of the biology/history divide. Mithen locates the seminal occurrences in the Paleolithic, viewing all later cultural developments as mere elaborations on what was given then, in principle. H. Knutsson, on the other hand, regards the Neolithic as a decisive *cultural* break with what went before while still holding on to a basic “biological” (ge-

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54 If it is not swept under the carpet by more or less axiomatically declaring, like Dunnell, quoted above, that artifacts (and by implication all cultural items) are “really” phenotypic traits, and hence in the end genetically “constrained”. It is also neglected on the other side of the fence, when “culturists” feel free to totally ignore everything to do with genes or brain physiology.

netic) continuity. She thus strongly emphasizes the divide we have noted, while Mithen disregards it completely. But both regard “biological nature” as fundamental.

If we now turn to an example covering the other (historical, sociocultural) side of the enigmatic “transition” from nature to human society, there are very many alternative views. The characteristic feature of most “culturists” is that they are quite as superficial as most of the “biologists”,<sup>55</sup> when it comes to accounting for the problem of the two histories (one biological, the other social/cultural). Geertz (1993) may illustrate the culturally inclined perspective on human societies. He believes that

culture is best seen not as complexes of concrete behavior patterns – customs, usages, traditions, habit clusters – [...] but as a set of control mechanisms – plans, recipes, rules, instructions (what computer engineers call “programs”) – for the governing of behavior. [...] [Man is] desperately dependent upon such extragenetic, outside-the-skin control mechanisms, such cultural programs, for ordering his behavior. [*ibid.*: 44]

He also writes (*ibid.*: 14) that

[a]s interworked systems of construable signs (what, ignoring provincial usages, I would call symbols), culture is not a power, something to which social events, behaviors, institutions, or processes can be causally attributed; it is a context, something within which they can be intelligibly – that is, thickly – described.

In this view, then, culture and physiology, culture and individual human beings are separated, since “[c]ulture is public because meaning is” (*ibid.*: 12), and “[t]hough ideational, it does not exist in someone’s head” (*ibid.*: 10). Consequently, within the confines of this conception studies of culture can be conducted without considering biology in any sense (except as a cultural phenomenon – “biology”), and without considering human individuals as such. In the last case

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55 He need not be a biologist by profession.

one may ask how meanings can be public if individuals do not “get it”; and if they get it, then meaning is not only public, and Geertz’ definition becomes unrealistic. Be that as it may – I am not embarking on a specific criticism of Geertz here – nevertheless this view of culture is still very influential, and serves well as an example of how a “culturist” places himself squarely at the “post-biological” end of the evolutionary time line.<sup>56</sup> The result is that he (and all that think in this vein) have just as little of interest to say about the exact nature of the supposed “transition”, as the biologically inclined thinkers have. But – and this is the point – *if* a “culturist” should become concerned with origins, he too would be focusing on the very same point(s), or stretches,<sup>57</sup> in time as the “biologist” would. Thus they, despite all their differences, share one very basic idea, *viz.*, *how* to think about “origins”. Generally the “biologist” is more explicitly concerned with origins *per se*, since this is the *raison d’être* of biology in this field,<sup>58</sup> than the “culturist”, who sometimes does not even care about it at all, but, to say it again, the intrinsic logic of both positions hinge on the same basic view – that there has been an

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56 Geertz acknowledges man’s biological evolutionary past; see *ibid.*: 55-83. Concerning the mind (which he strictly distinguishes from culture) he writes (*ibid.*: 82): “The problem of the evolution of mind is [not] a false issue generated by a misconceived metaphysic”; in other words he accepts a conventional biological account up to a certain point. (But then of course culture is “not causal”; one might wonder what *is* causal then – sociobiological imperatives?)

57 Regarding the “point” of transition Geertz (*ibid.*: 47) says: “The only trouble is that such a moment does not seem to have existed. By the most recent estimates [this was written in the 1960s] the transition to the cultural mode of life took the genus *Homo* several million years to accomplish [...]”. He adds, incongruously I think – in view of his acausal and non-psychological view of culture: “What this means is that culture, rather than being added on, so to speak, to a finished or virtually finished animal, was ingredient, and centrally ingredient, in the production of that animal itself” (*ibid.*). Stretching out the appearance of culture does not, however, remove the difficulty of making sense of the “transition” from animal to human being; it just assumed, it seems, that if the time frame is prolonged enough the problem vanishes. And it remains a “fact” that culture and biological human nature are decoupled *now* (like schematically conceived “software” and “hardware”). Hence “culturists” and “biologists” do not, in effect, have any scientific problems in common – *except* those pertaining to (historical) origins.

58 Most biological research is not concerned with origins.



evolutionary progression of some kind, involving a “transition” from non-cultural animal to cultural human.

I think that this view – which is foundational for the self-image of modern civilization – is misconceived in all its manifestations. The way it manifests itself in Scandinavian Stone Age studies is really just an example of its almost ubiquitous presence in present day Western thinking. I deeply suspect that without thinking, at some level, *in terms of* historical “origins” we are hard put to take any serious interest in the past at all.<sup>59</sup> But I think it is about time to find other motivations for our interest in past lives. The single-minded search for origins is based on a deep-seated need for a “Grand Narrative”. The “post-modernist” critique of such narratives is, of course, notorious. I am not siding with that, except on some secondary points. I am a firm believer in the necessity and inevitability of Grand Narratives; so if The Great Origins Narrative is faulty, or if “we” in (post-)modern Western civilization lack a Narrative, then I think we very much need another one. And I would rather see it issue from deep thinking than from popular demagoguery, which presently is more evolutionistic than ever, especially in a genetic sense.

### d. The Crux of the Matter: Human-Environmental Relations

All the questions laid bare in this and the preceding chapters are connected to the issue of the relations between human beings and their environments, often – but inadequately I think – thought of in terms of the relation between humans and nature, or between culture and nature (*cf* Rudebeck 2000). In the past, and still in many quarters, it has been very common to speak of human-environmental relations in terms of the different ways in which humans “use” or “exploit” their environments; either they are hunter-gatherers or they are farmers, for example. However, the Early Neolithic and also later

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59 When I expressed my misgivings concerning the fixation on origins, in a talk at *The Final Coast to Coast Conference* in Falköping 2002, M.A. Dobres (of the University of California-Berkeley) candidly stated that grant proposals in the United States were much more likely to be treated favorably if they in some way related to origins questions.

times cannot, as we have seen, be pinned down so neatly. The problem of conceptualizing changes in human-environmental relations (which is not to be conceptually identified with human-nature relations; see next chapter), is not often scrutinized in sufficient theoretical detail, which leads to a disturbing vagueness in arguments. Closely associated with the Mesolithic/Neolithic distinction are other conceptual pairs or oppositions. First of all, these terms are, as we have seen, closely tied to an emphasis on the differences between hunter-gatherers and farmers. In its most radical form, the distinction between the Mesolithic and the Neolithic (as kinds of culture and subsistence, not only as chronological periods) has served to pit “the early post-glacial hunter-gatherers against the Neolithic farming societies as two typological extremes” (Zvelebil 1998: 4). One insidious and seemingly inescapable consequence of this has been to pit two even more fundamental concepts against each other in a singularly unhappy fashion, *viz.* nature and culture. Pluciennik (1998: 76) is on the mark, I think, when he says that the

determination to emphasise differences between hunter-gatherers and agriculturalists may also be seen in the pervasive use, implicit or explicit, of the culture : nature dichotomy, which is still used as a metonym for farmers : hunters – as though the latter had no culture to speak of until the Neolithic came along.

This is partly tied to the emphasis, noted by Zvelebil *et al.*, on artifacts in Neolithic research – as if artifacts are the “culture bearers” *par excellence*. To reiterate questions already put earlier: what of “nature” – plants, animals, streams, mountains, clouds and rain, *are they really “outside culture”*? Do fewer artifacts imply less culture? Is a reliance on “wild” organisms for a living less cultural than a reliance on “tame” organisms? It seems as if the nature-culture dichotomy in fact lurks behind almost every problem in the “Neolithization” debate. In preceding chapters I have questioned the adequacy of regarding Neolithic people as farmers in contrast to hunter-gatherers. This seems, then, to amount to doubting the distinctions between nature and culture or ecology and society, as these are conventionally understood – because these conventions are inextricably embedded in the conventional understandings of hunter-gatherers and farmers, respectively.

Whether hunter-gatherers represent a general type has been debated in anthropology in recent years (*e.g.*, Kelly 1995, Kent 1992, Lee 1992, Solway & Lee 1990). Furthermore, some anthropologists (*e.g.*, Kelly 1995, Schrive 1984) question the use of modern hunter-gatherers as models of prehistoric ones. A corresponding reappraisal has taken place in archaeology to some extent, and has made itself felt particularly in views on the social life of the Mesolithic. As Pluciennik (1998: 67) points out, however, no corresponding wholesale reappraisal has been done in regard to farmers. They remain, as a type, essentially different from hunter-gatherers. This can be seen with some poignancy in several of those authors who embrace a more nuanced view of Mesolithic social life. For example, Tilley (1996; see especially p 111) still supports a strong contrast between hunter-gathers and farmers even if relegating it to an “ideological” realm. Thus the issue remains unresolved; in fact there has not been any sustained discussion of this, or of the culture/nature or society/ecology problem, in the literature on Scandinavian “Neolithization”.

I would like to formulate the specific form of the problem before us as follows. Even if human-animal and human-plant relations in the Early Neolithic, and perhaps all through the Neolithic, were not *in general* very different from what they were like before, there were still some “ingredients” in the environment (imported animals and plants, certain artifacts) that were definitely *new*. We may then ask: Given this sameness *and* difference (abstractly speaking) – what could these new items have *meant*, and what may have been the *consequences* of their presence? Any ever so tentative answers to these questions presuppose a clearly articulated pre-understanding of what human existence could have been like (cosmologically, socially and ecologically) at that time in that place. And this in turn, I venture, presupposes an explicit ontological framework of a very fundamental character which actually tries to resolve (make new sense of) the culture/nature and society/ecology problems as currently encountered. If this is not done in earnest, and articulated with the discussions at hand, the same old contrasts and logical conundrums will keep cropping up in ever new but really old guises. I think it would be more worthwhile to have some *new* riddles for a change.

All that has been said so far illustrate that the study and discussion of the “Neolithization” of Sweden cannot be conducted in iso-

lation from deeper questions about human nature, questions which also tend to crop up regularly in many other scholarly, and not so scholarly, debates. Viewed from a wider perspective, the “Neolithization” issue is in fact deeply embedded within our very conceptions of *ourselves* (Rudebeck 2000), and cannot be adequately discussed without taking that into account. The risk is overwhelming, that very fundamental presuppositions concerning the nature of humankind, our common identity, and what it means to be a human being – in relation to what is usually conceptualized as “nature” – are inadvertently introduced into the discussion without critical scrutiny, *i e*, without real awareness. The consequences of this will be, and have been more often than not, that what is offered as “scientific explanations” of empirical finds, are in fact no more than academically refined versions of certain cultural and political biases in contemporary society (*cf* Shanks & Tilley 1992). This enters not only into general arguments but may shape the categorizations of the empirical material itself, thus rendering the latter less objective than it would appear to be (*cf* K. Knutsson 1998), not to speak of the interpretations of finds (*cf* Karsten 1994).

A symptom of this state of affairs is exactly the customary use of the dualistic concepts mentioned. As Rudebeck (2000: 279) puts it in her survey of the historical vicissitudes of different views of human-nature relationships, in the discussion of agricultural origins:

I think it is clear that archaeologists operate with existential images of the human being largely unconsciously. These images are like filters through which we conceive of the origins of agriculture. [...] Obviously we do not all have the same images, but it seems that we choose, unconsciously, from a rather limited set of images that have been formed and transformed through time. [...] I would argue that *these images are largely independent of data* and instead they are the unconscious frame for our interpretation of data. [...] [This means that] the whole issue of what data is and what should count as data in specific cases ought to be more intellectually challenging *if different images of the human being were part of the discussion in a more explicit way*. [my emphases]

I fully agree, and the last plea is in fact what I am trying to heed in this book. The way out, I will suggest, is to think of the issues not in

terms of humans and nature, but in terms of human-environmental relations, *regardless* of whether the environments in question are natural or cultural in the conventional sense. Furthermore, the notion of environment, as well as that of human being, will have to be understood less holistically. What aspects of “human being” are we speaking of? What kind of environment, more exactly, is it worthwhile to focus on, in a given instance? In the following chapters I will suggest possible, and, I think, “constructively provocative” basic answers to such questions. Because the inquiry will now move to a more general level of discussion, the reader may experience some initial “dissonance”. It should be kept in mind, however, that the most basic problems confronting us regarding “Neolithization” issues are, to a large extent, conceptual ones, and that they, in one form or another, bedevil not only archaeology, but also anthropology, history of religions, and other related fields of study.

What follows, then, is a critical and synthesizing articulation of “a different image of the human being”, presented as an explicit part of a *prima facie* archaeological discussion. In the process, it will be seen why a fixation on historical origins detracts from a proper consideration of relevant issues.



## Part III





# The Problem of Environment, I: The Human Organism

## a. Prelude: Environments, Not Nature

“Nature” is a term and multi-faceted concept which is often more or less identified with the concepts of ecology and environment, even though these three concepts are not really identical. This practice is highly inadequate, however, if the aim is to think clearly and to escape from vague generalities. First we should note that the conventional dichotomy between humans and nature appears in different guises. In academic contexts there are two main ones:

- that between nature and culture (as ontological kinds), and
- that between humans as (biological) organisms and humans as (cultural) persons.

We are dealing here with general, very deeply entrenched thought patterns of ancient provenance, the actual expressions of which are legion. Finding works that have seriously taken up the challenge (trying to fathom *both* the issues just mentioned), in a scholarly and detailed fashion, is not easy, although the rhetoric on the issue is plentiful enough. One of the few who, to my mind, manages to make real and interesting progress is T. Ingold. He has recently brought together several of his important studies in a comprehensive volume (Ingold 2000) to which I will refer repeatedly in what follows. In fact, I regard this work as so seminal to my concerns as to warrant what I hope will be taken as positive criticism. I have therefore, in order to escape the danger of “referential inflation”, chosen to focus much of the following discussion around some of Ingold’s ideas, and those of a few more or less likeminded others, notably J. von Uexküll.

In this and the next two chapters I will discuss human-environmental relations in general terms, without giving explicit heed to the archaeological concerns discussed in Part II. My aim is to argue for a general *human* ecological perspective which, I think, is able to do justice to human beings both as living organisms, as makers and as thinkers. Since I do not believe in the adequacy of a basically biological perspective, nor in the adequacy of a basically cultural one, my stance as presented here by and large skirts (but does not ignore) the usual controversies between these two perspectives. I would like, instead, to state something positive that is deliberately unheeding in relation to many current ways of regimenting the issues, while constantly keeping them in mind nevertheless.

As already mentioned, I think that it is most worthwhile to study different human-environmental (not human-nature) relations, regardless of whether the environments are abstractly classified as “natural” or “cultural”. In reality these domains interpenetrate each other in various ways which belie the clearcut dual categorization. So, the first step must be to broadly categorize different kinds of environment and then try to understand in which way(s) they interpenetrate each other. In this and the two following chapters I have applied a categorization which puts human persons at the center of things and which distinguishes three kinds of human-environment relationships:

- human organisms and biological environments (this chapter)
- human persons and artifacts (next chapter)
- human beings and other beings in the context of symbolism (Chapter III:3)

As we will see these three categories of relationships interpenetrate each other in various ways wherever human beings are present, and separating them is mainly a matter of analytical convenience. If we ask what academic disciplines the three categories might correspond to, I would venture that the first is most evident in ecological and evolutionary biology and in neuropsychology, the second in social psychology (activity theory), cognitive science (distributed cognition) and material culture studies, and the third in comparative religion and environmental (ecological) anthropology. It stands to

reason that it is impossible to treat such vast questions in a comprehensive manner. What I will do instead, as I said above, is to discuss some pertinent issues in relation to a few controversial but illuminating studies, in order to see what insights can be gained from this, regarding the interrelationships of the three categories of human-environmental relations mentioned.

One more thing: The reader is warned that Sections *b-d* of this chapter are perhaps the most difficult of the whole book. They are conceptually necessary as an important basis of my outlook, but those readers who initially find themselves lost in the thicket of rather abstract arguments, are advised to jump directly to Section *e*.

### **b. Organism and Environment – Umwelt and Ecology**

Ingold (2000: 2-5) starts from the assumption that human beings are organisms, *i e*, the human person (usually identified with a mind) and the human organism (usually identified with a body) constitute a real unity, and, furthermore that this unity is an event in time only. In this chapter I will largely go along with the first premise although I dispute the second. I think that human beings are also organisms but I deny that they are only organisms. Leaving the last issue aside for the time being, we may start by noting that both logically and actually the presence of an organism (*e g*, a human being) implies the presence of an environment *to that* organism. It is, in other words, not very enlightening to speak of “*the* environment” in a way which does not make explicit *to whom* it is (or was) an environment.<sup>60</sup> The environment concept is thus relational, not absolute.

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<sup>60</sup> Or, *to what* it is an environment, since it quite possible to *think* of environments without organisms: “Even a sand grain on the surface of the moon has an environment” (Begon, Harper & Townsend 1996: 4). Lewontin (2000: 48) disagrees with this, however: “Just as there can be no organism without an environment, so there can be no environment without an organism. There is a confusion between the correct assertion that there is a physical world outside of an organism that would continue to exist in the absence of the species, and the incorrect claim that environments exist without species. [...] glacial streams, volcanic ash deposits, and pools of water are not environments. They are physical conditions from which environments may be built. An *environment* is something that surrounds and encircles, but for there to be a surrounding there must be something at the

As to “nature” we have already noted the all-pervasiveness of a biological evolutionary stance regarding the more remote human past, and how this tends to condition our interpretations of what *we* regard as “key events” (of which “the transition to farming” is often considered to be of paramount importance). We saw that this perspective leads to trouble when we come nearer to our own time, manifesting itself in the notorious evolution/history conceptual division, closely corresponding to the nature/culture division. Ingold (2000) is, as we have gathered, very critical of the division in question, and his view on how the theoretically awkward duality can be avoided rests squarely on his emphasis on organism (person)/environment “unity”. His solution to the problem is presented in a chapter on “Building, Dwelling, Living” (Ingold 2000: 172-88), and his main conclusion runs as follows (*ibid.*: 186-87):

by taking the animal-in-its-environment rather than the self-contained individual as our point of departure – it is possible to dissolve the orthodox dichotomies between evolution and history, and between biology and culture. For if, by evolution, we mean differentiation over time in the forms and capacities of organisms,<sup>61</sup> then we would have to admit that changes in the bodily orientations and skills of human beings, insofar as they are historically conditioned by the work of predecessors (along with the enduring products of that work, such as buildings), must themselves be evolutionary. And if, by cultural variation, we mean those differences of embodied knowledge that stem from the diversity of local developmental contexts, then far from being superimposed upon a substrate of evolved human universals, such variation must be part and parcel of the variation of all living things, which has its source in their enmeshment within an all-encompassing field of relations. It is not necessary, then, to invoke one kind of theory, of biological evolution, to account for the transition from nest to hut, and another kind, of cultural history, to ac-

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center to be surrounded” – *i e*, an experiential center (*cf* Gibson 1979: 8ff). Of course we could *designate* a sand grain to be a “center”, but it is not in actual fact a center, of the kind needed for the concept of environment to make enough sense.

61 (My note): Note that this concept of evolution (really: historical change) is different from the one which gives rise to the unfortunate “lure of origins”.

count for the transition from hut to skyscraper. For once history is itself recognized as an evolutionary process, the point of origin constituted by the intersection of evolutionary and historical continua disappears, and the search for the first hut – for the beginnings of architecture, history and true humanity – becomes a quest after an illusion.

Here we can see that Ingold, in addition to assuming an organism/person unity, also argues for an *organism (person)/environment* unity (“the-animal-in-its-environment”). This identification is very important to Ingold, and although it has great merit in a limited sense I see its totalization as questionable. If we stick to Lewontin’s view (quoted in the note above) the baseline is that the concepts of organism (or person) and environment go *irreducibly* together. This is not the same, however, as saying that the two termini of this togetherness, so to speak, are totally united. Ingold’s stance is fundamentally monist, ontologically speaking, and one consequence of this is that he is led to identify not only organism and person (Ingold 2000: 2-5) – which is sensible in some respects – but also the organism and its environment – which is not, I think, very sensible, *if “environment” is not differentiated further*. As Ingold sees it though, the organism and its environment are, to all intents and purposes, a single entity of a radically historical and contextual nature.<sup>62</sup> According to Ingold the terms “organism” plus “environment”, “should denote not a compound of two things, but *one indivisible totality*” (*ibid.*: 19; my emphasis). Here we might ask what the expression “indivisible totality” means. To me indivisibility is a hallmark of *unity*. It makes some sense to say that *the organism* is indivisible in the sense that it is a centered being, but the environment must, as I see it, be conceived of as a

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62 In Ingold’s view, life (which is first and foremost the very life of organisms, not an abstract concept) is “not the realisation of pre-specified forms [read: genes] but the very process wherein forms are generated and held in place. Every being, as it is caught up in the process and carries it forward, arises as a singular centre of awareness and agency: an enfoldment, at some particular nexus within it, of the generative potential that is life itself” (Ingold 2000: 19). In relation to J.J. Gibson’s ecological psychology he states that “the world emerges with its properties alongside the emergence of the perceiver in person, against the background of involved activity” (*ibid.*: 168). He calls this view the “dwelling perspective” (*ibid.*: 172-88).

multiplicity. That “the environment” is a relative term (Ingold 2000: 20) should not be taken to *imply* the general indivisibility of the organism-environment relation. Regarding the environment Ingold qualifies the above statement about indivisibility by saying that “the environment is never complete”; it is “continually under construction” through the activities of the organism; the organism is also, in its way, “under construction”. Thus he thinks that the organism and its environment do not constitute “a bounded entity but a *process* in real time” (*ibid.*). What I object to is the single little word “*a*”, which here inevitably connotes a unity which is not there, as I see it. The mutual construction of an organism and its environment is not *a* process, but they are both the results and producers of many processes, only some of which can meaningfully be said to be party to any “organism-environment totality” in a unitive sense. Furthermore, it is *the organism*, and *not* its environment, that has to work incessantly to keep up *its* unity in the face of many dangers. Within this activity the relational dependency on the immediate environment is there on account of the organism’s activities; *i e*, the unity is a property of the “organism side” of the relation only. This is how I read Lewontin’s (2000: 48) designation of the organism as *a center*. The environment is not a center. It remains a manifold at all times.

In other words, even though the concept of environment requires the concept of organism, the actual total environment of any organism far transcends its comprehension, perceptually and, as the case may be, cognitively. Here everything hinges on just what one means when using the term “environment”. Ingold practically identifies it with J. von Uexküll’s Umwelt concept (which seems to have been seminal to Heidegger’s “being-in-the-world”; see Harrington 1996: 53), although he notes (Ingold 2000: 176) that von Uexküll himself makes a distinction between Umwelt and the wider (physical) environment. According to von Uexküll & Kriszat (1983: 11) the fundamental statement of the *Umweltlebre* (a precursor of modern ethology as it were) is that “all animal subjects, the most simple as well as the most complex, are equally perfectly fitted into their environments [*Umwelten*].<sup>63</sup> To the simple animal corresponds a simple environment,

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63 “Umwelt”, although originally a German word, is by now the internationally adopted term for von Uexküll’s particular way of envisaging of the organism-

to the complex an equally rich environment.”<sup>64</sup> In other words Umwelt (*i e.*, “environment” *in this particular sense*) connotes exactly a unity between the organism and the aspects of the total environment *that it apprehends*. Furthermore: “The animal’s Umwelt [...] is only a section of the environment [*Umgebung*] that we see spread around the animal – and this environment is nothing else but our own human Umwelt” (*ibid.*: 15). This last remark is very significant and reveals the nature of von Uexküll’s Umwelt/environment distinction; it is a distinction *internal to our Umwelt* as observers and thinkers, not an objective distinction. According to von Uexküll, just as little as the tick knows anything about the wider context of the smell it responds to, just as little do we know anything about the wider context of the *Merkezeichen* (“mark signs”) we are perceiving and acting upon. These signs exist, according to von Uexküll’s conception, only within our Umwelt and not anywhere else (see further below). In other words the Umwelt, however wide and deep, is always a subjective world the objects of which are only signs, and of the “real nature” of the “originals” of these signs we know nothing, and cannot know anything. We are perceptually and intellectually *confined* within our Umwelts.

Ingold does not unequivocally go along with this, but in many ways he very much seems to. My position, as we shall see, is – *contra* both von Uexküll and (but only in part) Ingold – that any Umwelt which is not (in the human case) a product of fantasy, really represents (some of) the *actual* wider ecological environment. Consequently the latter is *not* unknowable “as such”, but neither is it to be identified with the Umwelt and hence with the organism. These very basic differences of opinion have, as we shall also see later on in this book,

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environment relation. In its original German context, however, the word itself was the usual word equivalent to “environment” (Sw. *miljö* or *omvärld*), side by side with the more or less synonymous *Umgebung*. (Sw. *omgivning*). I trust the reader to be able to sort it out, in my text and translations, according to context.

Especially in semiotics and to some extent in philosophical biology the Umwelt concept has been discussed rather often in recent times. There exist several different interpretations and emendations of it. A thorough discussion of these in relation to my suggestions is not possible here (only a few comments are made below); as an introduction the reader is referred to *Semiotica* 134, 1/4, (2001).

64 My translation.

very farreaching consequences. As I see it, then, we need to distinguish between, first, the effective environment that inevitably and always is indeed “part” of the organism itself (*i e*, the organism Umwelt), and, secondly, the wider ecological environment which may or may not impinge on the former. The ecological environment may become, as occasion arises, part of the organism Umwelt, but most of former most of the time is outside the latter (*cf* Winter 1998: 125-50). Von Uexküll, while making the distinction indicated (as far as *observed* organisms are concerned), nevertheless maintains that the characteristics of what he calls the *Gegenwelt* of animals and humans (J. von Uexküll 1921: 165-82) – *i e*, the environment *as apprehended*, by their nervous systems by means of “mark signs” – belong to the animal and *not* to the environment “as such”. What creates the environment (in the sense of *Gegenwelt*) of animals, is the innate characteristics of their nervous systems; von Uexküll speaks of species-specific *Baupläne* containing different *Schemata* (“brain tools” ready to respond to fitting stimuli in the outer world).<sup>65</sup> The implication is that to an organism everything outside of the *Gegenwelt*, which it perceives to be its environment is literally unknowable *in principle*. This Kantian subjectivism is virtually indistinguishable from Ingold’s notion of organism-environment unity, and the latter consequently also has a strong subjectivistic tendency.<sup>66</sup>

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65 In his own words: “In der *Gegenwelt* sind die Gegenstände der Umwelt durch *Schemata* vertreten, die je nach dem Organisationsplan des Tieres sehr allgemein gehalten sein und sehr viele Gegenstandsarten zusammen fassen können. Es können die *Schemata* aber auch sehr exklusiv sein und sich nur auf ganz bestimmte Gegenstände beziehen. Die *Schemata* sind kein Produkt der Umwelt, sondern einzelne, durch den Organisationsplan gegebene Werkzeuge des Gehirnes, die immer bereitliegen, um auf passende Reize der Außenwelt in Tätigkeit zu treten. Ihre Anzahl und ihre Auswahl läßt sich nicht aus der Umgebung des Tieres, die wir sehen, erschließen. Sie lassen sich nur aus den Bedürfnissen des Tieres folgern. Wenn die *Schemata* auch räumliche Spiegelbilder der Gegenstände darstellen, so ist dennoch die Form und die Zahl dieser Bilder Eigentümlichkeit des Spiegels und nicht des Gespiegelten.

Die *Schemata* wechseln mit den *Bauplänen* der Tiere. Dadurch ergibt sich eine große Mannigfaltigkeit der *Gegenwelten*, die die gleiche Umgebung darstellen. Denn nicht ist es die Natur, wie man zu sagen pflegt, welche die Tiere zur Anpassung zwingt, sondern es formen im Gegenteil die Tiere sich ihre Natur nach ihren speziellen Bedürfnissen.” [J. von Uexküll 1921: 168-69]



In other words Ingold, in practice and despite occasional caveats, views everything from the “immersed” organism’s point of view. From this, in turn, it follows that he has a tendency to underplay the impact of the ecological environment’s actual multiplicity (*i e*, its intrinsic *non*-unity) on the unitive activities of the organism, and this, as I said, is due to his tendency to conflate the ecological environment with the Umwelt. In sum, Ingold seems to me sometimes to confuse the logical and actual *dependence* of organism and environment, with *the unitive factor* constituted by the organism’s – *not* the environment’s – activities.

To gain a more precise notion of what it is we are dealing with I venture that the following points of Lewontin (2000: 51-64) actually describe how the organism/Umwelt “unifying” is accomplished in the organism’s contact with the wider ecological environment:

1. “Organisms determine which [physical] elements of the external world [what I call the ecological environment] are put together to make their environments [Umwelts] and what the relations are among the elements that are relevant to them” (*ibid.*: 51). This is “determined by the life activities of each species” (*ibid.*: 52).
2. “[O]rganisms not only determine what aspects of the outside world are relevant to them by peculiarities of their shape and metabolism, but they actively construct, in the literal sense of the word, a [physical] world around themselves” (*ibid.*: 54). For example, the atmosphere nearest to a land-living organism is in part a product of the organism itself.

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66 A discordant note is sounded, however, when Ingold speaks of the education of attention: “Placed in specific situations, novices are instructed to feel this, taste that, or watch out for the other thing. Through this fine-tuning of perceptual skills, meanings immanent in the environment [...] are *not so much constructed as discovered*” (Ingold 2000: 22; my emphasis). This can – and should, in my view – be interpreted as saying that there are *two* environments at work here: one (the Umwelt) of the person himself *before* learning something new, and the other the wider environment which is the *source* of the new insight. The former, then, is changed through the person’s becoming aware of something new in the outer world, which results in an altered Umwelt. Ingold’s way of reasoning (in the parts criticized here) seems unnecessarily to blur these distinctions.

3. “[O]rganisms not only determine what is relevant and create a set of physical relations among the relevant aspects of the outer world, but they are in a constant process of altering their environment” (*ibid.*: 55). For example, food “is turned into poisonous waste products by every metabolizing cell”. This consumption is simultaneously a productive act: “living systems are the transformers of materials” (*ibid.*). These transformed materials, in turn, are usually consumed by other organisms. Hence all organisms together at a given location collectively but differentially produce their common living conditions.<sup>67</sup>
4. “[O]rganisms modulate the statistical properties of external conditions [through averaging and rate detection] as those conditions become part of their environment” (*ibid.*: 60). This is because “the relevant aspect of the environment must appear relatively constant to the organism’s physiology, even though there are fluctuations in the external world that produces the materials from which the organism’s environment is constructed” (*ibid.*).
5. “[O]rganisms determine by their biology the actual physical nature of signals from the outside. They transduce one physical signal into quite a different one, and it is the result of the transduction that is perceived by the organism’s functions as an environmental variable” (*ibid.*: 63).

It can be readily seen that all of these points must involve *perceptual* activities of the organism.<sup>68</sup> In fact all of them imply that the essence of *being* an organism is to actively and physically (*i e*, bodily) perceive an environment. The verb “perceive” usually connotes a certain passivity; the perceiver “receives” signals that are, somehow,

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67 Lovelock (1989) has extended this to include the whole planet, which could then be regarded as a kind of meta-organism (by many “orthodox” scientists dismissed as nonsense; cf Cohen & Stewart, 2000: 377-89, for a more nuanced view).

68 We are speaking here primarily of animals, particularly mammals and most particularly humans. Since we are dealing here with human organisms I do not consider any problems that arise in connection with other kinds. With suitable specifications, however, Lewontin’s points (in the context I place them) apply also to plants and micro-organisms (for example, the notion of perception needs to be modified according to what one deals with).

turned into perception. But all of Lewontin's points say unequivocally that this cannot be the case. Perception (in one way or another, and at different organizational levels) is part and parcel of the very engagement of the organism in upholding its integrity, *i e*, in continuing to live and reproduce.<sup>69</sup> This in itself is wholly compatible with Ingold's organism-centered view. Furthermore, the organism's engagement with the world around it, in this intimate sense (Ingold says "enmeshment"; *cf* von Uexküll's "fitted into", *eingepaßt*), cannot be divorced from the physicality of all the "mechanisms" involved, and relegated to some independent mental realm of its own. Consequently, it really makes no sense to separate the "perceived" environment (again in this intimate "Umweltian" sense) from the "physical", or "real" environment. Ingold (2000: 18-19) states flatly: "I do not think we need a separate ecology of mind, distinct from the ecology of energy flows and material exchanges." This is distinct from von Uexküll's line of thinking, and I agree with it as far as we are speaking of organism/Umwelts, but the distinction between the Umwelt and the ecological environment (which I want to uphold) still implies a certain dualism, although not the Cartesian one of mind and matter (see below). Furthermore, I think that human beings should be treated as a special case in some respects (see, especially, Chapter III:3). In the present context we may note that the evident unity between an organism *and its Umwelt* in fact implies – in the wider scheme – multiplicity (or a multiplicity of organism/Umwelt unities), because – point 3 above – each organism/Umwelt is as such constituted, quite literally, by its place in a "food chain", and hence it is more or less in conflict (*cf* Colinvaux 1980: 182ff) with other organism/Umwelts, many of which totally escape its purview yet still influence it.

To sum up: All organisms are unitive (in an integral sense) in their activities and in this they are all of a kind, but at the same time they are all different, which means that when they encounter *one another* they are not, in the actual encounter, "indivisibly total". What we have is a multiplicity of phenomena, some of which are unities unto themselves (organism/Umwelts) while others (*e g*, rocks and rivers)

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69 Von Uexküll's Umwelt concept is also tied to physiological – perceptual and motor – processes (summary in T. von Uexküll 1982: 10ff).

are not. In the context of ecology (in the relational sense employed here), it is the former that are of paramount concern. One could say that a “clash of Umwelts” regularly occurs; for example, one organism is food in another organism’s Umwelt, while inversely the second organism is an enemy in the first’s Umwelt. But they do not relate in this (or that) way *unless they actually encounter one another*. Hence Umwelts are constant as to their uninterrupted presence as such *but not as to their actual contents*. The “place” of these encounters, their arena, is the ecological environment, as distinct from the Umweltian environments. That a given organism’s constitution (*e g*, its perceptual abilities), which is actively upheld, co-determines what *can* constitute its immediate environment (*i e*, become part of its Umwelt) does not mean that the environment co-determines the organism *in the same way*. The relationship is not symmetrical, which it tends to become in Ingold’s conception, as in von Uexküll’s (see next section).

It should be obvious that an organism’s Umwelt is not a matter of what the organism is aware of.<sup>70</sup> What an organism is aware of (in some sense) is an important ingredient in its Umwelt, but the latter cannot be restricted to the former. Consider, for example, the behavior of animals who are at all times potential prey for various predators. They are eternally vigilant. This vigilance is directed at *a potentiality* which may at any moment become actual, but as a behavior it does not – in most cases – presuppose any awareness on the part of the organism, except in the actual encounter. Still this vigilance must be seen as an important aspect of these organisms’ Umwelt construction, and, reciprocally, of the predators’ Umwelt construction as well.<sup>71</sup> Basic physiological functions like breathing are also Umwelt-producing, yet do not require any perceptual or cognitive awareness.

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70 I will not enter into a philosophical discussion on the meaning of awareness. Here I mean by this term only that something is noted as actually present within the perceptual field (by means of sight, smell, hearing etc) of an organism, and is registered (related to) as actually present.

71 I am indebted to M. Moon for this example.

### c. von Uexküll's "Harmony" and "Counterpoint" – Inadequate Ecological Metaphors

I will now turn our attention from the organism as the center of its Umwelt, and discuss its "place" in the wider ecological environment. The criticized conflation of Umwelt and ecological environment leads, as I see it, to an unrealistic view of actual ecological (and social) relationships. Von Uexküll (J. von Uexküll 1982) uses a musical metaphor for comprehending the relationship between organism and environment or, more precisely, between the organism and its Umwelt as *Gegenwelt – i e*, the "objective" world as constructed by the organism's specific physiological characteristics. He writes:

The theory of composition of music can serve as a model; it starts from the fact that at least two tones are needed to make harmony.

We must also look for two factors that form a unit in the examples taken from nature. Therefore we always begin with a subject that finds itself in its Umwelt [...] and we examine its harmonious relationships with individual objects that have appeared as meaning-carriers to the subject. [1982: 52]

This presupposes that both sides of the relationship complement each other and accompany each other in step. This may, in a sense, be the case when the "meaning-factor"<sup>72</sup> is non-organic (as in von Uexküll's example of raindrops running down the grooves of a leaf), but to my mind the situation changes more or less drastically when two or more organisms are "meaning-factors" for each other. Then the "meaning-factor" *acts back* and this acting back is not necessarily "harmonious"; it may be destructive – either to the "meaning-receiver" or to the relationship as such. Certainly, to save von Uexküll's conception on this score, one may have recourse to a "higher harmony" in which what is destructive to individual organisms, or particular relationships, is still subject to some harmonious, but not apparent, master plan. This, however, leads into speculative metaphysics of an order beyond the ken of this book. For the limited

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72 Something in the outer world which, through the peculiarities of the animal's *Bauplan* and *Schemata*, is reacted to as meaningful (important) in some way or other.

purpose of comprehending actions and their consequences in actual contexts, it is clear enough, I think, that von Uexküll's harmony and counterpoint metaphor fails utterly. "Harmony" connotes beauty and well-being, not ugliness and death, so common in the organic world. My objection to von Uexküll on this score is analogous to my criticism of Ingold's concept of the unity between organism and environment. We are speaking here of organism-organism relations, *i e*, of ecology (bracketing the non-organic environment). Ingold's emphasis on organism/person unity, in conjunction with organism/environment unity, leads him to identify ecology with sociality: "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" (Ingold 2000: 4); and: "There can, then, be no radical break between social and ecological relations; rather the former constitute a *subset* of the latter" (*ibid.*: 60). Consequently, to Ingold social relations are also ecological relations and vice versa.<sup>73</sup> Thus when he too uses a musical metaphor for capturing the "dwelling" characteristics of social life this, *mutatis mutandis*, applies also to ecology. He writes, for example:

By watching, listening, perhaps even touching, we continually feel each other's presence in the social environment, at every moment adjusting our movements in response to this ongoing perceptual monitoring. For the orchestral musician, playing an instrument, watching the conductor and listening to one's fellow players are all inseparable aspects of the same process of action: for this reason, the gestures of the performers may be said to *resonate* with each other. In orchestral music, the achievement of resonance – or [...] a 'mutual tuning-in relationship' – is an absolute precondition for successful performance. But the same is true, more generally, of social life [...]. Indeed it could be argued that in the resonance of movement and feeling stemming from people's mutually attentive engagement, in shared contexts of practical activity, lies the very foundation of sociality. [*ibid.*: 196]

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<sup>73</sup> I have no quarrel with this as a general idea (*cf* Chapter III: 3). My purpose in mentioning it here, is only to justify the logic behind my criticism of another point, *wż*, the musical metaphor under discussion.

Given the identification of ecology with sociality this can only mean that a “mutual tuning-in” is “the very foundation” of ecology as well. Again the affinity of von Uexküll and Ingold is apparent and on the issue at hand they can be criticized together. Another assertion of von Uexküll which ties in with his basic musical metaphor is this: “Nothing is left to chance in nature. In every instance a very intimate meaning rule joins the animal and its [physical] medium; they are united in a duet, in which the two partners’ properties are contrapuntally made for each other” (J. von Uexküll 1982: 54). Then he jumps abruptly from animal/medium interactions to a consideration of animal/animal interactions, which clearly shows that he regards them as of a piece. Immediately after the above he writes:

Only extreme disbelievers of meaning as a factor in nature would want to deny that in the functional circle of sex, males and females are made for each other in accordance with meaning. They assert that the love-duet, which is heard throughout the whole living world in thousands of variations, has emerged totally unplanned.

In the case of the love duet of animals and humans, two equal partners face each other, each of whom exists in its Umwelt as a subject and appears as a meaning-receiver, while the role of the meaning-carrier is assigned to the other. [*ibid.*]

One example given of such a “love duet” (note the underlying metaphor of harmony) is the mating of the brown ground-beetle:

The males and females pair off after first hunting together. After mating, the male’s behavior towards the female does not change at all. The female, on the other hand, throws herself upon her mate and ravenously tears him apart with hardly a struggle. In the Umwelt of the female the meaning-carrier ‘friend’ has changed into the meaning-carrier ‘food’ although the structure of the meaning-carrier has not changed in the slightest. [*ibid.*: 55]

Some “love duet” of “equal partners” where one of them ends up being *eaten* by the other! Admittedly, von Uexküll says that the eating sequence is the result of a *new* meaning perception on the part of the female beetle, but to see, in the whole sequence or any artificially

isolated part of it, an example of harmonious counterpoint, is either to stretch the concept of harmony beyond breaking-point, or to engage in grave cynicism. Von Uexküll thinks that people, in principle, act as organisms in their Umwelts in exactly the same way as other living beings; the reader is invited to contemplate the implications of asserting that (all) human actions constitute “harmonious counterpoints” to one another in this fashion. It cannot be said that Ingold’s musical metaphor is identical to von Uexküll’s, but the resemblance is close enough to instil similar misgivings.

#### d. The “Extended” Organism and the Reality of What Is Perceived

I want to preserve what strikes me as true and valuable in the Umwelt concept and, especially, in Ingold’s subject-centered ontology, but at the same time I want to avoid the Kantian subjectivism of the former and the ontological monism of the latter. I am arguing for a realist interpretation and use of the Umwelt concept as against von Uexküll’s own subjectivistic one, and for a certain dualism as against Ingold’s organism-environment unity. What the Umwelt concept and Ingold’s “dwelling perspective” do, is to help us realize that the organism’s boundary cannot in practice be identified with its skin, although the skin is one boundary within the organism/Umwelt entity; the latter as such is “wider” than the skin-enclosed organism itself, the *center* of the total entity. We might say that the organism/Umwelt entity is, as a whole, more or less “extended” in the ecological environment. The organism-and-Umwelt still has *definite limits*, although these are not as visible to an observer as the organismic center, in the shape of a body, is.<sup>74</sup> The Umweltian limits become relatively apparent in the organism’s behavior, however. From a theoretical point of view

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74 In my amendment of the Umwelt concept, therefore, an Umwelt is not only a matter of “subjective experience” as such, but the subject (as organism-and-Umwelt) is *itself*, in practice, literally extended in the ecological environment (although *centered* in the body). Hence I make no distinction between “subjective experience” as such and “physical reality” as such. Every experience has a physical dimension, and every physical occurrence in an ecological environment (defined as primarily relational) has some kind of subjective aspect to it.



this means that the “ontological function” of the “extended” organism-and-Umwelt entity is ecologically equivalent to the corresponding function of the more restricted “skin-bound” organism as conventionally understood. The difference is that the organism-and-Umwelt’s functional boundaries in the world at large (*i e*, in the ecological environment) will have to be drawn in another way than is conventionally done by just locating a body in time and space. Although the Umwelt boundaries may shift according to circumstances, the fact that there *are* boundaries, *i e*, separation and multiplicity, does not change. One interesting difference, however, is that Umwelts, in contrast to bodies, may interpenetrate to a varying extent.

One important consequence of the perspective I argue for is “action at a distance” by the organism/Umwelt entity throughout its life cycle. Recall the example of the eternally vigilant potential prey. This vigilance *means* that the Umwelts of the predators impinge on the Umwelts of their prey, and to some extent vice versa,<sup>75</sup> *also when they do not actually encounter one another* (an example of the interpenetration of Umwelts). This holds whether the predispositions in question are assigned genetic causes (as in Dawkins’, 1989, extended phenotype concept) or not. What is ecologically important is that this “extended” relationship is maintained through *iterated interactions*. Should these cease *the relationship* – and *its* constituent Umwelts – would disappear. (This principle is of fundamental importance to my arguments in subsequent chapters.)

To repeat: It is only *within* an Umwelt that organism and environment are “one” in action – the *organism’s* action. The ecological environment, on its side, has its own reality quite independent of any *particular* Umwelt, but not independent of all Umwelts (since the concept of “environment” requires an organismic center of some kind to come into existence in the first place; *cf* note 61). Now one could construe this in a Kantian fashion and say that the ecological environment is unknowable as such. Thus a distinction is made between the *phenomena* of the Umwelt (von Uexküll’s *Gegenwelt*) and the merely implicit and, as such, unknowable “realities” of the “physi-

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75 The potential prey is (almost always) constantly vigilant but the predator is not constantly hunting.

cal world” (analogously corresponding to Kantian *noumena*). This is not my view, however. What an organism or person comes to know within its Umwelt *is*, I submit, what (a portion of) the ecological environment is *really like*. I can see no a priori valid reason for the strong assumption that what, thanks to the species-specific characteristics of the organism, is “picked up” from the environment is something different or other than what exists in the first place. It *can* be, there is no question about that (there are illusions to reckon with), but why should that *generally* be the case? This is simply an assumption. There is no use in responding to or engaging with a wider environment, if these responses and this engagement do not issue in knowledge of *what* one is having a relationship with.<sup>76</sup>

One’s perception and the consequent Umwelt is colored by one’s interests, and by one’s specific constitution, but these interests and this constitution do not actually create the objects of experience; rather, they assist in one’s becoming aware of the objects as being real. Experiential objects which are not illusions or fantasies have an actually independent existence; they are, in other words, not really mysterious. When perceived they *are what they seem to be*; it is just that they appear differently to different species, and to some extent to different individuals, and the sum of all these different possibilities of perception is *part of the reality of the thing perceived* as well, not just of the perceivers. Its reality is in different ways “co-created”, we might say, by the active perceivers of it, but its actuality is not reducible to these perceptive acts. Consequently, I think it is misleading to stress, like Deely (2001), only one side of the equation. I submit that the reality of Umwelts is inexplicable if they are regarded as

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76 This is quite in line with the realism following from the Darwinian theory of adaptation, although my ultimate premises are different; cf. e.g. Plotkin (1995) who argues for a Darwinian epistemology, and concludes (*ibid.*: 240): “Our sensory data may not be perfect, they may not be complete, and they may not be direct. But the data do bear an element of correspondence to the things-in-themselves.” Furthermore (*ibid.*): “Living creatures survive by exploiting energy sources in the world outside of themselves, and by avoiding events or entities that would destroy them. They do not do this by chance [...]. The success is a result of living things being able successfully to match their own organization to the order of the outside world. That is, they can and do indeed know about the world outside of themselves.”

only or primarily subjective or subjectively constructed.<sup>77</sup> An Umwelt, rather, is the subjective appropriation of what is actually there and, furthermore, of what that is actually like, *in part*.<sup>78</sup> In other words, I would like to rid the Umwelt concept of any *ontological* relativism and subjectivism; *epistemological* relativism, on the other hand, is ubiquitous and unavoidable (but never unlimited), in the sense that the same things can be known in different ways. Whichever way they are known, however, they retain their own basic identity. Otherwise the perceiving of them by beings bent on survival would, as I said, be inexplicable.

Von Uexküll, however, in fact regards the “physical stimulus-givers” (which I locate in the ecological environment) as almost infinitely malleable and hence as not possessing any intrinsic meanings: “the form [*Gestalt*] is never anything else but the product of a plan imprinted on the indifferent materia [*Stoff*] that could have taken another form as well” (J. von Uexküll, quoted in T. von Uexküll 1982: 5). Deely (2001) adopts a somewhat more restricted range of possibilities, but still insists that the different ways in which, *e.g.*, a rose is perceived by different organisms means that *what the rose is* (in itself) *is also different* depending on who is perceiving it and why. Hence, in

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77 I am not saying that Umwelts are not subjective; I am denying that their subjective nature means that they do not correspond to external (ecological) reality as it is, in part. In other words subjectivity and objectivity are different sides of the same reciprocal relationship. Hence there is no need to stress subjectivity over against objectivity or vice versa. They belong together and need one another but they never “mix”, nor are they separate. If this sounds taoistic, that can not be helped.

78 Consequently I do not accept Deely’s (2001: 129) distinction between “object” (within an Umwelt) and “thing” (supposed to “maybe” exist independently). In my view of mutual organismic perception/action object and thing are partly the same, while the thing is also independent – but only of that particular relation, not of all relations. In other words I do not reckon with even a surmised “physical world” independent of experience (by *someone*). Subject and object follow each other *all the way*; there is no “prior” or “outside”, and there is no unity in this world. The question of the ultimate origin of subject/object reality is not my concern here, however. This, obviously, has consequences for how one views the non-organic parts of the ecological environment. Although they are not as such centered in the way organisms are (*cf* note 61), it may be said that they must exist in relation to a *meta*-physical Center or Unitive Principle (*cf* discussions in Chapter III: 3). Here, in other words, I part with a totalized naturalistic ontology.

a sense, *the rose as such does not exist*. This implication is what I object to. Here is how Deely (*ibid.*: 126) puts it:

we see not all colors possible, but only those that, under given conditions of light and shade, fall within the range of our type of eye. Nor is ‘our type of eye’ the only type of eye. That same meadow will appear variegated quite differently to the eye of a bee, a beetle, or a dragonfly, however much we may suppose an underlying common ‘physical’ being which is ‘the same’ no matter who or what species of individual happens to be beholding the meadow. A rose by any other name may still be a rose. But what a rose *is* will not be the same to a bee and to a human suitor. [my emphasis]

And further:

So it is clear that experience, for any organism, does not simply consist of anything that is ‘there’ prior to and independently of the experience, but *only* ‘what is there’ *within* and dependently of experience. [*ibid.*: 128; my emphasis]<sup>79</sup>

As I see it, the last point of the first quotation, to the contrary, does not – cannot – mean that there are “different roses” but only that the comprehensive entity we call “rose” is *richer* than we usually think. The different possibilities we may discern (within a discussion such as this) are due to differences in intention, action and perception on the part of different organisms, or different human beings. But all of these presuppose *also* the presence of an *actual* rose, how-

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<sup>79</sup> Deely, like von Uexküll, makes a clear distinction between (raw) sensation and (interpretive) perception, between which signs are inserted (perception “transforms” raw sensation into signs we may say, and it is these *signs* that constitute the world for the organism, not the sensation of physical stimuli). What is experienced, then, is only signs and relations between signs. This view is the basis for semiotics which I, consequently, reject if totalized in this manner. I do not think that reality and what we perceive as reality can be reduced to signs. Signs are signs *of* something, not realities unto themselves (*cf* Chapter III: 3, Section *d* on *symbolizing*). What I am proposing, in other words, is an emendation of the Umwelt concept in the direction of realism rather than nominalism, which I think is the outcome of an exclusively sign-based ontology.

ever different it may appear, and *not only* an “experienced” rose. What becomes “a rose” to humans in experience, is not just some unspecified emitter of indeterminate physical signals to be sensed and *then* interpreted as meaningful “signs” – “a rose” – by perception. What the “signs” *signify* reside also *in the rose*, not just in the perceiver.<sup>80</sup> In other words the total possible reality of this actual rose, is much richer than any particular perception of it will ever reveal.

Furthermore, the rose (like any other living entity) will be more or less affected – directly or indirectly – by any intentional, active perception of it. And how it appears from the point of view of a perceiver, as well as how it can respond, are both co-determined by its *intrinsic* characteristics at the moment of encounter. All organisms attending to one another will be reciprocally affecting and responding to each other, regularly or occasionally. But every specific action and every specific response will be limited to the aspect(s) of the involved total realities in which both interactors *share*. The total realities are, in any actual encounter, only partly actualized. Consequently, every actual ecological occurrence is surrounded by a “cloud of potentialities” (in principle possible occurrences which did not occur in a given situation), stemming from the respective intrinsic properties of the beings encountering one another, and of the properties that are *co-determined* by other potential relationships. How much (or what) of all this potentiality is subjectively revealed to a given participator, depends on its perceptual state at that moment (*i e*, in effect, its state of being; it can be sleeping or awake, searching or resting, dreaming or thinking etc). Hence there is a difference between limited subjective realities and the total (of particular encounters independent) reality, which includes all potentialities. These potentialities are not mathematically infinite, however, since they depend on each organism’s intrinsic characteristics, and these – apart from being co-determined – are restricted in line with the specific nature of each.

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80 Note that we are here speaking primarily of perception/action and do not explicitly consider the role of language in human Umwelts. The latter creates the *possibility* of a “decoupling of signs” which does not exist without it. As I argue in Chapter III: 3, however, this possibility does *not necessarily* lead to such a decoupling in all cases. Certain linguistic usages, as well, retain their realism.

### e. Genes and Environments

After this I think unavoidable flight into certain deep (some may think too deep) questions of ontology (and even metaphysics),<sup>81</sup> we will now gradually turn our attention to more specific concerns. So far I have discussed organisms as wholes in their own right. In fact, however, the insides of organisms are quite differentiated, as we all know. In particular there exist within each cell the genes specific for that kind of organism. In many ways these genes seem to be a law unto themselves, functioning as they do relatively independently of the succession of actual organisms who harbor them and who are said to be their “phenotypic expressions” or “vehicles” (so, notoriously, by Dawkins 1976). The strong emphasis lately put on genes for comprehending the nature of life also bears on the question of organism–environment relations. What is the role(s) of genes in shaping these? This question cannot be answered in any detailed or comprehensive manner here; even trying to would be presumptuous. What I will do instead is to indicate the way in which I think the “genetic dimension” can be thought of in relation to my basic discussion of the concepts of organism/Umwelt and ecological environment. The main reason for at all bringing up this complex problem is that a certain gene-based view lies behind the opinion we encountered in an earlier chapter, *viz.*, that we who live now are “still”, at heart, Stone Age humans genetically adapted to late Pleistocene environmental conditions (what some call the environment of evolutionary adaptation, or ancestral environment; *e.g.* Tooby & Cosmides 1990). What follows constitutes part of my reasons for rejecting this standpoint. Other more radical reasons have already been indicated, and will be returned to in subsequent chapters.

From the standpoint of evolutionary biology the relationships between genes and environments in the life of an organism are extremely complex. There can, under no circumstances, be any ques-

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81 The reader who has not yet grasped the import and implications of what has just been discussed is excused. These matters will be discussed further and by means of examples in subsequent chapters, so please bear with me. Those so inclined may wish to return to this chapter (especially Sections *b-d*) after perusing the later discussions.

tion of “genes *versus* environment”. The words of evolutionary theorist R.D. Alexander (1987: 7) are clear enough on this:

For many (especially in the social sciences, philosophy, and medicine) biology translates as ‘genetic’ or ‘physiological’, and is contrasted with ‘psychological’, ‘social’, or ‘cultural’. I do not so mean it, and, indeed, I reject these usages. People who have fallen into this erroneous and, I believe, harmful dichotomy are often those who search for ways to alter human behavior. [...] It is understandable that this kind of problem leads them to ask whether or not a behavior is ‘biologically’ determined. But the dichotomy is misleading. Biologists also study what social scientists call ‘psychological’ and ‘cultural’ aspects of behavior, even in nonhuman organisms, and not merely physiological and genetic aspects [...]. Biologists, moreover, have no justification for being more deterministic than others in their view of behavior, or for neglecting ontogenies, plasticity, or psychological, social, and cultural stimuli and causes.

A term preferable to “biology” in this context, Alexander thinks, would be *natural history*: “One aspect of this usage that distinguishes it from the use of ‘biology’ by many nonbiologists is that it explicitly includes environmental as well as genetic effects, and, indeed, it always includes the *interaction* of genes and environment” (*ibid.*).<sup>82</sup>

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82 It should be noted that we are here discussing actual organism/environment interactions, *not* Darwinian explanations for the existence of organisms in the first place. The view we encountered in an earlier chapter, as exemplified by Wilson (1979, 1998) and Dunnell (1996), *viz.*, that culture is kept in a “genetic leash”, really concerns the role of natural selection in the formation of the species-wide characteristics that are said to have emerged during the course of the evolution of *Homo sapiens*. It is thus not directly connected to the gene-environment question in regard to actual organisms. Phylogeny and ontogeny must not be confused; they are phenomena of different orders and kinds. Alexander (1987: 13-20) makes a useful distinction between *ultimate* and *proximate* causes. The identification of ultimate causes answer “How come?”-questions. How can it be that organisms exist? How can it be that different species exist? Proximate causes, on the other hand, concern the actual workings of all relevant factors in the present of living organisms, largely irrespective of the larger “How come?” issues. The ultimate causes, however, are always lurking in the background. They are of “principal” importance. From a Darwinian perspective natural selection as an ultimate cause

The constant interactions between genes and environment do not mean that their correlation is always very tight. One reason is *noise*, which intervenes “between” the genes and the environment. Lewontin (2000: 36f) discusses the consequences of this at the cellular level. Many of the molecules involved in the workings of a cell occur in very small amounts. Molecules necessary for cell metabolism

are differentially concentrated in different parts of the cell and the cell machinery depends on movement of molecules to meet each other for reactions. [...] [These processes] take time and occupy space [...].

The consequence [...] is that there is considerable variation from cell to cell in the rate and number of molecules that are synthesized. This becomes manifest in the time that it takes for cells to divide or migrate during development. [*ibid.*: 36]

A relatively simple case of this can be observed in genetically identical bacteria cultured in identical culture conditions. Here the mass of bacteria does not grow in pulses, as would be theoretically expected (because they are genetically identical and hence, one would think, should divide at the same time in the same environmental conditions), but continuously, since because of the mentioned random variations they actually divide at different times. Lewontin notes that “the same phenomenon occurs in the development of multicellular organisms”, and indeed

[s]uch random processes must underlie a great deal of the variation observed between organisms, *including variation of their central nervous systems*.

A leading current theory of the development of the brain, the selective theory, is that neurons form random connections by random growth during development. Those connections that are rein-

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can never be escaped in the long run, which is Wilson’s point, except by changing the stakes, which others (*e.g.* Dennett 1996) think has occurred in the case of human culture; Dennett, too, however, holds on to the universality of the principles of natural selection as a paramount causal factor, ultimately speaking, but he does not tie these exclusively to genes.



forced from external inputs during neural development are stabilized, while the others decay and disappear. But the connections must be randomly formed before they can be stabilized by experience. Such a process of neural development could give rise to differences in cognitive function that were biological and anatomically innate, yet neither genetic nor environmental. [*ibid.*: 37-38; my emphasis; cf Edelman 1989, and Elman *et al.* 1998]

While the position cited is still in the realm of specialist controversy, the detailed (and definitely respected) arguing for it in itself shows unequivocally that gene-organism-environment relationships are not at all straightforward,<sup>83</sup> which is all we need here. The “fit” between genes, organism, and environment is never perfect. Hence they are not *a* unit although they constantly *tend* towards unity, because of the activities, the impetus one might say, of the organism as an ecological agent.

A very important consequence of the above is the relatively independent ontological position of organisms as wholes. They are *not* just conduits relaying and phenotypically manifesting the results of genetic selection by environments over time, as “Ultra-Darwinism” (Eldredge 1996) would have it. Goodwin (1994: 104) puts it well I think:

The great insight of evolutionary theory is that organismic life-cycles undergo hereditary changes that depend on a dynamic balance between influences internal and external to organisms, rates of change in populations being dependent on these influences acting on constituent members of the population. The limitations arise [...] from a failure to recognize the organism as an active agent with its own organizational principles, imposed between the genes and the environment. Organisms both select and alter their environments, and their intrinsic dynamic organization limits the hereditary changes that are possible, so that the variety available for evolution [Darwinian selection] is restricted.

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83 Cf Stewart & Cohen (1997: 63-76) on “Ant Country” – the *gap* between the top down and bottom up perspectives on any natural occurrence, a causal “region” where what happens is radically indeterminable (albeit not strictly random).

Goodwin thinks that organisms are, as such, subject to a set of rules (laws of form) independent of natural selection. Hence the “noise” discussed by Lewontin is not all random; its randomness is, rather, epigenetically “channelled” in specific directions (see Goodwin 1995). This explains the conservative nature of species – who are, after all, made up of actual organisms, not theoretically postulated genes.

Finally, it must be emphasized as to genetic differences between organisms it is vital to distinguish between

- 1) the view that the genotype determines the basic characteristics (possibilities) of an organism’s environment (Umwelt) by giving it its species-specific characteristics, and
- 2) the notion that its genes determine the whole development and many or most of the actions of the organism.

The first conception is true, but the second is false and the first in no way implies the second. Confusion regarding this is a, perhaps *the*, major hindrance for resolving the infected “nature versus nurture” debate.

#### **f. Pivotal Organisms: A Heuristic Ontology of Ecological Relations**

Genes, cells and organisms, then, may be characterized as linked but also relatively independent “subsystems” within a larger differentiated whole. Interactions within each subsystem is different in kind from the interactions between subsystems. The “subsystems” mentioned are, in Darwinian evolutionary theory, also designated as *units of selection*, which is another way of saying that they are (or can be, depending on circumstances and, to some extent, on perspective; cf Hull 2001: 23f) relatively independent in relation to each other. Genes, cells and organisms, in the words of Michod (1999: 133)

do not exist in complete isolation, nor are they completely interdependent. Instead, they are embedded in a hierarchy of nested but partially decoupled levels, and any focal level provides both the context for lower-level units and the components for higher-level ones. Because evolutionary units (genes included) play the roles of both

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## The Problem of Environment, I: The Human Organism

context and component at the same time, the dynamics of design at any level involves an interplay between the dynamics at all levels.

The use of the term “level” here can, however, be confusing. In a way the “subsystems” occur on different spatio-temporal scales (which can be envisaged as “levels”), but it is often misleading to speak here of levels or scales, which are or imply quantitative concepts. There exist numerous pathways by means of which events at very small scales (and hence at a different “level” than those at a larger scale) effectively and directly influence events at a much larger scale, and vice versa. Just think of how a few molecules of a potent poison will kill a large multicellular organism very quickly; or how sudden fright will trigger a rush of adrenalin, instantaneously produced by cellular mechanisms. The “sub-” of “subsystems”, therefore, does not in practice mean that genes are “below” cells which are “below” the organism, but only that they are all functionally “sub-” in different ways, in relation to the larger whole of which they form parts. *None is really subservient*; the whole is irreducible but not diffuse. The larger whole in question (whether historically or ecologically conceived) is, I submit, focused around organisms as actively perceiving/cognizing entities (“pivotal” agents). Even though pivotal, however, organisms are not kings in worlds of their own. So, what are organisms most closely “sub-” in relation to? One answer is: the population of fellow organisms belonging to the same species. But we need to proceed carefully here. This population is in many but not all species very much dispersed in time and space. The nature of the interactions within the population are of a different kind than the nature of the interactions between cells *in* an organism. The latter are, in most cases, much more severely policed, by the “level” of the organismic unit as a whole, than the latter is, by the other members of the population of similar organisms.<sup>84</sup> The population is a much “cloudier” entity than the organism. Furthermore, since the population of one species is spatiotemporally distributed among populations of *other* species, in this arena the relationships are more

84 There seem to exist exceptions to this. Societies of ants may be one such, but this does not alter the nature of the general problem; in a way it may make more sense to speak of an ant society as *an* organism rather than as a population of organisms.

*ecological* than organismic, so to speak. In other words populations, whether of one or of several species, are multiple and disparate rather than unitive. I have emphasized this in the distinction between Umwelt (belonging to the organism) and ecological environment (which is of a different, “transcendent” order). In most cases (or perhaps all, depending on how one categorizes some organisms), therefore, the organism is “sub-” in relation to the ecological context in a way *different* from the way in which the cell is “sub-” in relation to the organism. If ecological “systems” are “wholes” they are wholes of a very different kind than organisms, which is one more reason why Umwelt cannot be identical to ecological environment, although the former represents aspects of the latter.

Now let us contemplate an ontological, graphically presented heuristic device which summarizes much of what has been said or implied already. In Figure 1, we see what can be called the generative (vertical) dimension represented by hatched lines. These lines represent the flow of genes through time, travelling *through particular organisms* (represented by round dots).<sup>85</sup> These are generated partly by internal processes, partly by external influences. They are active as wholly integrated, perceptually/cognitively functioning entities. To survive, organisms have to track relevant changes in their immediate environment in real time, something which the genes cannot do by themselves. The genes, in other words, are as much at the mercy of organisms as vice versa.

The ecological (horizontal) dimension,<sup>86</sup> then, emerges contingently through the iterated behavioral interactions (represented by double-pointed arrows) between particular organisms of different species occurring in proximity to one another.<sup>87</sup> Thus, it can be seen that the organisms are really functional nodes at the “interfaces”

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85 To be accurate the dots and the lines in the figure represent, if the species is sexual, the interbreeding parties of a population whose offspring has survived to reproduce in turn. The point remains the same regardless, however, since nothing of what is said changes in principle if the dots are “magnified” to reveal the “actual” organisms. What is not seen in the representation is the organisms that die before they reproduce. The latter have to be kept in mind though, as is stressed in the text.

86 The reader is asked to imagine a spatial dimension “into” the picture as well.

87 As for these different dimensions of respectively genetic and ecological change, cf. Eldredge (1985) and Brooks & Wiley (1988).

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## The Problem of Environment, I: The Human Organism

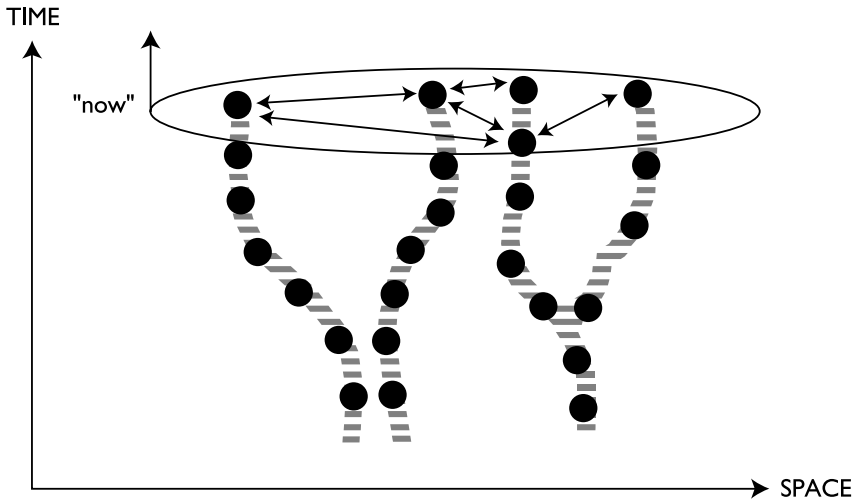


Figure 1.

between the generative (vertical) and ecological (horizontal) dimensions. It is also evident that genes never exist in any sense outside of their organismic context even though they, as abstractly conceived genealogical lines, seem restricted to the vertical dimension.<sup>88</sup> The

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88 As is well known this abstraction has been promoted as the basic truth of biological history, notably by R. Dawkins – *eg* (1995) in his metaphor of a river of DNA (*ibid.*: 4): “[The river of DNA] is a river of information, not a river of bones and tissues: a river of abstract instructions for building bodies, not a river of solid bodies themselves. The information passes through bodies and affects them, but it is not affected by them on its way through.” But of course “the DNA river” is affected! Anything which ecologically affects phenotypes (even those who do not reproduce), and anything that the phenotypes themselves might do, affects the genes in their journey through time. The flow of genes, which *always passes through* organisms, must, consequently, itself be dispersed and located in space as well as in time – despite Dawkins’ claim: “The river of my title is a river of DNA, and it flows through time, not space” (*ibid.*). This statement is really quite incomprehensible and seems to issue from dogmatic inference rather than fact, because the minute one realizes that DNA is dispersed in space, the whole idea of DNA not being affected by what occurs in this actual space (which is the space of all organisms, including non-ancestors) becomes absurd. Dawkins is himself led to stating simultaneously that “[t]he river of genes flows in time, but the physical repartnering of genes takes place in solid bodies, and bodies occupy a location in space” (*ibid.*: 6). Within Dawkins’ own scheme this amounts to a self-contradiction, which can be easily avoided if one refrains from unduly separating genotypes from pheno-

organisms, however, are not so restricted (being *both* “vertical” and “horizontal”), and, consequently, neither can the genes be in reality.<sup>89</sup> As we see, then, ecological relations are always current, while the genealogical lines are in fact a theoretical abstraction, since they have *never* been as context free as they appear in “retrospect” (*cf* Ingold 2000: 132-51).

This means that organisms, and nothing else, are the products *and* producers of two simultaneous but functionally quite different kinds of processes (the generative and the ecological), in addition to constituting in themselves a third kind of process – an actively perceptual/cognitive one. The organisms themselves, as by no means passive agents, contribute to shaping the statistical probabilities (at all “levels”) of the future. This includes many of the activities of future *non-ancestors* (*i e*, organisms that die before they reproduce). That most organisms die before they get a chance to reproduce is vital to the ecological dimension and thus also to the generative one. *All* organisms, as ecologically *active*, shape what goes on. They all work very hard to *stop* food and information from moving freely (Colinvaux 1980: 182ff); their nodal functional position does not mean that they are mere conduits. From this I conclude that *the “organism-as-such” factor is an irreducible phenomenon*, and that its foremost attributes are feeding and perception/cognition, broadly speaking (*cf* Winter 1998: 125-50). This concurs with the way I have defined organisms – not in terms of their spatiotemporal bodily locations, but in terms of their total “Umweltian” relationships with other organism/Umwelts, in the common ecological environment. This means that the character of organisms is basically one of mind rather than body. The body is more like a focus for what are basically “minding” activities, rather than a thing.

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types (really: organisms) in the first place; they are different but not separate. The only reason for separating them anyway seems to me to be that the theoretical (mathematical) treatment of changes in populations becomes much simpler if one can treat genes as “pure information”. In this way one avoids the intrinsic messiness of actual living entities in their actual surroundings. Sometimes this seems to work quite well, for purely pragmatic purposes. But in other cases it fatally distorts our comprehension.

89 The concept of the vertical/horizontal organism/Umwelts may be related to Ingold’s concept of *taskscape* (Ingold 2000: 194-200), to be discussed in Ch. III: 2.

## The Problem of Environment, 2: Artifacts

### a. Prelude

In the last chapter I have discussed matters that human beings to varying extents share with other creatures. The conditions outlined there are present and operative in all human-environmental interactions, but how they work out depends also on other factors that put human beings in a unique ontological position. One of these factors, perhaps the most basic outwardly and one particularly important to archaeology, is human-artifact relations. Questions of the nature of artifacts and the archaeological record (consisting to a large extent of physical artifacts or parts of such artifacts) are, understandably, much debated within archaeology, both in detail and in more general terms (*e.g.* Binford 1983, Schiffer 1987, 1999, Thomas 1999b, Tilley 1999, and many others). I do not propose to enter into those debates directly (*i.e.* from the standpoint of various archaeological concerns), but I will proceed to discuss artifacts from the ontological perspective I am in the process of articulating. From this perspective it is clear that anything which regularly moves across the Umwelt/ecological environment boundary (has its existence in both realms, so to speak) will be of special interest. Artifacts, I will argue, have this quality to a high degree. For this reason the nature of their socioecological dynamics, as hypothesized here, may serve as a paradigm case of how, and why, the conventional borders between mind and body, inner and outer, culture and nature, society and ecology cannot be upheld. Artifacts are so obviously human in origin yet they also, in their continued socioecological existence, more or less transcend the awareness and concern of individual humans.

Thinking in general about the production and use of artifacts is intimately tied to our notion of mind, of what a mind is and where

minds are located. In truth, the concepts of “mind” and of “artifact” are both highly problematic. Mind has received by far the most attention and it is impossible to keep track of the flood of publications dealing with it. Artifact is much less popular. The relatively new field of cognitive archaeology (*e.g.*, Renfrew & Zubrow 1994) is particularly focused around the mind/artifact interface and aims at understanding “the ancient mind” via artifactual remains, studied from various angles. As far as I have been able to determine, however (I certainly do not claim any encyclopedic knowledge), the concept of mind employed in such studies is, basically, quite conventional and the concept of artifact has seldom been problematized *in relation* to a reciprocal problematization of the concept of mind.

## b. The Conventional Artifact Concept and Its Limitations

The concept of artifact, then, is *itself* rarely regarded as problematical; it is as if it were rather self-evident what “an artifact” is. I think that this prejudgment is a serious mistake. Renfrew & Bahn (1997: 369) define “cognitive archaeology” as “the study of past ways of thought from material remains”. This, however, has not led them to revise their definition of “artifact” as “portable man-made object” (*ibid.*: 45-46). At the same time they state that “artifacts provide crucial evidence to help us answer all the key questions” of archaeology (*ibid.*: 45). How can artifacts *do* that? The concept of man as maker posits an influence in one direction only, from the mind/brain to the artifact – which archaeologists in their interpretations then try to reverse, assuming that artifacts “reflect” the brain/mind of the maker. This view ignores what might occur in the other direction, *i.e.*, the possibility that artifacts not merely mirror but *actively shape* the organic mind. This possibility cannot be appreciated properly unless the very concept of artifact is revised to take it into account.

The conventional line of reasoning, then, is that since artifacts were made by humans they must somehow “reflect” something of the thoughts and habits of their makers. The assumption here is of a fairly direct, one-way relationship between an artificial object and its maker. But is this assumption generally valid? One question which I think has not received enough attention is: Given that there exists a



relationship between maker and artifact (it would be hard to deny that), what can the actual nature of this relationship be in a socioecological context, in which every new individual enters into a social and artifactual ambience that *already exists*?

I contend that this question cannot be answered adequately if we entertain the conventional artifact concept. First, then, this will have to be criticized. I will do this by means of a critical examination of a philosophical analysis of it (Hilpinen 1993), which makes use of the concepts of *making* and *authorship* as basic.<sup>90</sup> Hilpinen uses the word “author” in its old sense meaning, roughly, “person consciously giving rise to or originating something else”. He further restricts the term authorship “to the relationship between an agent (or a person) and the *intended* products of his actions”, *i e*, artifacts. Author and artifact, then, are correlative concepts; something is an artifact if and only if it was intentionally made by an author. This means that a finished flint axe, for example, is an artifact, strictly speaking, while the debitage also produced in the process of making it is not.

The *content* of an author’s intention is “some description of an object or some ‘concept’ under which the intended object is conceived” (*ibid.*: 157). Consequently, “the intention ‘ties’ to the object a number of descriptions (concepts or predicates); such descriptions define its *intended properties*. The object’s existence, as well as some of its properties, are causally dependent on the author’s intention” (*ibid.*). The gist of this reasoning is the same as that of Dasgupta (1996: 4) who states that “technology is concerned with the invention of artifactual forms – an activity that entails *human goals, aspirations* and *wants* and their satisfaction”. Speaking of material artifacts Dasgupta notes, following Simon (1981), that they exist at the interface of what Simon calls their outer and inner environments. The *outer* environment of an artifact is the physical environment in which it must reside. This obeys the physical laws of nature, as does the *inner* environment. The latter is constituted by the material of which the artifact is composed – by its physicochemical properties. It also obeys physical laws but in a different way. Given this, one can say

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90 Note that I am not really criticizing Hilpinen; I am just making use of his analysis of the (conventional) artifact concept to make it possible to criticize the latter in more detail, and to see where it is inadequate.

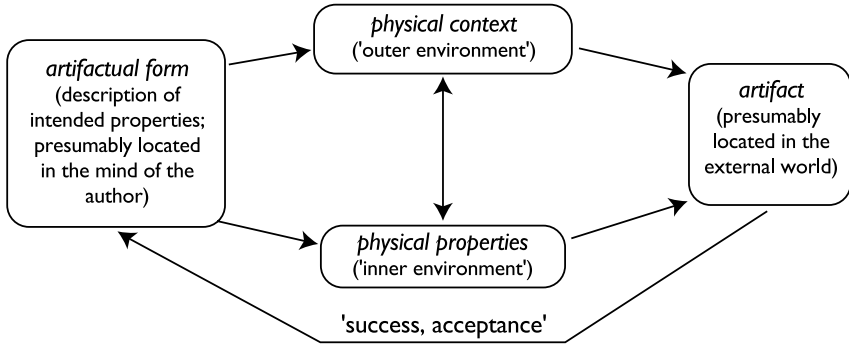


Figure 2.

that the “task of technology is to invent artifactual forms and make artifacts in the image of such forms such that the inner and outer environments of each artifact cohere and cooperate in order to satisfy some given set of human wants” (Dasgupta 1996: 10-11). I submit that what Hilpinen means by “descriptions that define an artifact’s intended properties” is the same as what Dasgupta means by “artifactual forms”. This ties in well with Hilpinen’s stress on the correlative relationship between an author and an artifact. My interpretation of this is illustrated in Figure 2.

Contemplating this figure, it is not readily apparent where the “author” ends and where the “artifact” begins. This does not seem to concern Hilpinen, however, and there is a reason for this. Separating an author’s “description” of the artifact-to-be (its artifactual form) from the actual finished artifact, makes it possible to state that the author, the causative agent, “may experience a *failure* to make what he intended” (Hilpinen 1993: 157). According to my schematic interpretation in Figure 1, what may be at fault is then either the quality of the artifactual form, unanticipated characteristics of or occurrences in the outer environment, unknown or clumsily utilized physicochemical properties of the material used, or some combination of these factors. The mark of a *skilled* author is that he does not fail; a tight correspondence between the form in his mind and the finished artifact is in fact actualized.<sup>91</sup>

91 An alternative but, I think, not necessarily contradictory view of skill has been put forward by Ingold (2000: 339-61). He stresses, more in line with the view I will

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## The Problem of Environment, 2: Artifacts

The next step in Hilpinen's analysis is the contention that at "least one of the descriptions included in an author's intention to make an object must be a description of some object *kind* or *type* (or sort) which the artifact should exemplify" (*ibid.*: 158). This presumably includes a notion of its main uses and of what other artifacts are complementary to it. This quite specific intentional content, then, *guides* the author's production of the artifact, and it also permits him to judge when the intended artifact has been completed to *his* satisfaction. All of this makes the very existence of artifacts (as they actually occur) causally dependent on their authors' individual minds. An artifact, in this view, is the literal realization of *the author's* intentions. To be sure, the embodiment itself (the actual artifact) will also have properties other than those specifically intended by the author, but these are incidental to its artifactuality proper, *i e.*, to its existence as an artifact of the type intended. Still, notes Hilpinen, this does not really distinguish unintentional "artifacts" from intentional artifacts. Debitage from the production of a flint axe has properties dependent on the intention of its author, even though he did not set about knapping in order to produce this debitage. So Hilpinen has to sharpen his definition some more.

He makes this move in several steps, whose outcome is what he calls "Success Conditions", which state that proper authorship requires that the object produced should fit the author's intentions (to some degree) and not merely depend on them. If an author fails in every respect, he does not produce a genuine artifact, but only "scrap" (*ibid.*: 160-61). Here, however, if not before, the wished for clarity of the conventional artifact concept starts to turn turbid. It is not unlikely that the future recipient, seller, buyer, or user of the artifact (of whom the author may or may not be aware) is quite satisfied with the artifact, while the author himself *is not*. If so, the fitness

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articulate I think, that the movement of actually making an artifact, rather than its idea, is what is "truly generative of the object"; the artifact is not "merely revelatory of an object that is already present, in an ideal, conceptual or virtual form, in advance of the process that discloses it" (*ibid.*: 346). This means that the emerging artifact in a way participates in its own making. However, this does not exclude the notion that artifacts *also* embody preconceived ideas; but focusing only on the latter is a half-truth. With this, I think, Ingold would agree (*cf ibid.*: 126, where he writes that items of a certain kind of artifact "*are* thoughts").

(success) of an artifact cannot be determined by referring exclusively to its author, but will have to be located in the wider social context of which both author and artifact are parts, and parts only. Hilpinen is aware of this social aspect of authorship and artifactuality. He notes that “the evaluation of an artifact need not be based on (and limited to) its author’s intentions. [...] artifacts can be reinterpreted in the light of new interests and intentions” (*ibid.*: 164). In effect, however, this could mean that the contents of such a “reinterpretation” (a success and acceptance condition external to the author) need not even be different in kind, *but only in degree* from the author’s own, in order for the causal ties between an author’s intentions and the finished artifact (as actually used) to start getting decidedly less tight. It cannot always be said that the artifact, as it is, is more “tied” to its author than to its user. And if so the mind of the user also has some bearing on the artifact.

As an example, let us ask ourselves: Is the first more or less hand made prototype of a plastic bowl produced by a single designer, a proper artifact in Hilpinen’s terms? Yes, it could be. What about the thousands of copies of “this” bowl produced by a bowl-making machine? What is their connection to the prototype and the postulated “intention” of its author? It is theoretically possible that the designer herself may well have thought of the prototype as partly “scrap” (she did not manage to realize the perfect artifactual form she had in mind) but some executive decided it was good enough and ordered production to be started anyway. Who is then the author, in Hilpinen’s sense, of what *then* became the prototype for the thousands of copies subsequently produced, and this by a *machine*? Not the original designer, surely, but neither the executive, nor the machine constructors. In a sense they were all contributing “authors”, but since their “intentions” were partly at cross-purposes, Hilpinen’s criteria for artifact status break down, and the notion of “author” *itself* (as conventionally understood) seems artificial in this complex context. (The buyers of the bowl would also have to be included, since it was because of them that thousands of copies were made.) All of these factors seem to be too loosely connected to constitute a “collective” author in the way Hilpinen pictures such an entity<sup>92</sup>.

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92 “[T]he authors of a collective artifact form a ‘collective’ in the sense that different

And, on top of that, what in fact constitutes “*the* artifact” here? The prototypical design which the designer deemed to be unsatisfactory? The executive’s intentional decision after having contemplated this design? The bowl-making machine “representing” the bowls it makes? The thousands of copies? I can see no other way out of this dilemma than to state that *all* of these things together constitute “the” artifact in question. But in that case one has to say that “*the*” artifact, if this concept is to be retained, is *extended* in space and time, as well as in several different individual minds. Its comprehensive mode of existence is *not only that of a material object* in the naive sense at all. This example shows that it may be a mistake to try to *specify* and *locate* the correlative notions of author and artifact in the way Hilpinen aims to do, and which is also implicit in the conventional artifact concept.<sup>93</sup>

### c. A Dynamic and Non-Local (Ecological) Artifact Concept

The above considerations indicate tentatively that the conventional artifact concept is just too static and “isolated” to be adequate when social contexts are taken into account. The single-minded question “*What* are artifacts?” and the like will have to be dropped at this point, and replaced by the more seminal question “*What* do artifacts *do*?”. What are their dynamic, interactive, intrusive and unfolding roles in sociocultural processes? This amounts to inquiring into the general character of such processes, and to realizing that somehow artifacts must play an important part in these. A way forward can be found by thinking about an easy-to-understand yet surprisingly complex example. I have borrowed it from Wertsch (1998: 28f), but elaborate on it a little differently.

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authors satisfy the conditions which characterize the relationship between an author and the artifact collectively rather than individually” (Hilpinen 1993: 168). In other words, “the intentions of the different authors should be interdependent” (*ibid.*).

93 Incidentally, the above analysis is not dependent on the assumption that the designer deemed the prototype to be more or less scrap. (This just serves to highlight the need for an alternative perspective.) Even were she happy with it, the decision to mass-produce replicas of it would not have been hers, or hers alone.

Suppose I ask you to solve the following multiplication problem:

$$\begin{array}{r} 876 \\ \times 934 \\ \hline \end{array}$$

Just sitting there, thinking about it, you are probably quite unable to give the correct answer. You just smile and shrug your shoulders. But now suppose that I *demand* an answer, or I will kill you. What will you do? In all likelihood you will produce a piece of paper and a pencil, and proceed to calculate the solution, quite rapidly. You will live after all.

And now for the real question, curiously this time: *Who did the calculation?*

“Why, I did!” you exclaim. No, I tell you, you did not! When I first asked you, you were unable to give an exact answer (approximations will not do when it is a question of life or death). In reality, if you had not been able (or allowed) to produce paper and a pencil, and if you had not learned the arithmetic algorithm of how to solve a multiplication problem in school, you would be dead. Still you *took part* in producing the solution. But only part, and this is the curious thing. Other “agents” in the process of producing an answer were different kinds of artifacts: *paper* (or its functional equivalent), a *pencil* (or other writing implement), a *system of numerical notation* (known as “Arabic numerals”, representing the base ten *number system*), and an *algorithm* (specified step-by-step procedure) for how to set up and solve a multiplication problem on paper.

*Given* all these things, and given your learned skill in using them properly, the correct answer was rapidly and reliably produced. The answer to the question “Who did the calculation?”, then, is that *the whole process of operations* performed by and with the specified items, initiated by you (and, indirectly, by me), did it (Figure 3). In a real and irreducible sense, the mentioned artifacts were *actual participants* in the production of the answer (which itself is an artifact as well). It is just our common egocentricity which makes us think that *we* use them, and that that is all there is to it. Logically, and in actual fact, it could as well be said that *they* “use” us. It is clearly very difficult to separate what you did from what the artifacts at your disposal did, especially since the most important of them were inside your head,

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## The Problem of Environment, 2: Artifacts

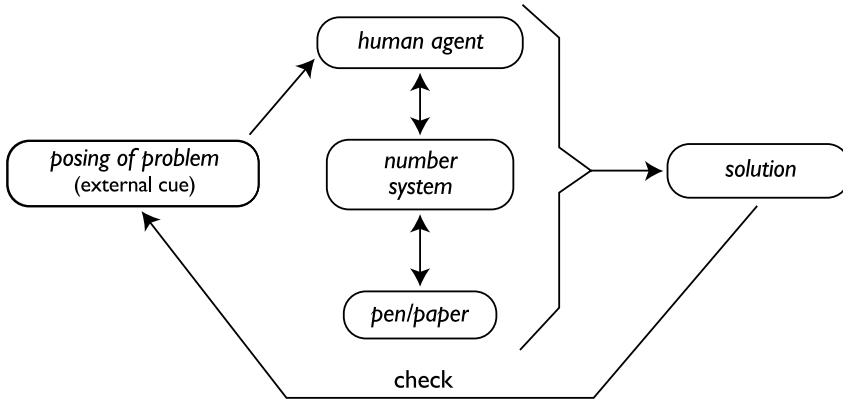


Figure 3.

and only temporarily “realized” in connection with the manipulatory activities. After that the algorithm and the number system receded again into unconscious memory. We should especially note that when it comes to complex problems the multiplication algorithm (although you seem to “carry it with you” all the time) is entirely useless without the physical utensils and their proper use on demand. Thus this algorithm is in reality not a “program” in the brain, but a behavioral sequence (which includes certain mental states, *inseparably tied* to certain physical operations).

Furthermore, there are two different kinds of artifacts involved. There are the material items of paper and pencil, and the physical marks called numerals; and there is the base ten number system, which is non-material. We may call the first kind “material artifacts” and the second kind mental artifacts (*cf* Dasgupta 1996: 10-12). The differences between the two kinds are not as clearcut as they may seem, however. Any material artifact, like a pencil, presupposes an idea in the mind of its user as to what kind of thing it is and what it is for. Thus, an aspect of any material artifact is in fact mental (the function of a pencil could be performed, at least approximately, by some other implement). Similarly with any mental artifact; it is of no use apart from its material implementation. The base ten number system would be impotent without its intimate links to the material signs of Arabic numerals, crucially including zero, “0”. Also, arithmetic itself, as well as other kinds of mathematics, would be incomprehensible without their intimate ties to human physical character-

istics, observations and activities (*cf* Lakoff & Núñez 2000). Consequently, the real distinction between material and mental artifacts lies not in matters of physicality or non-physicality *per se*, but rather in the *relative importance*, respectively, of the material or the mental aspects of the artifact in question (*cf* Cole 1996: 117f). In the case of the pencil, the material aspect is more important; it has to be able to produce physical marks. In the case of the number system, the mental aspect is more important; its real value resides in its imaginative use, in the ideas and combinations of ideas it makes possible.

It is also crucial to take social context into account. The reason *you* were able to perform the operation “you did” – when you solved the multiplication problem above – is that you went to school, where it was deemed *socially necessary* to acquire this knowledge. It is necessary because without both basic and advanced mathematical knowledge and skills, our modern technological society would not work at all. Most of us would not even get any food. So the quip that inability to solve a multiplication problem could prove fatal was not just a joke. If you cannot do it yourself someone else (or some artifact, like an electronic calculator) has to do it for you, and because of this you have survived so far.

What interests Wertsch (1998) in the above example is the humanly active side of the matter, the fact that most human actions are mediated by “tools” of one kind or other. This means, once again, that individual psychology is not enough; one has to take into account the whole ensemble of “individual-operating-with-mediational-means” (*ibid.*: 26). We have seen how this point emerges from the multiplication example. Wertsch then notes in passing that we “might be unaware of how or why [the multiplication algorithm] should work, and we might have no idea about how it emerged in the history of mathematical thought. In this sense, we are unreflective, if not ignorant, consumers of a cultural tool” (*ibid.*: 29). This implies a certain passivity on the human side of the relationship. Now, if we imagine taking the *artifactual* point of view, what would this mean then?

It would reveal a curious ambiguity. If we are often unreflective or even ignorant “consumers of cultural tools”, one can as well say, conversely, that what we do (since we *are* “consumers” of them) is to mediate the “reproduction” or re-use of the artifacts in question, keeping them “alive” and flourishing. Once again, *the artifact* in its



comprehensive, contextual sense, is not just a material object, but rather is *extended* across time and space, and across the inner world/outer world boundary. Every time someone uses a pencil to solve a multiplication problem, the multiplication algorithm is repeated, and the “pool of solutions” to multiplication problems is multiplied. What is more, the artifacts themselves contribute to this process. Hence it makes sense to think of them, as long as they are operative together with their user, as a bounded collective and spatiotemporally extended entity, with definite characteristics *belonging to the artifactual components*, and to which the user *adapts*. There is, as we saw, nothing “passive” about the artifacts’ part of the action, once they are invited to participate. *If* they are invited they almost literally insinuate their “being” *into* the active mind of the problem solver. Her mind and their “mind” are for a short time indistinguishable. Since the problem solver did not herself invent these tools of arithmetic, it must be the case that they have literally entered her mind *from the outside*; hence the “mind” of these artifacts, and the human mind inviting their participation in action, are distinct – yet they merge temporarily during the production of the solution, and important aspects of the artifact are henceforth lodged in memory. (It is not just that a human user, artisan or “author” is skilled; he is skilled *together with* the appropriate artifacts; cf Ingold 2000: 291,<sup>94</sup> *et passim*; Schlanger 1994: 144.) This is exactly what we tend to forget – how intimate and symbiotic our relationships with our artifacts are, and that *this is a two-way process*. Hence we may as well invert Wertsch’s slogan and also speak of “mediational-means-operating-through-individuals”, keeping itself “alive” in the process. The one perspective does not exclude the other, but adopting one or the other leads to different and complementary understandings of what goes on in social processes involving artifacts. Which one is most interesting or adequate depends on the context of inquiry, but one perspective should not be allowed to get totalized at the expense of the other.

All the material and mental artifacts operating together with a human being, *in order to* solve a multiplication problem, can, as I said,

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94 He writes: “skill is not an attribute of the individual body in isolation but of the whole system of relations constituted by the presence of the artisan in his or her environment.”

be regarded as *one* extended entity, as long as it is operative. Clearly the person in question is really just a component of this entity, which is definitely artifactual, but not in the naive sense at all. Henceforth I will call such entities (when operative) *extended artifacts*. We should bear in mind that although the human taking part in the operation of such an extended artifact is, analytically speaking, just a part, she also is quite crucial for *initiating* and *upholding* the “life” of the extended artifact as a whole. So, while the human person – as we saw in Wertsch’s multiplication example – is not the only active ingredient (once the operation of the extended artifact is set in motion), she is still the *animating* center of it all. Keeping all of this in mind, I do not think it would not be too exaggerated to say that the extended artifact (crucially including its human component) has *an Umwelt of its own; i e*, every such extended artifact carries with it *its own unique ambience*,<sup>95</sup> constituted by all its current uses and “actions”, only an aspect of which conjoins with the human being in *her* own Umwelt (which, of course, extends far beyond that of any extended artifact).<sup>96</sup> Consequently, several aspects of the extended artifact entity belong in the wider ecological environment, as well as in the Umwelts of its particular co-users at any given time.<sup>97</sup>

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95 Cf Gell (1998: 20): “Because the attribution of agency rests on the detection of the effects of agency in the causal milieu, rather than an unmediated intuition, it is not paradoxical to understand agency as a factor of the ambience as a whole, a global characteristic of the world of people and things in which we live, rather than as an attribute of the human psyche, exclusively.” And: artifacts “are objective embodiments of the *power or capacity to will their use*, and hence moral entities in themselves” (cf Johansson 1999: 78-83).

96 Although I here, for my theoretical purposes, grammatically ascribe the Umwelts of extended artifacts to their artifactual aspect, it should be obvious that the apprehensions which actually give rise to the extended artifacts’ Umwelts are human. These apprehensions, however, are, to a significant extent, *strictly guided* by the characteristics of the specific artifact kinds involved. Hence the operative Umwelt in all such cases (*i e*, in all cases of specific human-artifact interaction) is *characterized* by the artifactual components, rather than by the human ones.

97 Naturally this way of looking at things (in terms of extended artifacts with human *components* and having *their own* Umwelts) is most useful in relation to artifact kinds of which there exist many singular “manifestations” – things like cars, computers, pencils, books etc. In the case of unique artifacts the perspective still holds, but the ambience (quasi-Umwelt) of such artifacts is severely limited, unless it is of great

To sum up, the perspective outlined means that every artifact (although to hugely varying degrees) is intrinsically socioecological in its very existence, and this ecological status irreducibly includes *both* mental and physical aspects of the artifact in question. Furthermore, the artifact is or becomes an ecological entity by means of being attended to and used by human beings, but *only as long as it is being attended to and used*. As long as it is, however, the extended artifact, in the sense just defined, is as much an agent (co-agent) in the social ecology as is the organic human being. For this reason artifact production and use cannot be reduced to an issue of human authorship, intention, or creativity – although all these things play their part. And since practically every human endeavor includes artifacts of various kinds, it is crucial, when trying to understand human social processes, not to forget the co-agent properties of the extended artifacts occurring in a given context (*cf* Gell 1998). In fact, I would venture that what social scientists call “structures” (*cf* Giddens 1979) are, more often than not, a matter of specific, permanent and/or repetitive human-artifact relationships. Should these change the “structures” change accordingly, wittingly or unwittingly as far as the human actors are concerned.

### d. Pottery as an Extended Artifact

Let us see how these ideas work out in the case of a more material artifact – pottery. The making of a clay pot requires, at a minimum: clay, a potter, some means of firing, and a reason for making the pot (Figure 4). To highlight the analogy with the multiplication example we may speak of a “pot-making algorithm”, if “algorithm” is again interpreted not abstractly but as *embodied skill* working with material means. It is evident that this is not abstractly pre-specified nor located just in the potter’s head, but rather in his continuous interactions with his material and tools, having the purpose of making a pot

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symbolic significance in a general sociocultural ambience (like the crown of a king of old). Such an artifact is in fact, like numbers/numerals, more a mental than a material artifact. (We may already note in passing that mental artifacts, or the mental aspects of artifacts, are intimately tied to symbolism, which will be discussed in the next chapter.)

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Per Johansson

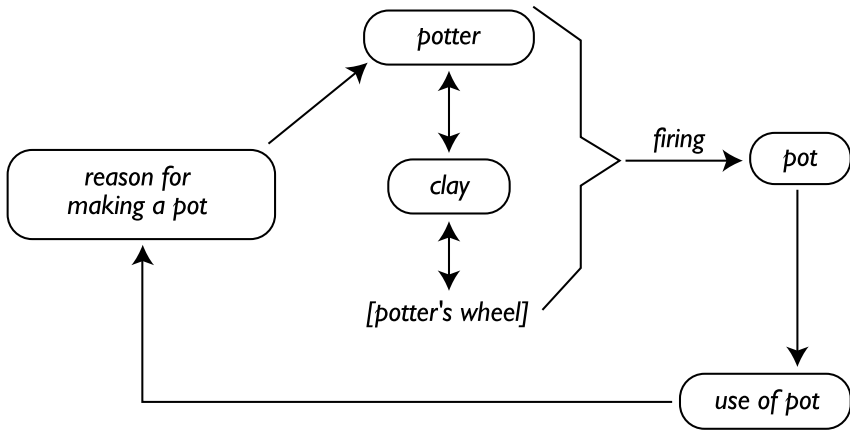


Figure 4.

in mind. But this purpose is not just in *his* mind; it is spread-out in the whole community where pots are used and valued, otherwise there would be no need for a potter. In social contexts, pots may be required for a host of different reasons; however, they can only be *produced* in a limited number of ways. Consequently the pot-making skill as such is relatively independent of the *eventual* use of the pots produced, and it remains so whatever use is made of the pots. Even though its context is always social, it is relatively independent of any *particular* context, except the pot-making context itself, which would usually include masters as well as apprentices.<sup>98</sup> So, social contexts (which may be very different) and pottery technology per se (as a special kind of activity) are different things, even if they are always joined in some fashion.

A related distinction applies to any skilled human-artifact relationship; there is an “in-group” and an “out-group” *in relation to the specific artifact kind*. The in-group is the “place” where the Umwelt of the potters as human beings and the Umwelt of the extended pot artifact are most closely conjoined, *i e*, where the mutual dependence is strongest, and the relationship most “alive”. Properly speaking the potters “give birth” to the extended pot artifact’s Umwelt, *in the act of entering* into a relationship with the artifactual components (some of which are mental, but only realized in connection with the

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98 Cf Section *f*, this chapter.

appropriate material). As pots are then distributed and used in various other contexts, further Umwelt possibilities of the extended pot artifact are realized, when pots enter into the Umwelts of other humans. Seen in the perspective of this larger context, the potter is a crucial *means*, but not the unique originator. If anything, the real “author” is the pot-making tradition as such, which the individual potter has not himself invented but *entered into*, through a period of apprenticeship.<sup>99</sup> The only exceptions to this would be the very first potters, who actually invented pottery.<sup>100</sup>

Each material pot is, in other words, really only one *instance* of a spatiotemporally extended pot-using-and-making “network” of potentially enormous proportions, relative to the individual pot, potter or user. Once a pot has left the kiln, it goes on to participate in inducing whatever thoughts and actions that a pot can induce *in its current cultural context*. The subsequent use of the pots also “feeds back”, in one way or another, to the potter (or some potter), and makes him produce still more pots of the required kind. Thus the extended pottery “network” keeps itself alive, in one fashion or another. What pots or any other artifacts *do*, then, is to capture (and hold, for whatever reason) the attention and imagination of humans and then, to some extent, they structure our cognition and actions in accordance with themselves, analogously to the way in which the multiplication algorithm and its artifactual ingredients did in the earlier example. As long as human attention is held by it, for whatever reason, pottery will continue to exist.<sup>101</sup> If attention wavers significantly or changes its focus completely, pottery (and potters with it) also changes its character or even vanishes. A joint human-artifactual

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99 Cf. Apel (2001: 59): “the makers of the Late Neolithic flint daggers of Scandinavia did not choose to become flint-knappers – they were destined to become flint-knappers.”

100 This, of course, may have occurred more than once. That pottery techniques in a given tradition have been altered or improved by master potters is another matter.

101 In this chapter I concentrate on grasping the more objective dynamics of human-artifact relations. In a wider context, including cosmological and other socially structuring ideas, it appears that material artifacts, like pots, assume symbolizing just as much as mundane functions. The former, therefore, are important aspects of the real socioecological contexts of extended artifacts. (See further in Section *b*, this chapter, and Chapter IV: 1, Section *b*.)

ensemble is thus a kind of *reproductive* system, more or less extended in space and time. If reproduction (reiterated use and production) ceases, the extended artifact as an ecological entity “dies”. Alternatively some new use is found for the material components of it, in which case these are “transformed”; to all intents and purposes they become instances of a *new* extended artifact, even though the material items as such look more or less the same. This is what has happened to stone axes, for example; they are now thoroughly “dead” as to their former senses, and only “live” as curiously resurrected parts of *archaeological* practice, in which they, functionally speaking, are not the same kind of artifact at all, although apparently looking largely the same as before.

### e. A Heuristic Ontology of Artifacts as Extended Entities in Ecological Contexts

At this point it is possible to relate what I have said so far to the heuristic ontological device introduced in Chapter III: 1, Section *f*. In the case of human societies something new (*viz.* artifacts) has entered the Umwelts as well as the ecological environment of human beings, assuming nodal as well as generative functions, analogously to organisms and germ lines respectively. As extended artifacts, they exhibit agency in the horizontal (mainly spatial) dimension, as well as historical continuity in the vertical (mainly temporal) dimension. Figure 5 is similar to Figure 1 but a new component – artifacts – is represented by filled lines. The lines represent the extended character of artifacts, defined and analyzed above.<sup>102</sup> If “magnified” the lines would break up into physically more or less discrete items and instances of use and action, but the pictorial representation is justified on account of the integrated and integrating features of the extended artifacts.

From this heuristic point of view, extended artifacts of all kinds (including mental artifacts like arithmetic, scientific papers or formal organizations) act as social agents and also function *mnemonically*, in that they code historically developed memories and knowl-

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<sup>102</sup>Stewart & Cohen (1997: 243-70) have caught on to this artifactual character of human culture and, quite aptly, call it *extelligence*.

## The Problem of Environment, 2: Artifacts

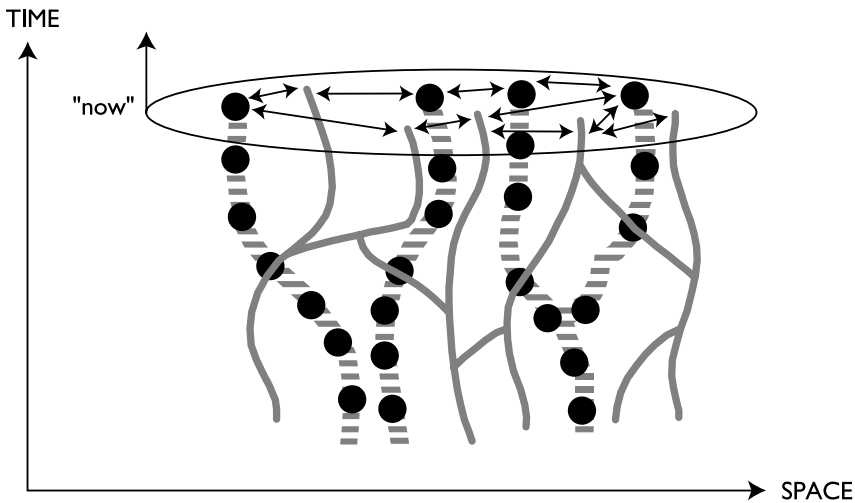


Figure 5.

edge in a form easy of access to subsequent generations. (Stewart & Cohen, 1997: 243-70, have caught on to this partly external, artifactual character of human culture and, quite aptly, call it *extelligence*, complementary yet joined to the intelligence of the organic mind.) Extended artifacts have the property of inducing and/or making possible the remembrance of specific cognitive states and actions (*cf* Carruthers 1998). Through this property they may induce social interactions between persons in specific contexts, interactions which are in fact very much *focused around* artifacts as actual participants in human cognitive and social processes. (Interactions are indicated by double-pointed arrows in the figure.)

Significant portions of the thoughts and activities of human persons (many of whom are dead or unborn at any given moment) are, has been, or will be present to a great extent in the external world (*i e*, in the ecological environment) by means of all kinds of artifacts, which means that significant parts of human cognition are in practice literally distributed or extended in the environment (*cf* Clark 1997, Stewart & Cohen 1997, Cole 1997 and Hutchins 1995). Many artifacts are largely linguistic (*e g*, songs, books, theories), but many others are not, although they may require linguistic competence of their human components in order to operate properly.

From a psychological point of view, one could say that artifacts with which a person is actively and intimately engaged in effect en-

ter into the, more or less conscious, “activity zone” of the person to help constitute his actual Umwelt.<sup>103</sup> The human being becomes literally *involved* with specific environmentally present entities, but in this process she is not, because of this very “involving”, the only active participator but one among several. Against this background the concepts of action, agent, and agency have to be viewed ecologically rather than either mentally or in relation to “structures”. An ecological perspective, in conjunction with the emendation of the Umwelt concept I have proposed, means that who or what in a given situation is an agent (in the sense of actively contributing to the characteristics of the situation), depends on the given circumstances and on the nature of the specific items involved *with each other* in that context. In other contexts, in other socioecological circumstances, the same specific items may assume different roles with respect to their relative agency (or lack of it). Consequently what, in a given social context (of shorter or longer duration), is the main structuring agent behind what actually occurs, is not necessarily always human beings per se. It may be that the human being is peripheral to the joint activity of an ensemble of interactors (such as an extended artifact). After a while the situation may change and a new integral set of interactors comes into play, possibly with different central/peripheral emphases as to which item of the new ensemble it is that now runs the show, so to speak. Gell (1998: 21-23) expresses the

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103 Since this zone develops and changes with age and education, I think it is adequate here to think of something like L.S. Vygotsky’s “zone of proximal development” (e.g. Vygotsky 1978: 84-91); for a noteworthy recent discussion in this vein see Tomasello (1999).

Generally speaking, my stance in some respects, as well as Ingold’s, is in line with what in social psychology is known as activity theory. The foundational names are L. Vygotsky, A.N. Leont’ev and A. Luria (for further connections, see Valsiner & van der Veer 2000; J.V. Wertsch, who we met above, belongs to this school). According to Nardi (1996: 7) activity theory is concerned with understanding “the unity of consciousness and activity”. This unity is “firmly and inextricably embedded in the social matrix of which every person is an organic part” (*ibid.*). If we make the thought experiment of including animals, plants and features of the landscape within the purview of activity theory, we wind up with something akin to Ingold’s “dwelling ontology”. In the words of Nardi (1996: 8) understanding “the interpenetration of the individual, other people, and artifacts in everyday activity is the challenge activity theory has set for itself”.



same idea, I think, in his agent/patient distinction: “with respect to *any given transaction* between ‘agents’ one agent is exercising ‘agency’ while the other is (momentarily) a ‘patient’” (*ibid.*: 22). Even a casual examination of actual situations serves to show that human beings as such are by no means always the, functionally speaking, most determining components in such ensembles, although they are usually crucial components, not least by mentally appropriating – internalizing – properties of the co-active artifacts. In such situations we are very much subsumed under the workings of extended artifactual complexes like, *e.g.* factories or educational curricula.

A human individual, then, is, from this perspective, largely a somewhat shifting amalgam of the different components entering and departing its Umwelt according to circumstance. The amalgamation process itself, however (the Umwelt construction), is possible only because of the nodal ontological position of human beings in the total ecology. This irreducible nodal position, as I see it, presupposes characteristics *of its own* (an “essence” if you will); it cannot be just the net effect of various “outside” causes and influences, although it is that too to varying degrees. Thus there is something to *personhood* that transcends any specific Umwelt/ecological environment relationship and content. The foremost characteristic of persons and, to a lesser degree of organisms *in their nodal position* is, I submit, *consciousness*. Consequently, if this position is irreducible this means that consciousness is an irreducible part of reality.<sup>104</sup>

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<sup>104</sup>This contradicts the idea that consciousness is a latecomer in the basically physical evolution of the world, something emphatically denied in principle by the Darwinian theory of evolution (which is a materialistic theory as far as the basic nature of reality is concerned). The latter position is hard to demonstrate convincingly, however (a recent well known attempt is Dennett 1993). A case for consciousness as in some sense (we are not speaking of it in the medical or everyday sense) an irreducible dimension to reality itself, along with energy and matter, has been made by Chalmers (1996). It is largely based on the ubiquity of information: “We find information everywhere, not just in systems that we standardly take to be conscious. [...] In fact [...] we find information everywhere we find causation. We find causation everywhere, so we find information everywhere.” Furthermore “all information is associated with experience. If so, then it is not just information that is ubiquitous. Experience is ubiquitous too” (*ibid.*: 293). All in all, Chalmers argues cogently, in the face of and using the results of scientific research, that “panpsychism” (not my term) is not as unreasonable as is commonly thought.

One more thing illustrated in the heuristic ontological device is that the agency of many extended artifacts (not all) is, precisely, very much extended in time and space, while the agency of the individual human beings involved with them is *less* so. This puts individual human beings at a certain “disadvantage” in relation to long-standing, extended artifactual entities. When a human enters into joint action with an artifact, she is – for the time being – embedded within the “extended ambience” (Umwelt) of this artifact kind and helps to reproduce *it*. Consequently she is not very “free” in her involvement. And although these two ambiances (of the extended artifact’s Umwelt and the human Umwelt, respectively) may very well “harmonize”, they may also conflict – especially in the long run. This double-sidedness of human-artifact interaction (where the artifact is not passive) is generally not recognized, however, because our focus as individual human actors is – understandably – on what we (only we) are doing and why we are doing it, and not, as a rule, on the larger context – which is probably impossible to comprehend without theoretical tools to guide us.

## f. A Short Note on Chaînes Opératoires and Apprenticeship

More or less clear if limited intuitions of the kind of ontology hypothesized here exist in the archaeological literature, especially in the investigations dealing with the *chaînes opératoires* of artifact production (*cf, e g*, Schlanger 1994; Apel 2001: 22-43). What sticks out in these, from my point of view, is that an important aspect of the practical know-how involved in the skilled production of an artifact, is an intimate “dialogue” with the raw material, *i e*, with the artifact in the process of emerging from the hands of the artisan (*cf* also Ingold 2000: 339-61). During the different production stages the artifact “talks back”, so to speak. That is why such skills can only be acquired through practical experience. Part of the *sapientia* of the human craftsman is in fact “located” in the *faber* of artifact production, *i e*, it is distributed among the human and the (emerging)

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The field of consciousness research is now to some extent a matter of “Dennett versus Chalmers” (as types of positions), and controversy rages.

artifact (*cf* Schlanger 1994: 144). Furthermore, in virtually every case the context of learning such skills is one of apprenticeship (*cf* Apel 2001, Ch 3). The essence of apprenticeship is *submission*: social submission to a master craftsman and practical submission to the material used. These two cannot be separated in practice; they belong intrinsically together. Hence it could be said that the apprentice, the master, the raw material, and the artifacts (in various stages of production) form *one* extended systemic ensemble which is inextricably and simultaneously cognitive, practical, material and social, and this, obviously, is what I have in mind with the concept of “extended artifact”. In line with our earlier analysis, these different aspects can be distinguished but not really separated, *as long as the extended artifact is operative*. In other words, this kind of extended systemic ensemble *is* “systemic” and *works* in unison only at those times when its different components actually come together. At all other times these components are intrinsically separate. Hence what is at one time an extended *entity* is at another time separate *items* (which may then enter into other systemic ensembles).

In other words, the unity of apprentice, master, raw material and artifact is subject to definite limitations in time, space and social context. What I have tried to define as “extended artifacts” *transcend* (in all their ramifications) the context of their production. Therefore it is quite right but may also be misleading to focus our understanding of artifacts on their (immediate) context of production. If there is a tradition of apprenticeship there are also traditions of use, and both the material and the mental aspects of any extended artifact span, and are essential to, all these contexts but not necessarily in the same way in each context.<sup>105</sup> There is much more to any artifact than meets the eye – whatever particular perspective one adopts.

Apel (2001: 45) thinks that “the term ‘apprenticeship’, implies a fairly stratified, chiefdom-like community, in which craft specialisation was institutionalised”. This would mean that such a perspective would not be of much use in Mesolithic or other contexts, in which we are (supposedly) concerned with “non-stratified” hunter-gatherer societies. It also betrays a tendency to regard skilled (read: special-

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<sup>105</sup>This is not intended as a criticism of the *chaînes opératoires* approach; I am only trying to cursorily relate this to wider concerns.

ized) artifact production/craftmanship as the epitome of more “advanced” kinds of sociality. Whether the latter valuation is intentional or unintentional does not really matter, since it clouds understanding either way. Apel is concerned with Scandinavian flint daggers of the period 2350-1500 BC. For that time, and for those particular artifacts in their surmised social contexts, his restriction of the applicability of the term “apprenticeship” does not seem unreasonable. But it is misleading, I think, to generalize our understanding of apprenticeship from that context.

### g. “Taskscape”

Ingold’s already mentioned concept of *taskscape* seems to me to capture much of what I have been saying, although there are certain dissimilarities (disagreements) which it may be illuminating to bring out. A taskscape is a pattern of “dwelling activities” that is intrinsically temporal in its “rhythmic interrelations” (Ingold 2000: 154). The taskscape concept thus combines two notions: *dwelling activities* and *rhythmic interrelations*. On the former Ingold (*ibid.*: 186) writes:

Human children, like the young of many other species, grow up in environments furnished by the work of previous generations, and as they do so they come literally to carry the forms of their dwelling in their bodies – in specific skills, sensibilities and dispositions.<sup>106</sup>

As a result

the landscape is constituted as an enduring record of – and testimony to – the lives and works of past generations who have dwelt within it, and in so doing, have left there something of themselves. [*ibid.*: 189]

An implication of this is that meaning is not something that “covers” the “objective”, physical landscape but something that is intrinsic

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106 (My note): C/Stewart & Cohen (1997: 135-64) on “neural nests”, the “privileged” nurturing contexts within which humans, as well as the members of some animal species, grow up to maturity.

sic to its very constitution. (Note also that, as discussed in relation to the Umwelt concept, *other beings as well* are participatory dwellers in the same landscape.) Here we may quote the following important passage expressing Ingold's "dwelling ontology" (*ibid.*: 409):

to the extent that people dwell in the same world, and are caught up together in the same currents of activity, they can share in the same meanings. Such communion of experience, the awareness of living in a common world of meaningful relations, establishes a foundational level of sociality which exists [...] 'on the hither side of words and concepts', and that constitutes the baseline on which all attempts at verbal communication must subsequently build. For although it is indisputable that verbal conventions are deployed in speech, *such conventions do not come ready made*. They are forever being built up over time, through a cumulative history of past usage: each is a hard-won product of the hazardous efforts of generations of predecessors to make themselves understood. When we speak of the conventional meaning of a word, that history is simply presupposed or, as it were, 'put in brackets', taken as read. And so we are inclined to think of use as founded on convention when, in reality, convention can only be established and held in place through use. Thus to understand how words acquire meaning we have to place them back into that original current of sociality, into the specific contexts of activities and relations in which they are used and to which they contribute. We then realize that, far from deriving their meanings from their attachment to mental concepts which are imposed upon a meaningless world of entities and events 'out there', *words gather their meanings from the relational properties of the world itself*. Every word is a compressed and compacted history.

From a dwelling perspective, then,

[m]eaning is there to be *discovered* in the landscape, if only we knew how to attend to it. Every feature, then, is a potential clue, a key to meaning rather than a vehicle for carrying it. [*ibid.*: 208]

Here the emphasis, besides on "*discovered*", should be placed: "*in the landscape*", rather than: "*in the landscape*", since it is not the lat-

ter as a holistic object with which we are concerned, but rather with the myriad activities which *give rise* to what is called “a landscape”, as a kind of shorthand (in this perspective). The idea of *discovered* meanings can be clearly appreciated in the case of artifacts; we readily acknowledge that any artifact we encounter is meaningful and there for a reason. Similarly the antics of living beings and their traces are also intrinsically meaningful and possible to discover. (Theoretically we have already made this point in the last chapter.) As far as language use is concerned, then, the meanings in question are *expressed* rather than constructed.<sup>107</sup>

When a specific pattern of dwelling activities interrelates, as it always does, with other dwelling activities (not necessarily human ones), these interrelationships are – according to Ingold – of a rhythmical nature and *result*, as I understand him, *in a “taskscape”* (which is really the historical dimension of a landscape; *ibid.*: 189-201). A taskscape is “an array of related activities” (Ingold 2000: 195); hence it is intrinsically temporal. Being temporal and in its nature social, any particular part of a taskscape (which, in effect, is an instance of Umwelt co-construction) is interrelated with all other *present* parts:

the taskscape must be populated with beings who are themselves agents, and who reciprocally ‘act back’ in the process of their own dwelling. In other words, the taskscape exists not just as activity but as *interactivity*. [*ibid.*: 199]<sup>108</sup>

These interactions presuppose that the involved agents “attend to one another” or “*resonate* with each other”, evoking an image of interlocking rhythms of activity: “in social life, there is not just one rhythmic cycle, but a complex interweaving of very many concurrent cycles” (*ibid.*: 197). Thus it would seem that the taskscape (as the temporal aspect of a landscape) is solely a matter of interacting *beings*. Ingold does not want to confine it in this way, however:

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107 This matter is further discussed in the next chapter, Section *d*.

108 And he adds: “there is no reason why the domain of interactivity should be confined to the movements of human beings” (*ibid.*).

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## The Problem of Environment, 2: Artifacts

The rhythms of human activities resonate not only with those of other living beings but also with a whole host of other rhythmic phenomena – the cycles of day and night and of the seasons, the winds, the tides, and so on. [*ibid.*: 200]

And, following the inquiry in this chapter, we may also add the “rhythms” of various extended artifactual systems.

So far so good. In a way, and rightly, the foregoing can be read as an exposition of the state of affairs that I have tried to express by means of the heuristic ontological device discussed above. The “upwardly” moving ellipse (cross-section) in Figure 5, and in the corresponding figure in the last chapter, if “frozen” in contemplation, is part of the landscape, while the different kinds of interactions that at any given moment give rise to this is the taskscape. I too have stressed, like Ingold (2000: 197), that “since any rhythm [sequence of “resonances” or interactions] may be taken as the tempo [impetus-giver] for any of the others, *there is no single, one dimensional strand of time* [sequence of causal connections]” (*my emphasis*). As we have seen, however, unlike Ingold I make a basic distinction between organism (person)/Umwelt and ecological environment, respectively. Some critical consequences of this distinction have already been pointed out in the last chapter. What Figure 5 schematically and symbolically depicts is really the ecological environment *as seen from a transcendent perspective*, not anything of its component Umwelts; thus it refers only to the objective side of landscape/taskscape and not to its subjective aspect. The problem with Ingold’s conception, as I see it, is that it tends to subjectify also what in my view is *non-subjective*, at the same time as it flattens, so to speak, the subjective aspect of reality so that it is *confined to actual dwelling practices*. In Ingold’s scheme nothing can transcend *the very interactions* of taskscape/landscape:

Social life [...] is never finished, and *there are no breaks in it that are not integral to its tensile structure*. [Ingold 2000: 197; *my emphasis*]

Our actions do not transform the world, they are *part and parcel of the world’s transforming itself*. And that is just another way of saying that *they belong to time*. [*ibid.*: 200; *my emphasis*]

Logically, therefore, according to Ingold nothing that humans do and think (and these terms are nearly synonymous in his inquiry) is in any way transcendent in relation to actual, spatio-temporally confined situations.<sup>109</sup> In contrast to this, I think that the ecologically nodal ontological position of human beings is irreducible as to its nature (essence) and that it has characteristics of its own, independently of any given time and location. Metaphorically we could say that this nodal position (humans as centers of agency) *mirrors* a transcendent Center which is their common nature, irrespective of time and place. There is, in other words, a dimension to human life that *is* transcendent in relation to any particular situation, and this dimension is ontologically permanent. It does not change according to circumstances, as our Umwelt does continually, and it makes it possible for us to discuss these things in the first place.

#### **h. Towards an “Animate” View**

So far in this book I have concentrated more on the objective than on the subjective aspect of the matters considered. Clearly, the ontological stance outlined states that the objective and the subjective, body and soul, are really two sides of *the same* reality. As I see things, this does not – all things considered – issue in a simple monism but rather in a dualism different from the modern Cartesian one. I have tried to express the nature of this dualism by making a certain kind of distinction between organism (person)/Umwelt and ecological environment, respectively. This distinction is not between body and soul (or mind) which are both – as aspects of one reality – ubiquitously present in one form or another, but rather between, on the one hand, the particularities of each specific kind of being (epitomized in the concept of Umwelt), and, on the other hand, the wider ecological environment that is constituted by all of these specific Umwelts together, as well as by non-organic things. Now, as I said above, the possibility of making this kind of distinction, and the *ability* to make it (a prerogative of human beings only), imply an

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109 For reasons yet to be explored I think that Ingold’s position here is incongruent with other arguments of his. I will discuss this in the next chapter which deals with personal being or personhood.



ontological position transcendent in relation to this very distinction, which all other creatures are subject to but cannot fathom. In other words, while humans – *as organisms* – are subject to this state of affairs we *also* have the capacity to rise above it and in this capacity we are *human* beings, as distinct from any other creature confined to the situational flow in time. Thus I postulate a second kind of dualism in our case, *viz.*, between the intrinsic temporality of the “taskscape” and a dimension of depth perpendicular to the “flatland” of the taskscape as such (*cf* Abbott 1952). In this depth dimension time as a unidirectional “flow” has no bearing.<sup>110</sup> This view – that there is something in the human mode of being that is not bound to circumstances – not confined to its specific individual Umwelt as centered round a particular physical body – seems to be universally held, except in modern society and culture.

In connection with the notion of taskscape/landscape we noted earlier that Ingold sees this as implying, and I agree, that meaning “is there to be *discovered* in the landscape, if only we knew how to attend to it.” This applies more precisely to any phenomenon *within* what is called “landscape”. Any specific phenomenon we encounter is *intrinsically meaningful*, *i e.*, it is meaningful of its own accord and not just because we attribute meaning to it. (This meaning appears or is revealed, however, only in relationship.) It would seem to follow that behind any encountered phenomenon (whether “natural” or “artificial”) there hides an “intelligence” (in some sense), whether we are capable of appreciating this or not (*cf* Gell 1998: 16f). And this is exactly how non-modern cultures see things. Regarding artifacts Tilley (1996: 247-48) makes the following noteworthy comments:

In our contemporary Western common sense we tend to draw an absolute distinction between a world of persons and their words and a world of things and their attributes. The world of things, or objects, is typically considered to be mute and inert, only animated by persons and their words creating culturally variable systems of mean-

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<sup>110</sup>This may be recognized, loosely speaking, as a kind of “Platonic” view, commonly thought to have been discredited by modern conceptions like Darwinian theory and its cognates (so, *e g.* Dennett 1996). Other scientifically argued positions, however, tell a fundamentally different tale (*e g.* Barbour 2000).

ings. In most small-scale non-industrial societies this separation between persons and things does not hold true. Things or objects may be considered to share the same essences as persons, they may possess “souls”. Objects in circulation help to define and redefine relationships between people and may play an active part in the reproduction of the social order. Persons form parts of things and things form parts of persons so that objects may be personified bodies.

[...] The biographies of things relate to where they come from, who made them and their specific “career” as they pass between persons and memories and stories are built up around them. [...] Focusing on specific objects, we can regard them in terms of having specific biographies, or lives. When we consider classes of artefacts such as the axes and pots [of the Stone Age], we move to a different scale transcending individual biographies and looking more at the typical or ‘ideal’ career of an object and larger historical ebbs and flows of the meanings of things.

Much of this ties in rather well with what I have said above concerning extended, socioecologically active artifacts. Such parallels came as a surprise to me and made me realize that “primitive” conceptions may not be so far out as they superficially appear to be. It occurred to me that it may be possible to discuss the conceptions internal to non-modern, small scale traditional societies in scholarly useful terms which are not totally at odds with these conceptions. I have written of the extended artifacts and of how they generate *Umwelts* (artifactual ambiances) of their own. What if these active artifactual ambiances were *mentally perceived* as agents, on a par with human beings and other creatures, it would not be so very farfetched to call them “souls” or “spirits”. The step to attributing “spirit” to the visible material object(s) *only* (which may be called “fetishism”) would then not be very long, although misplaced in relation to the wider context.

What I have been saying has strong affinities with Gell’s (1998) analysis of art and agency.<sup>111</sup> In his conclusion, entitled *The Extended*

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111 Gell’s detailed and highly interesting analyses arose out of a consideration of “art” from an anthropological perspective. My own much more generally conceived view arose (quite independently of Gell’s) out of a desire to knit together various fields

*Mind*, he expresses his view of old Marquesan art as a “distributed object”. The way he puts this can, I suggest, be applied word for word to the case of TRB type artifacts; in the quotation below I have therefore taken the liberty to replace “Marquesan” or “Marquesan art” with “TRB”, “TRB people” or “TRB artifacts”:

[TRB artifacts], considered as a whole, can be conceptualized, macroscopically, as a ‘distributed object’ in time and space. [...] The corpus of [TRB artifacts] [...] emanates from [no] central executive organization, and has come into being only by historical accretion (and deletion) via a network of social relations [...] over the course of [...] centuries. Except, perhaps, from a stylistic point of view, [TRB artifacts have] only a tenuous unity as a distributed object. It consists of no more than the detritus or exuviae of the once flourishing [artifact] production and circulation system of the [TRB people] now sundered and scattered [...]. All that remain are museum specimens, curiosities in private hands, sketches and drawings, and scholarly texts [...]. None the less, despite this [...] [TRB artifacts retain] an inner integrity of [their] own, as a macroscopic whole rather than as an aggregate of fragments. [...] each [artifact] has passed [...] through a [TRB] mind, and each was directed towards a [TRB] mind.

[...] I do not want to suggest that [TRB artifacts are] the product of a ‘group mind’ or collective consciousness. But [...] I do want to approach, with due caution, the problem of the relationship between the macroscopic characteristics of distributed objects (such as [‘the TRB culture’]) and ‘the mind’ in both the individual and collective sense. [*ibid.*: 221-22]

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of knowledge and experience in terms of ecological relations, with a view to produce a comprehensive ontological stance from which to approach more specialized inquiries. I think that the fact that several authors from very different starting points (and even very different metaphysical principles) home in on related conceptualizations of social/ecological relations, in itself argues strongly in favor of these conceptualizations having a kind of “family resemblance” (Wittgenstein) of great significance – unless of course it can all be explained in terms of genetically inherited brain structures common to us all, which force us to think along certain avenues whether we know it or not (Boyer 2001). Curiously, however, the last possibility also argues for the realism of what is found in this way (*cf* note 77).

Gell (*ibid.*: 222) thinks that “there is *isomorphy of structure* between the cognitive processes we know (from inside) as ‘consciousness’ and the spatiotemporal structures of distributed objects in the artefactual realm”. This idea may be related, I venture, to what I wrote of what I call extended artifacts. As Gell (*ibid.*: 228ff) points out in relation to the so-called Kula system of Melanesia, an acute and imaginative individual mind may also internally simulate the extended characteristics of certain socioecologically active artifact-human ensembles, and thereby gain power over much of the human-artefactual ambiances in question.

I have further argued that the nodal function in socioecological processes which primarily belongs to organisms/persons, can and often is fulfilled also by extended artifacts within which the material artifacts function as foci of attention, and – because of that – as participants in social processes. Virtually the same idea, but not explicitly related to artifacts in this manner,<sup>112</sup> occurs in Collins (1998), another text congruent with the stance articulated here:

We can understand macro-patterns, without reifying them as if they were self-subsisting objects, by seeing the macro as the dynamics of networks, the meshing of chains of local encounters that I call interaction ritual chains.

[...] How is [long-distance linking across situations] done? The impacts of situations both inward and outward are parts of the same process. Intensely focused situations penetrate the individual, forming symbols and emotions which are both the medium and the energy of individual thought and the capital which makes it possible to construct yet further situations in an ongoing chain. [1998: 21]

I would say that the “symbols” and the “capital” most often take some kind of artefactual form, thereby assisting in keeping up the “interaction ritual chain”. This applies equally to Collins’ description of what he means by “interaction ritual” (*ibid.*: 22-23):<sup>113</sup>

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112They are very strongly implied, however; see below.

113It is important to realize that Collins is here not speaking only of “religious rituals” or any other “specialized” kind of ritual, but, rather, of the (necessary) ritual aspect of *any* recurrent communicative situation identifiable as more or less

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## The Problem of Environment, 2: Artifacts

The following are the ingredients of any interaction ritual:

1. a group of at least two people is physically assembled;
2. they focus attention on the same object or action, and each becomes aware that the other is maintaining this focus;
3. they share a common mood or emotion.

At first glance, this seems to miss the core of the usual definition of ‘ritual’ – stereotyped actions such as reciting verbal formulas, singing, making prescribed gestures, and wearing traditional costumes. These are superficial aspects of a formal ritual, which have their social effect only *because they ensure a mutual focus of attention* [my emphasis]. The same focus can occur implicitly in what we may call *natural rituals*. To the extent that these ingredients are sustained, they build up social effects:

4. The mutual focus of attention and the shared mood cumulatively intensify. Bodily motions, speech acts, and vocal micro-frequencies become attuned into a shared rhythm. As micro-coordination becomes intense, *participants are temporarily united in a shared reality* [my emphasis], and experience a boundary or membrane between that situation and whoever is outside it [in my terms: an interpersonal Umwelt is co-constructed and maintained for the duration].

5. As a result, the participants feel they are members of a group, with moral obligations to one another. *Their relationship becomes symbolized by whatever they focused on*<sup>114</sup> *during their ritual interaction* [my emphasis]. Symbols are charged with social meaning by the experience of interaction rituals; and *symbols run down and lose their compelling significance if such encounters are not reenacted within a period of time* [my emphasis]. [...] The survival of symbols, and the creation of new ones, depends on the extent to which groups reassemble periodically. [...]

6. Individuals who participate in IRs are filled with emotional energy, in proportion to the intensity of the interaction. [...] [And:] Encounters have an emotional aftermath; it is by this route that per-

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“the same” over more or less extended time periods. The term “interaction ritual” originally comes from Goffman (1967).

114(My note): It is even partly constituted by this/these focusing object(s), I would say. Remember my earlier statement: the nodal function in socioecological processes which primarily belongs to organisms/persons, can and often is fulfilled also by extended artifacts within which the material artifacts function as foci of attention, and – because of that – as participants in social processes.

sons can pursue their interior lives and their individual trajectories, and yet be shaped by the [ritual] nodes of social interaction.

That Collins relates this to the crucial role of certain artifacts is evident from this remark (*ibid.*: 27):<sup>115</sup> “Intellectuals, as the community uniquely oriented toward writing – those who live for the production and passing on of texts – could only come into existence with the text-distribution structure” (*cf* Ong 1982, Olson 1993). At the same time it holds that “[w]ithout face-to-face rituals, writings and ideas would never be charged up with emotional energy” (*ibid.*). This stress on “emotional energy” is very apposite, and it can, I submit, be connected to what I have said regarding the “Umweltian” character of extended artifacts. By becoming foci of attention material artifacts, through expressing and to some extent embodying human intentions, also symbolize and induce some of the emotional energy that interaction rituals give. The more crucial particular artifacts are to the life of a society or some “sub-society” (like a Book of Law, for example), the more power, the more emotional impact it may seem to have “in itself”.

Since many of the paramount artifacts of any society are primarily but never wholly mental in nature and are reproduced by means of language (the Distant Time stories of the Koyukon,<sup>116</sup> for example, or Darwin’s theory of natural selection), it follows that *symbolism* can not adequately be treated or really understood apart from the constituent Umwelts and local ecological environment of a given society. At the same time the basic principles at work in Umwelt formation in relation to a wider ecological environment is basically the same in all societies; hence both the local and the universal dimension need to be taken into account.<sup>117</sup> There are limits to relativism as well as to universalism. Now, the whole point of this chapter is to bring home the idea that some of these Umwelts and parts of the ecological environment are *not simply human* in themselves (once they are “begotten”) but essentially artifactual. Humans enter into

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115 Collins’ specific subject matter is the social history of philosophical debates in a global perspective.

116 See next chapter.

117 See further in the next chapter.

and depart from the various artifactual ambiances according to the situation, and some ambiances are more encompassing than others – like the Distant Time stories of the Koyukon (see next chapter) or the Darwinian theory of evolution, whose import and impact are far-reaching indeed in their respective societal environments. Such encompassing ambiances (always, I submit, taking the primary form of stories retold over and over again) must – as long as they function as such – be *highly compatible with the other crucial but in their reach more restricted “sub-ambiances”* of particular interaction rituals (to use Goffman’s/Collins’ terminology). We may even say that stories of this dignity actively *make* many restricted ambiances compatible, by coordinating their emotional impetus in a common direction. Darwinism, for example, is highly compatible with the ambiances necessary for and generated by computers and telecommunications, and the collective phenomenon of the Internet (*cf* Dyson 1997), while Distant Time stories or traditional Biblical Christianity are not (*cf* Johansson 1999).

Against this background the “primitive” conception that artifacts (really, the ambiances of extended artifacts) possess “souls” does not seem very far-fetched at all, and I think that it is only proper to interpret the following passage from Ingold (2000: 190) in that light:

Telling a story [...] is not like unfurling a tapestry to cover up the world, it is rather a way of guiding the attention of listeners or readers *into* it. A person who can ‘tell’ is one who is perceptually attuned to picking up information in the environment that others, less skilled in the tasks of perception,<sup>118</sup> might miss, and the teller, in rendering his knowledge explicit, conducts the attention of his audience along the same paths as his own.

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118 (My note): In “perception” must be included, in this case, intellectual insight; *cf* Ingold (*ibid.*: 278): Some kind of distinction is entailed between “the ordinary sight of pre-existing things that comes from moving around in the environment and detecting patterns in the ambient light reflected off its outer surfaces; on the other hand, the revelatory sight experienced at those moments when the world opens up to the perceiver, as though he or she were caught up in the movement of its birth.”

An interpretation of this in terms of intellectual insight presupposes a concept of intellect different from the modern one, which more or less identifies it

As a means of rendering such knowledge explicit, traditional stories constitute the prime medium in what Ong (1982) calls “oral cultures”. Hence it is not unreasonable to attribute some socioecological agency to *the stories themselves* (as extended artifacts). They embody their subject matter in a way that opens up the world (as it is in some respect)<sup>119</sup> to the listener. Consequently the symbolism of the stories is directly connected to the relationships between the people and the environment which the telling of the stories makes intelligible by revealing it. And more than that in certain non-modern contexts: Some stories are themselves “*persons*”. Stories of non-human persons (like the Thunder Bird of the Ojibwa, an other-than-human “grandfather”) take the form of myths and “the myths *are* these persons, who, in the telling, are [...] *actually made present* [...]”. For this reason, the narration of a myth is a ritualised event, and there are restrictions on who can tell it and when it can be told” (Ingold 2000: 92; the last emphasis mine).

I have more to say regarding stories and symbolism at the end of the next chapter. First, however, we must consider how other living beings are considered in many non-modern societies whose Umwelts include living creatures more than material artifacts.

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with the outcome of rational thought. In the experience indicated by Ingold intellection is the source of both being and knowledge; it is the cause not the outcome of thought.

119 One must think here of a kind of realism different from that of more or less literal correspondence between different kinds of statements (observational and theoretical).



## The Problem of Environment, 3: Living Beings and Symbolism

### a. Ubiquitous Personhood

Hitherto I have written in abstract terms of humans as organisms and ecological agents, and of (extended) artifacts as also being ecological agents of a kind, both these categories being in certain ways “spread out” in their wider environment. I have not said anything so far about the way in which human relationships with other living beings are apprehended from within given *Umwelts*. I will now discuss a selection of such conceptual/symbolic ambiances of a non-modern kind. The common characteristics of many traditional conceptions regarding life and cosmos seem well established in studies in anthropology and history of religions. Taken together they indicate a cosmological outlook that we may assume is closer to the way in which Stone Age people apprehended themselves within their environments. What seems to be the most basic cosmological idea may be called “ubiquitous personhood”. As we will see this is in some ways not radically different from the view articulated in the last two chapters regarding the central “ontological place” of organisms/persons.

Consider what the Koyukon of Alaska think. For them humans are, on the one hand, qualitatively different from animals: “Only the human possesses a soul [...] which people say is different from the animals’ spirits. [...] the human soul seems to be less vengeful and it alone enjoys immortality in a special place after death” (Nelson 1983: 20). On the other hand

[t]he Koyukon seem to conceptualize humans and animals as very similar beings. This derives not so much from the animal nature of humans as from the human nature of animals. [...] today’s animals

once belonged to an essentially human society, and [...] transmutations between human and animal form were common. [...]

Animals [...] have a range of emotions, they have distinct personalities, they communicate among themselves, and they understand human behavior and language. They are constantly aware of what people say and do, and their presiding spirits are easily offended by disrespectful behavior. The interaction here is very intense [...]. [*ibid.*]

Furthermore:

All animals, some plants, and some inanimate things have spirits, vaguely conceptualized essences that protect the welfare of their material counterparts. [...] The spirits are not offended when people kill animals and use them, but they insist that these beings (or their remains) be treated with the deference owed to the sources of human life. [*ibid.*: 21-22]

Evidently not only humans and animals have spirits. Interestingly something similar applies to trees and other plants. For the Koyukon the white spruce (*Picea glauca*) and paper birch (*Betula papyrifera*), for example, have powerful spirits who must be duly respected (*ibid.*: 49f, 52f). And

berry plants are considered to have special power because they grow close to the earth and are nurtured directly from it. [...] the most fundamental of all spiritual powers (*sinh taala'*) emanates from the earth's surface. Low growing plants like the berry bushes acquire some of this power, and so they are potentially dangerous. This is especially true in the evening and at night, so people must not gather berries (nor should they pick flowers or harvest any kind of plant) in dusk or darkness. [*ibid.*: 54]

Not only animals and plants have "personal" characteristics but also bodies of water, waterways, winds etc (*e g*, Nelson 1983: 33-46). Regarding another tribe, Ingold remarks that "[f]rom the Cree perspective, personhood [consequently] is not the manifest form of humanity; rather the human is *one of many outward forms of personhood*" (Ingold 2000: 50; my emphasis), and, furthermore, that "personhood,

at root, is the potential to become a man, a goose, or any other of the innumerable forms of animate being” (*ibid.*). Hence “personhood” is in fact a transcendent category in relation to its manifest forms. This implies that we are dealing here not with simple anthropomorphisms, or the “projections” of human qualities onto essentially non-human beings or non-living landscape features, but rather with a “universally person-centered” cosmology.

If compared to the ontology I have been articulating, this seems to say that the special position I have attributed to human beings (compared to other organisms) is in fact *common* to many other creatures and, in addition, to natural landscape features. In other words, the two versions of the “ontological device” (Figures 1 and 5, with commentary) are conflated and no real distinction is made between organisms and persons. Or is it? Another interpretation would be that what I have called organisms are the “outward forms” of transcendent spirits (“persons”). In that case the differences between various organisms is maintained but the transcendent dimension I have reserved for human beings is universalized. This implies that personhood is encountered in *different realms of being* according to whether it is perceived “as such”, we might say, or in any one of its multiple manifestations. There is a mundane world, and there is another world and in reality they interpenetrate each other, but the other world can only be seen for what it is under certain circumstances.

This can be illustrated by means of another example. The Chewong of the Malay rainforest speak of “*rumai*”, which can be understood in three different senses, of increasing “personal intensity” as it were (Howell 1996). First, “all animals and plants have *rumai* in the general sense of being alive” (*ibid.*: 134). Second, there are “personages” who are conscious, have language, reason, intellect and a moral conscience. A *rumai* in this sense may have the outer shape “of gibbon, human, wild pig, frog, rambutan fruit, bamboo leaf, the thunder being, a specific boulder” (*ibid.*: 131) and until “something has revealed itself as a personage, the Chewong have an agnostic attitude to every plant, stone, or moving creature in the forest” (*ibid.*: 136). Third, a *rumai* may be a spirit-guide. Shamans “have many spirit guides and their *rumai* can wander into all worlds, and their ‘cool’ eyes mean that they may see through all deceptions, and see reality for what it

really is” (*ibid.*: 134); consequently, “[w]hether or not a particular species is a personage may, or may not, be visible to the ordinary human ‘hot’ eye, but is always apparent to the ‘cool’ shamanistic one” (*ibid.*: 133). We should note that the same term is used for all of these categories, implying that it is a matter of gradation rather than of absolute distinctions, and that recognizing something as belonging to one or the other “grade” is in important respects a matter of perception and knowledge, *i e.*, of the “state” of the being having a specific encounter.

There are two points here which are of particular significance. First there is the notion that the physical or visible world is, in a very real sense, a manifold cloak which hides *and* reveals a more fundamental reality “behind” it. Howell uses the word “deception”, meaning that an encountered creature is not necessarily what it superficially seems to be. On the other hand the “*ruwai* and its cloak [...] are not truly divisible. Each is constituted through the other” (*ibid.*: 134-35). Only *ruwai* who are adepts (shamans) can temporarily disassociate themselves from their specific cloaks; then “the being sees the world with the eye of the host species, and experiences and senses like them” (*ibid.*: 135). In other words the creatures encountered in the world are precisely what they seem to be yet also, at the same time, “cloaks” of an invisible, transcendent reality which is common to all. There is a difference yet no real distinction between these “modes” of being, a seeming paradox which it is impossible to handle properly within a dichotomistic modern mind-set.

The second point worth noting in the context of our general discussion is stressed by Howell herself: “The forest and everything in it is not ‘nature’. Rather the forest environment constitutes the limits of the Chewong cultural [social] domain and as such a potential for manifestations of personages (*ibid.*: 135). In other words Chewong sociality is, in a sense, as “complex” as the forest itself; “*their social world [...] must be extended to be coexistent both with the forest and with their cosmos*” (*ibid.*: 136; my emphasis).

Århem (1996: 188) writes concerning another people from another continent, the Makuna of the Northwest Amazon, that fundamental to their cosmology and hence their lives

is the distinction between the visible, physical and changing reality of everyday experience and the invisible, unchanging and transcendental realm of gods and ancestral spirits which the Makuna gloss as the *be*-world – the world of the life-giving and predatory *be*-spirits. Every material form and practical activity has its counterpart in the *be*-world. Indeed, material forms and physical operations in the visible world instruct human beings about the hidden reality of the spirit-world, and thus of the deeper significance of existence.

Århem notes that the “Makuna case is far from unique. Remarkably similar traditions abound in the ethnographic record” (*ibid.*: 201). Viveiros de Castro (1998: 471) concurs: “[Cosmological transformism] can also be found [...] in the far north of North America and Asia, as well as amongst hunter-gatherer populations of other parts of the world.” From this it is not even a small step to conclude that what can be recognized as fundamentally the same kind of cosmology is universal, in its essential aspects common to all “aboriginal” peoples everywhere, albeit manifested in different specific forms. Viveiros de Castro (*ibid.*: 472) also notes that “horticulturists [...] *do not differ* much from circumpolar hunters in respect of the cosmological weight conferred on animal predation, spiritual subjectivation of animals and the theory according to which the universe is populated by extra-human intentionalities endowed with their own perspectives” (my emphasis). The common cosmology, therefore, seems to be to some extent independent of specific ecologies and subsistence practices, if we follow Viveiros de Castro (*cf* also Steadman, Palmer & Tilley 1996, regarding the question of universality).

Even more significantly, Viveiros de Castro summarizes the essence of what he, in his particular context, calls “Amerindian perspectivism” as signifying that the “original common condition of both humans and animals is not animality but rather humanity”, and quotes P. Descola, who writes that “the common point of reference for all beings of nature is not humans as a species but rather *humanity as a condition*” (Viveiros de Castro 1998: 472; my emphasis). Clearly this “condition” is transcendent (*meta*-physical) and encompasses, as well as being encompassed by, very much more than what is conceived of in modern humanism. The Koyukon speak of the “Distant Time” (*Kk’adonts’idnee*) “which is so remote that no one can

explain or understand how long ago it really was” (Nelson 1983: 16). This was the original condition of all beings:

During this age ‘the animals were human’ – that is, they had human form, they lived in a human society, and they spoke human (Koyukon) language. At some point in the Distant Time certain humans died and were transformed into animal or plant beings, the species that inhabit Koyukon country today. [*ibid.*]

A central figure in this ancient world was the Raven [...], who was its creator and who engineered many of its metamorphoses. [*ibid.*: 17]

At the end of the Distant Time there was a great catastrophe. The entire earth was covered by a flood, and under the Raven’s supervision a pair of each species went aboard a raft. These plants and animals survived, but when the flood ended they could no longer behave like people. All the Distant Time humans had been killed, and no Raven recreated people in their present form. [*ibid.*]

Significantly, in addition to providing a historical account of what once was,

Distant Time stories also provide the Koyukon with a foundation for understanding the natural world and humanity’s proper relationship to it. When people discuss the plants, animals, or physical environment they often refer to the stories. [*ibid.*: 18]

This *current* significance of Distant Time stories implies that it – in a certain sense – is also a present reality, a transcendent framework which makes sense of life at any point in temporal history. Animals and other beings occasionally *still* reveal themselves to be more than they seem and hence they are (or should be) treated accordingly: “Each animal is far more than what can be seen; it is a personage and a personality, known from its legacy in stories of the Distant Time” (*ibid.*: 31). Consequently,

[t]he Koyukon people live in a world full of signs, directed toward them by the omniscient spirits. The extraordinary power of nature

spirits allows them to reveal or determine future events that will affect humans. This understanding is sometimes divulged to watchful human eyes through the behavior of animals or other natural entities. [*ibid.*: 27]

Reciprocally, the environment “is also sensitive to human behavior, because the natural and human communities originated together in the Distant Time and have never become completely separate” (*ibid.*: 33). In other words, the patterning of life to the circumstances of the living environment in all its manifestations goes far beyond any modern conception of “ecological adaptation”. This patterning is, rather, a matter of relationships between living beings, *i e*, the totality of what we call nature, and which modern Westerners tend to separate themselves from, is actually a vast *society* that includes human beings. This can be appreciated, I submit, in terms of the ontology I have suggested, but of course such a juxtaposition begs a lot of questions, not least in relation to conventional anthropological ways of understanding the cosmologies of non-modern people. So, let us now address this issue.

### b. A Condescending Attitude and Its Problems

The modern way of conceptualizing “man and nature” is conventionally dualistic – we here; nature there. My ontological suggestions constitute one way of overcoming this irrationalism, as does Ingold’s attempt in a somewhat different way. In general, however, it is apparent that the human/nature distinction is firmly maintained although sometimes in rather subtle ways:

Anthropologists [...] [b]y and large [...] adopt an expository strategy not unlike that of the theatre-goer attending a performance of Shakespeare’s *Dream*, amounting to a willing suspension of disbelief. [...] [Their] concern is to understand the world view, not the fundamental nature of reality. [...] Now there is more than a hint of duplicity here. [...] Evidently what [anthropologists take] to be [...] particular cultural construction[s] of an external reality is, in [*e.g.*] Ojibwa eyes, the only reality they know. [Ingold 2000: 95]

In contrast, anthropologists tend, for example

to range [...] peoples' practical-technical interaction with environmental resources in the context of subsistence activities, and their mytho-religious or cosmological construction of the environment in the context of ritual and ceremony. Hunters and gatherers are said to be distinctive, however, insofar as they do not seek physically to reconstruct the landscape to conform with their cosmological conceptions, but rather find these conceptions 'ready made' in the world as given. On these grounds they are supposed to occupy a 'natural' rather than an 'artificial' or 'built' environment. [*ibid.*: 56]

Another stance of which Ingold is critical is the one which sees certain non-modern ways of thinking about the living environment (as being socially related to the human beings within it) as metaphorical (*e.g.* Bird-David 1992). He asks:

But when the hunter-gatherer addresses the forest as his or her parent, or speaks of accepting what it has to offer as one would from other people, on what grounds can we claim that the usage is metaphorical? This is evidently not an interpretation that the people would make themselves. [Ingold 2000: 44]

At bottom the metaphorical approach also assumes an "ontological dualism between the intentional worlds of human subjects and the object world of material things, or in brief, between society and nature" (*ibid.*). Ingold draws attention to a rather embarrassing implication of the fact that this dualism is applied in the study of "non-western" societies:

The implication [...] is that the claim of the people themselves to inhabit but one world, encompassing relations with both human and non-human components of the environment on a similar footing, *is founded upon an illusion* – one that stems from their inability to recognise where the reality ends and its schematic representation begins. [*ibid.*: 44; my emphasis]



Such a view clearly implies a condescending attitude. It also – less obviously – implies a reduction of human life to material ends. This reduction occurs because the claim that people apprehend nature metaphorically (*just* metaphorically) in terms of human social relations, amounts to saying that since it is (only) a matter of metaphors, the *real* action occurs elsewhere. This is the inescapable connotation of the term “metaphor” in the intellectual climate of the modern scientific West. The metaphorical perception of *real* (*i.e.*, non-metaphorical) nature is then just one ingredient in the human way of obtaining a livelihood, or, perhaps, of securing one’s social position among fellow humans. It has no real ontological import, but is in effect relegated to being the “trappings” of supposedly more fundamental physical and “brutely” social imperatives.

Ingold systematically and thought-provokingly contrasts this “Western” (modern scientific) view with traditional ontologies and traditional forms of knowledge. He notes, for example, that among the Cree hunting is regarded “as a kind of interpersonal dialogue, integral to the total process of social life wherein both human and animal persons are constituted with their particular identities and purposes” (*ibid.*: 49). This description, as it stands, can easily be fitted into a scientific framework in terms of *the experiential aspect* of hunting expeditions. But Ingold stresses that for the Cree *the whole world* “is saturated with powers of agency and intentionality” (*ibid.*: 14). Nelson (1983) writes similarly about the Koyukon of Alaska: “Traditional Koyukon people live in a world that watches, in a forest of eyes. [...] The surroundings are aware, sensate, personified. They feel. They can be offended. And they must, at every moment, be treated with proper respect.” The hunting experience, indeed *any* experience in/of “nature”, is just one moment in a world where the concepts of “pure” physicality or “purely” human sociality literally make no sense. Still one could insist that this is all metaphorical and proceed to deal with all the strange tales and descriptions phenomenologically, without making any basic ontological or metaphysical claims. And this is the usual strategy. But Ingold evidently is not satisfied with this. He wants to take the Cree, and other traditional cosmologies *seriously*.

This has its own problems, however. For what does it amount to? “Going native”? Think of the consequences:

if I were to report, in all sincerity, having encountered such a character as Puck or Iron Maker [with their shape-shifting abilities] in real life, I doubt whether much credence would be given to my claims. People would say that if I was not actually lying, then I must be suffering from delusions, leaving me incapable of telling fact from fantasy, or reality from dreams. Yet these are precisely the sort of claims that Ojibwa make. Are they, then, lying or deluded? [*ibid.*: 95]

The dilemma is clear: Either one adopts a viewpoint which devalues the reality claims of a virtually unanimous and very likely ancient traditional cosmology, and, in so doing, makes its current representatives seem quaint – certainly not to be taken seriously on ontological and metaphysical issues (although their practical skills may be admired). Or one takes them seriously and risks ending up being browbeaten by the academic community for abandoning “scholarly standards” or something equivalent – given that one is an academic in the first place, of course. Ingold’s solution to this problem is to appropriate native understandings into his own “dwelling ontology”, which he claims corresponds closely to the actual life-worlds of the peoples in question. In this he centers his reasoning on the notion of “engagement within an environment”: “Can we, in other words, ground [Ojibwa] understandings in the real experience of persons in a lifeworld rather than attributing them to some overarching cosmological schema for its imaginative reconstruction?” (Ingold 2000: 95-96). Ingold, then, wants to take their *experiences* seriously, but does not seem ready to seriously entertain their cosmological views as such. He writes, for example, that

the liveliness of stones emerges in the context of their close involvement with certain persons, and relatively powerful ones at that. Animacy, in other words, is a property not of stones as such, but of their positioning within a relational field which includes persons as foci of power. Or to put in another way, the power concentrated in persons enlivens that which falls within its sphere of influence. [*ibid.*: 97]

The interpretation here hangs on the nature of persons. What is not clear, neither here nor elsewhere in Ingold’s work, is whether he thinks that the “persons” in question *really* are, or *really* may be, other-

than-human. If they are, then the stone which is perceived as somehow “alive” is not, necessarily, animated by and in the active social imagination of human beings, but by some other – equally real – spirit, just as the natives say it is.<sup>120</sup> The latter is something which does not rhyme well with Ingold’s general ontological stance. But if it is humans who (in their social imagination) “animate” stones, for example, or regard foxes as somehow “human” too, then I am hard put to see the difference between Ingold’s view and the “metaphorical stance” of other anthropologists. My impression is that Ojibwa cosmology, for Ingold, is indeed an *imaginative* reconstruction of the mutual constructing of organisms/persons and their actual (concrete) environments. Consequently, the (imaginative) *re*-construction (not *co*-construction) is not really, or not quite, real – but it succinctly *expresses* the personal experiential dimension of (living-in-the-) world. Evidently Ingold does not want to separate Ojibwa understandings from Ojibwa life (as he accuses other anthropologists of doing), but neither is he prepared to accept their own account as it stands. Thus he reconstructs the meaning of their *meta*-physical view in order to fit it within his own developing ontological framework, which has no truly metaphysical dimension. Is this, in the end, any less duplicitous than the (temporally limited) suspension of disbelief strategy or the metaphorical approach mentioned above? (I hasten to add, however, that Ingold is not quite consistent on this score, as is evident from other passages discussed and utilized in my treatment.)

I am not objecting to the reformulation of Ojibwa or any similar understanding into more scholarly tractable terms. What I am suspicious of is a reconstructed conceptualization which is not really congruent with the accounts from which it gets its fuel. Of course this is a matter of degrees and approximations, and I would certainly ascribe to Ingold’s treatment a high degree of “congeniality”, as far as it goes. But if, *e.g.*, Ojibwa cosmology assumes the reality of *immortal beings* (which it does), the scholarly reconstructed account must, to be congruent, assume the same. Why, then, would congruence or “congeniality”, for philosophical purposes, be worth aiming at? Ba-

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<sup>120</sup>It should be noted that in *neither* case need it be assumed that *the stone* is alive in and of itself. The “spiritual” point of view is also relational. The difference, basically, is one of metaphysical presuppositions.

sically because of the infected issue of duplicity or disingenuity, which Ingold brings to the fore. I believe in actually confronting traditional understandings with modern ones, for the sake of intellectual clarity if nothing else.<sup>121</sup> Something like a confrontation of traditional cosmologies with our usual modern (or “postmodern”) presuppositions surfaces, or is on the verge of erupting, in parts of Ingold’s (2000) discussions, although he puts a lid on it by stressing – too emphatically I think – the situatedness and involved practice of traditional knowledge, implying that it cannot really be taken “out of context” and discussed in general (although he himself does just that). This “subjectifying” (speaking in terms of “experience”) and “contextualizing” (speaking in terms of temporality) of *every* human thought content is a stance which I have already criticized from other angles in previous chapters. What it amounts to, as I see it, is that it precludes any understanding of significance and interest to anyone outside of the concerned communities (living or already dead). Consider the issue of universality. I think it is fair to assume that the kind of conceptions we are discussing (the ubiquity of “personhood”) are of universal provenance; hence they have no specific historical and geographical origin. If this universality is approached from Ingold’s basic, intramundane assumptions, it can only be explained on the basis of *the actual circumstances of living* (which are seen as intrinsically temporal in all respects). Hence it follows, roughly, that the cosmologies of hunter-gatherers must be different from the cosmologies of regular farmers, not to speak of the ancient state societies. I agree that this is likely as far as specific customs and their contextual (spatiotemporally specific) intellectual motivation are concerned; the same follows from my arguments regarding the artifactual mediation of thought. What I am trying to comprehend here goes deeper, however.

The most basic issue is the metaphysical grounding of one’s ontology. At least as pervasive and “overwhelming” as is a certain dualism in modern Western thinking, is a thoroughgoing materialism or naturalism, at least in academic circles.<sup>122</sup> The bottom line, according

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121 I have earlier tried a variant of this approach; see Johansson (1999).

122 This materialism can be disguised (*cf* what was said concerning metaphorical understanding above) but it is there nonetheless.

to this stance, is that everything, yes, reality itself, *is* space, time and energy, historically differentiated and evolved. This goes hand in hand with a certain relativism which does not acknowledge anything which *really* transcends the actual contexts of spatiotemporally located life (except in the form of abstract thought, which is an *imaginary* transcendence). So Ingold: he firmly ties human existence to the situations of actual, particular persons “thrown” into the current of history:

Social life [...] is never finished, and there are no breaks in it that are not integral to its tensile structure. [Ingold 2000: 197]

Our actions do not transform the world, they are part and parcel of the world’s transforming *itself*. And that is just another way of saying that they *belong to time*. [*ibid.*: 200; my emphases]

We have already met these words when discussing Ingold’s notion of taskscape. Since this concept very much captures what to Ingold is *total reality*, it is clear that the latter to him *must* be confined to spatiotemporally located contexts only. Ingold’s stance in fact implies strongly that

taskscape = activities of dwelling = organism/  
environment unity = all there is.

Admittedly Ingold (2000: 197) states that “the taskscape exists only so long as people are actually engaged in the activities of dwelling”, but this only serves to express the fact that particular taskscapes vary and are each of limited duration, not that organisms (persons) and their environments are sometimes not comprehensive unities, and this means that organisms (persons) are irrevocably *tied* to their circumstances. Ingold defines *life itself* in terms of mundane activities (“dwelling”) and hence as an uninterrupted series of various “resonating” taskscapes. This is in stark contrast to how reality is seen by his non-modern sources, who assume a truly transcendent (non-temporal) dimension in all their mundane activities.

At the same time Ingold sometimes seems to champion aboriginal metaphysical conceptions over against modern ones (including his own as interpreted above). For example, in writing of the cos-

mology of Australian native traditions Ingold virtually enters into an exercise in metaphysics but, significantly, wavers on the basic issue. Note what he says in the following quotation (I have added my own comments/interpretations within brackets):

For the Pintupi, the world was created in the Dreaming, but the Dreaming is *trans*historical, not *pre*historical [*i e*, it is metaphysical]. The events of the Dreaming, though they occurred at particular places, are themselves timeless [...]. And so the landscape, brought into being in these events, is movement out of time. People, as the temporal incarnation of ancestral beings [who are timeless; they are thus ancestral in a metaphysical, not a temporal sense], are not so much creators themselves as *living on the inside of an eternal moment of creation*. [Ingold 2000: 57; last emphasis mine]

Symptomatically, Ingold seems to distance himself much more from the “totemistic” (*cf* Ingold 2000: 111-131) Australian cosmology in focus here than from the “animism” of northern circumpolar peoples. This is not done explicitly, but is apparent enough in his appropriation of animism (as he sees it), not totemism (as he sees it), for his own ontological purposes. However, he adds a farreaching comment in relation to what he says about the Australian case. After noting that the landscape, for the Australian aborigines, is “a movement *out of time*” (*ibid.*: 57; my emphasis), he comments: “*Likewise*, Koyukon [the Alaskan people] are bound to the course of the Distant Time, and must move with it, never against it” (*ibid.*: 58, referring to Nelson 1983: 240; my emphasis). As we have already seen, the Distant Time of the Koyukon was an age “so remote that no one can explain or understand how long ago it really was” (Nelson 1983: 16). This hardly means that it was in what Darwinians call “deep time”, *viz.*, millions and millions of years ago in a purely spatiotemporal sense. No, it was (really: is) *another* “time” in a realm transcendent in relation to the current world, and its otherness is metaphorically expressed in terms of distance. In Nelson’s understanding, which I accept on this matter, it was “a primordial world” (*i e*, we might say, another plane or state of being) that was *transfigured* into the form it has now. In this primordial world

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### The Problem of Environment, 3: Living Beings and Symbolism

‘the animals were human’ [...]. At some point in the Distant Time certain humans died and were transformed into animal or plant beings, the species that inhabit Koyukon country today. These dream-like metamorphoses left a residue of human qualities and personality traits in the north-woods creatures. (Nelson 1983: 16)

From the fact that these “northern animists”, in thinking of the relations between this and the “other” world, focus on animals and plants, and not, as the Australian “totemists”, on features of the landscape, it does not follow that the animists are dynamically thisworldly, so to speak, nor that the aboriginal totemists are – inversely as it were – statically thisworldly. This, however, is how they come out in Ingold’s argument. In concluding what these cosmologies, despite their differences, have in common he writes (Ingold 2000: 130):

In a word, they [*i e*, their respective art forms, which are the thematic focus of Ingold’s discussion here] are not representational. Neither in their painting nor in their carving do people seek to reconstruct the material world they know, through their mundane subsistence pursuits of hunting and gathering, on a higher plane of cultural or symbolic meaning. Whether their primary concern be with the land or its non-human inhabitants, their purpose is not to represent but to reveal, to penetrate beneath the surface of things [...]. There is *no division*, here, *between ‘ecology’ and ‘art’*, as though hunting were merely a matter of organic provisioning and carving or painting gave vent to the free play of the symbolic imagination. [my emphasis]

Bearing in mind Ingold’s view of *ecology* (see Chapter III: 1), the conclusion is inevitable that the art of the Australian aborigines and the circumpolar hunters, respectively, cannot reveal anything truly *metaphysical*, but only some “deeper” dimension of their *intramundane* experience (some “hidden” aspect of their being-in-*this-world* as a spatiotemporally bounded entity). He shies away from regarding the Dreamtime or the Distant Time as real in themselves, regardless of their concurrent relationship with our ordinary world.

How, then, is the issue of disingenuity and an (unintentionally) condescending attitude to be handled? Do I propose the adoption of

“aboriginal” metaphysics on the part of scholars? No, not in any simple sense, but I believe that the three most visible – and mutually contending – perspectives all deserve some skepticism: one, the biological one which sees the symbolic (“religious”) universes of various traditions as based on Darwinian adaptations, resulting in certain brain structures which then give rise to the logic behind “religious” conceptions (*e g*, Boyer 2001)<sup>123</sup>; two, the dualistic one which sees symbolic universes as cultural (mentally shared) constructions metaphorically representing purely subjective interpretations of objective non-metaphorical occurrences (*e g*, Gudeman 1986); three, a quasi-native one which shares the traditional belief in the existence of “another reality” but then tries to relate this to modern discoveries about the world, as if they were *directly* comparable (*e g*, Narby 1999). I think that all these views at some point fail to do justice to the intellectual concerns behind universally held traditional conceptions. Ingold’s perspective, although I have criticized it to some extent, is much more adequate. Its main shortcoming, from my point of view, is that it overemphasizes the experiential aspect of non-modern cosmologies, and that it underplays their intellectual, metaphysical significance.

For my part I have already indicated that the heuristic ontology I have proposed is able – to some extent – to harbor the idea of ubiquitous personhood, and that this quality can be understood as constituting another “dimension” in the proposed ontological device, in addition to space and time and encompassing them, as it were (*cf* Zinchenko 1996). From a mundane perspective this means that this transcendent quality is *embodied in (but not restricted to)* various ecologically acting organisms, most particularly humans. In an abstract way, this seems to bear some resemblance to traditional conceptions. It is in fact, as I said, a species of Platonism broadly speaking, set in contrast to materialism, naturalism and also to the kind of experiential innerworldliness Ingold seems to espouse. There is one outstanding feature of human life that must be taken more fully into account, however, than we have done so far – the role of language in shaping the actual ontological position and Umwelts of human beings. The

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123Boyer’s book is in its way highly original, but its premises are those common to a dominant form of current Darwinism.



relationship of language and linguistic symbolism to reality is a truly vast issue, but it needs to be addressed nevertheless. I limit myself to some preliminary, by no means exhaustive considerations in line with the thrust of my overall standpoint.

### c. A Case in Point: Amerindian “Perspectivism”

Language, indeed, is the focus of another critique recently levelled against some implications of Ingold’s “dwelling ontology” (Hornborg 2002). This critique, like mine, is sympathetic to Ingold’s stress on the concept of person but is also, again like mine, wary of his thoroughgoing monism, or, rather, of the analytical implications of taking this monism too much at face value. Hornborg writes:

My rejoinder [...] would be that an ontological ‘monism’ should not imply that we allow all our analytical categories to dissolve. The argument for monism in fact relies on these categories. It cannot be judged unreasonable to distinguish between, say, the Second Law of Thermodynamics, the organization of global capitalism, and the human experience of anxiety. As features of Nature, Society, and Person, they are all a part of the same universe and can probably be shown to be interconnected in many ways, but I cannot see what is to be gained from not keeping them analytically separate.

To make the epistemological observation, as Ingold [2000] does, that Culture and Nature are rarely recognized as distinct analytical categories in non-Western societies does not automatically lead to the conclusion that Westerners are mistaken in making this distinction.

Hornborg further criticizes Ingold for “mixing epistemological and ontological arguments”<sup>124</sup> and asks: “Are ecological relations (everywhere?) to be seen as [human-like] social relations because this is how the world is perceived by the Ojibwa? Are animals ‘persons’ even where no humans recognize them as such?” These questions are indeed pertinent and the connection to the dilemma discussed in the last section is obvious. The abstract way out I have suggested so

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124 Cf. my discussion in the final chapter, Section *b*.

far is hardly satisfactory without confronting the specifics involved. Hornborg's point issues in the observation

that, in trying to account for human behaviour, we must acknowledge both the arbitrariness of Culture and the non-arbitrariness of Nature. It should be quite feasible to be a cultural relativist while acknowledging the Second Law of Thermodynamics. The problem that continues to plague our profession, however, seems to be how to agree on where to draw the line between the symbolic and the natural, and on their relative importance.

It is here, of course, that the phenomenon of language enters the picture. But before addressing this problem directly I think it would be worthwhile to give a somewhat more detailed example of what we are discussing, pertaining also to the issue of relativism "versus" universalism. Hornborg speaks of cultural relativism and of the "arbitrariness of Culture". In seeming contrast to this Bloch (1998: 43; cf Bloch 1992: 2-4) writes that "[t]here is a need for anthropologists to go beyond particularities, since [...] the same [symbolic] themes come up again and again all over the world." But he adds the caveat: "This, of course, does not mean ignoring the equally important fact that similarities between symbolic systems are accompanied by a fundamental variability that it would be methodologically misleading to forget." Aside from the seeming incongruity of saying that certain themes are universal while "variability" is fundamental, this amounts to the ancient philosophical question: How can something universal also be particular? Whence the multiplicity if there is also a basic unity? Wherefore unity when multiplicity is so apparent? The dominant research trend, not only in anthropology but in all the human sciences, has long been to focus almost exclusively on particularities and contingencies, to the detriment of any sophisticated understanding of the universal aspects of any phenomenon, *in connection* with its specific characteristics.

From the standpoint of much established rhetoric in social science, Hornborg's insistence on the "arbitrariness of Culture" is uncontroversial. Bloch too bows in this direction but is seriously troubled by equally apparent universal features. In the first section of this chapter I quoted the comment of Viveiros de Castro that no-

tions of “cosmological transformism” (the shape shifting abilities of transcendent persons) is found in South America and “in the far north of North America and Asia, as well as amongst hunter-gatherer populations of other parts of the world” (Viveiros de Castro 1998: 471). I also gave a few examples of such transformism, a phenomenon which Viveiros de Castro calls “perspectivism” and sees as grounded in a “cosmological deixis”. Now, are these phenomena “real” – on a par, somehow, with the 2nd law of thermodynamics – or are they “symbolic”?

As an example illustrating the more precise import of this question in a given context, I borrow some remarks of Viveiros de Castro (1998) and Århem (1996). According to the former “the Amerindian words which are usually translated as ‘human being’” refer not to a particular people but “rather to the social condition of personhood, and they function (pragmatically and not syntactically) less as nouns than as pronouns” (Viveiros de Castro 1998: 476). This gives these terms “an enormous contextual variability”. Consequently, to say that animals and spirits are persons is to attribute to them the capacity of

conscious intentionality and agency which define the position of the subject. Such capacities are objectified as the soul or spirit with which these non-humans are endowed. Whatever possesses a soul is a subject, and whatever has a soul is capable of having a point of view. Amerindian souls, be they human or animal, are thus indexical categories, cosmological deictics whose analysis calls not so much for an animist psychology or substantialist ontology as for a theory of the sign or a perspectival pragmatics [...]. [*ibid.*]

In other words:

the *point of view creates the subject*; whatever is activated or ‘agented’ by the point of view will be a subject. This is why terms such as *wari* [...], *dene* [...] or *masa* [...] mean ‘people’, but they can be used for – and therefore used by – very different classes of beings: used by humans they denote human beings; but used by peccaries, howler monkeys or beavers they self-refer to peccaries, howler monkeys or beavers. [*ibid.*: 476-77]

Århem (1996: 200) says, I think, virtually the same thing and also points out the logical consequence:

The Makuna stress the continuity between nature and society, and ultimately the *essential* [my emphasis] unity of all life, as manifest in the notions of *masa* – the ‘humanness’ of all beings – and *be* – the undifferentiated, transcendental reality beyond all physical differentiation.

As I have pointed out before, it must be recognized that the “essential unity” spoken of here is *not* the organismic or “Umweltian” unity spoken of by Ingold. It is rather a unity “from above” in that all beings share the same basic nature (“*masa*”) whose *transcendent (non-temporal) origin* lies in what the Makuna call “*be*”.<sup>125</sup> Consequently, Amerindian perspectivism, as well as corresponding notions in other cultures, does not assume a “unity” on the level of manifestation, *i e*, in “everyday life”. In everyday life the experienced reality is one of “predation” – in effect, one of ecology as understood by modern science, but seen very differently as to its meaning. The difference lies in the metaphysical rationale of everyday life: in modern science everything is reduced to the level of physical manifestation (there is, literally, *no “above”*); in traditional cosmologies *reality* is much more comprehensive and the physical particulars (*e g*, animals) are “symbols”<sup>126</sup> simultaneously concealing and revealing “cloaks”, of their real, transcendent origin, regardless of whether that is thought of as “*masa*” or as the still more transcendent and unitive “*be*”. This is not a purely philosophical conception but a lived ambience, consistently conceptualized among the Amerindians in terms of kinship (*e g*, Århem 1996, Viveiros de Castro 1998). Consequently this kinship is not only a “classificatory system” of a more or less arbitrary nature, but also an experienced field of personal, reciprocal relationships tran-

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125 This, I submit, is so within the specific conception of the Makuna. This does not necessarily mean, however, that the Makuna notion of *be* is universally adequate to the real nature of this dimension, according to the corresponding conceptions of other cultures. In other words, there is room for controversy on this point. What we should note in our context is just the basic structure of the thinking here and its possible adequacy to what is the case.

126 On “symbolizing”, see further in the next section.

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### The Problem of Environment, 3: Living Beings and Symbolism

scending and descending on several cosmological levels according to definite rules or obligations:

In this cosmic society, where all mortal beings are ontological ‘equals’, humans and animals are bound by a pact of reciprocity. The categorical distinction between ‘eater’ and ‘food’ – or hunter and prey – seems to override the bond of totemic ‘kinship’ between humans and animals; all animal ‘others’ are treated as ‘essential affines’. The relationship between the human hunter and his prey is thus construed as an exchange, modelled on the relationship among affines. Men supply the Spirit Owners of the animals with ‘spirit foods’ (coca, snuff, and burning bees wax). In return, the spirits allocate game animals and fish to human beings. This exchange, mediated by shamans, involves three different sets of relationships: between men and spirits (shamans and Spirit Owners); between spirits and animals (Spirit Owner and his protégé animals); and between men and animals (the human hunter and his prey). [Århem 1996: 191-92]

What is the source of these rules or obligations? According to Århem (*ibid.*: 192) “the Makuna explicitly exploit the sociological model of marriage exchange in conceptualising the interaction between men and animals”. On the basis of this the whole thing could be interpreted as a typical social (or cultural) “construction”. But Århem continues: “Underlying this sociological exchange model is the cosmological notion linking predation to regeneration”, and he writes further (*ibid.*): “*The perpetuation of cosmic order* – encompassing all varieties of *masa* – requires ‘male’ predation as well as ‘female’ fertility, and social life is predicated on the continuous exchange of individual vitality for categorical essence” (my emphasis). Two things should be noted here; first, that the society encompassed by this “sociological” (really cosmological) “model” is *not at all only human* in the modern Western sense; second, that the “male” and the “female” functions are to be seen as symbolizing and not taken too literally. The actual men and women, in their social roles (genders), *symbolically participate* in the cosmic dynamics on which the conception as a whole is predicated. Thus it would seem that just because the people discussed by Århem are said to use a “sociological model” to explicate the nature of human-nature relationships, it does not follow

that the nature of what is “sociological”, “social” or “cultural” can be reduced to what is acknowledged as such in academic sociology or social and cultural anthropology.<sup>127</sup>

It needs to be taken into account, however, that Viveiros de Castro (1998: 471) notes that what he calls “perspectivism” *usually does not involve all species of animals*, and, furthermore, that “it is not always clear whether spirits or subjectivities are being attributed to each individual animal” (*cf* the case of the Chewong, discussed earlier). Strictly speaking, then, one should not, in this context, speak of human-animal relations in the usual sense of the words but rather of *transcendent* “human”-“human” (person-person) relations, relations which can be had on a *direct* basis only in a more or less temporary, non-ordinary state of being. In other words, when cosmologies of the kind discussed are said to underlie social relations and cultural expressions, this does not mean that people go around always *experiencing* this cosmic reality. Some people may even *never* experience cosmic or spiritual reality directly, although they are confident that other persons among them do, and can be trusted to know what they are talking about. This obviously leaves room for maneuver on the part of those “in the know”.

Amerindian perspectivism is very much joined to “the valorization of the hunt” (Viveiros de Castro 1998: 472). Furthermore,

[t]his hunting ideology is also and above all *an ideology of shamans*, in so far as it is shamans who administer the relations between humans and the spiritual component of the extra-humans, since they alone are capable of assuming the point of view of such beings and, in particular, are capable of returning to tell the tale. [*ibid.*; my emphasis]

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127 Århem himself seems to be among those who are prepared to go some way towards meeting the Amerindians on their own philosophical ground, seeing their cosmology as being “cultural codifications of deep ecological insights, developed during millennia of intimate practical interaction with the environment” (1996: 201-02), and further conjecturing “that cultural processes have the capacity to develop a kind of ‘systems view’ of reality which reaches beyond consciously articulated, individual awareness to capture an ‘integrative dimension of experience’” (*ibid.*: 203).

There is thus no contradiction between a viewpoint acknowledging the possible reality of non-material realms of being and a viewpoint stressing the importance of such beliefs in maintaining power structures in society. An important point to remember for the “hermeneut” of such societies, however, is that from a point of view internal to the societies in question these power structures are *not only human*.

Let us consider what Viveiros de Castro says in relation to this cosmologically comprehensive view of social relations. He writes that Amerindian perspectivism means that “all beings see (‘represent’) the world in the same way – what changes is the world that they see” (*ibid.*: 477). And since every being is basically “human” all beings, on their part, think and act like humans: “Everybody is involved in fishing and hunting; everybody is involved in feasts, social hierarchy, chiefs, war, and disease, all the way up and down” (M.-F. Guédon, quoted in Viveiros de Castro 1998: 477). Ecologically speaking this is, rather prosaically, a matter of who eats who, but more philosophically the deeper point is that each subject, whether obviously human or not, is a *center* of awareness and agency. And since all such subjects are fundamentally thought to be of the same transcendent nature, this means that they are all – in their “clothings” – *the differentiated manifestations of “the One Center”* which is beyond all differentiation. Hence although this “cosmic society” or “ecology” is (in the everyday world) superficially predatory, it is fundamentally an ecology of in principle equal persons. This means that your predatory enemy, or your prey is *not only* a predator, or a prey, but first and foremost a person (or rather the “clothing” of a transcendent person) who you must reckon with and maintain respectful relations with. Consequently, once again, when speaking of power relationships or power structures in such societies it is seriously reductionist to see them just in the ordinary ways of modern social science. In any discussion of continuity and change in the internal social and cultural dynamics of such societies the presence of *other beings* must be acknowledged. Viveiros de Castro (1998: 478) locates the unity of beings in a transcendent realm (“the One Center” I called it above), and their differences in their respective manifold bodies:

The ability to adopt a point of view is undoubtedly a power of the soul, and non-humans are subjects in so far as they have (or are) spirit; but the differences between viewpoints (and a viewpoint is nothing if not a difference) lies not in the soul. Since the soul is formally identical in all species, it can only see the same things everywhere – the difference is given in the specificity of bodies.

Viveiros de Castro (*ibid.*) defines “body”, in a very “Ingoldian” way, also reminiscent of J. von Uexküll, as “an assemblage of affects or ways of being that constitute a *habitus*”, *i e*, not primarily as a fixed material shape. Logically it follows from this that the universal spirit nature common to all individually (bodily) manifested or existing creatures *is not perspectival*, but rather an absolute reality “above” (transcendent to) the bodily (perspectival) level of being. Then Viveiro de Castro (*ibid.*) adds, significantly, that “[b]etween the formal [“non-perspectival”] subjectivity of souls and the substantial materiality of organisms there is an intermediate plane which is occupied by the body *as* a bundle of affects and capacities and which is the origin of perspectives” (my emphasis). “As bundles of affects and sites of perspective, rather than material organisms, *bodies ‘are’ souls*, just, incidentally, as souls and spirits ‘are’ bodies” (*ibid.*: 481; my emphasis). The body’s outer shape is *a sign*, “although it can be deceptive since a human appearance could, for example, be concealing a jaguar-affect”. What is seen with the bodily eyes as a jaguar may be “just” a jaguar, for the time being and from the perspective of the beholder, but it might also be a “human” (conscious thinking being) in jaguar shape, and – most difficult to comprehend for us – there is no clearcut difference between the two, but all depends on the perspectival affects and capacities of the being or person having the encounter.<sup>128</sup> It is difficult to make any other sense of this than to say that there must exist at least three different levels or planes of reality, at, or in, which existence (in both the “objective” sense of body and the “subjective” sense of soul) is apprehended and experi-

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128 Clearly all of this must mean that the reality *behind the sign* can be apprehended in certain circumstances; consequently signs are not everything and one must always ask what they are signs *of*.



enced differently. “Translation” from one plane to another also involves a bodily change, not only a change of consciousness:

It is not so much that the body is a clothing but rather that clothing is a body. We are dealing with societies which inscribe efficacious meanings onto the skin, and which use animal masks (or at least know their principle) endowed with the power metaphysically to transform the identities of those who wear them, if used in the appropriate ritual context. To put on mask-clothing is not so much to conceal a human essence beneath an animal appearance, but rather *to activate the powers of a different body*. The animal clothes that shamans use to travel the cosmos are not fantasies but instruments [...]. [Viveiros de Castro 1998: 482; my emphasis; cf Ingold 2000: 121ff]

It should be very clear that “body” here does *not* denote the same concept as that term does in a modern Western context, not even if taken in an anti-dualistic sense. What in modern Western thought is seen as either concrete and “empirical” *or* abstract and “theoretical” is, in the traditional world discussed here, regarded as much less univocally fixed into preconceived categories. It *all depends*. Viveiros de Castro contrasts Amerindian cosmology with “Western ‘multiculturalist’ cosmologies” in the following way:

Where the latter are founded on the mutual implication of the unity of nature and the plurality of cultures – the first guaranteed by the objective universality of body and substance, the second generated by the subjective particularity of spirit and meaning – the Amerindian conception would suppose a spiritual unity and a corporeal diversity. Here, culture or the subject would be the form of the universal, whilst nature or the object would be the form of the particular. [*ibid.*: 470]

With the above in mind we may now address the question: How seriously should we take this kind of cosmology? Or rather: In what way should we take it seriously? Should we take it as an indication that reality is like that, or as a symbolic interpretation and expression of certain (basically mundane) ecological and social relationships?

#### d. The Problem of Symbolism Seen in an Ecological Light

We will now reflect on the possible meaning of the term “symbolic” in the context of my proposed ontology. Hornborg (2002) observes that

[t]hroughout the millennia of foraging and subsistence horticulture in Amazonia, a major part of the interaction between human and non-human organisms has been mediated by a myriad sensations of the eye, ear, nose, tongue, and skin, only a fraction of which have been reflected upon and assigned linguistic categories. Such sensory sign flows are what constitute the human embeddedness in the world evoked by phenomenologists and “practice theorists”. To the extent that people mimetically reproduce and share conventional patterns of emitting and responding to such sensory signals, these patterns are thoroughly cultural. This sensory level of human-environmental relations includes modes of interpreting non-human life forms as well as modes of communicating with them.

He notes that the “relation between such local, cultural experience and natural surroundings is clearly co-evolutionary”. This can have rather farreaching ecological consequences: “Whether deliberately or not, the [symbolically expressed] dietary and other cultural preferences of past generations of Amazonian Indians [...] have left a tangible record in the form e.g. of old fallows, with a much higher incidence of food species” (*ibid.*; cf Rival 1998, Balée 1995). Furthermore:

Although much of this crop symbolism is evidently codified in explicit preferences, it is apparent that the sentiments thus expressed represent a more elusive, sensory level of experience that is transmitted largely through mimetic practice rather than words. No less than language, such mimetic practice represents a cultural process that conditions human beings to respond in specific ways to particular signs. [*ibid.*]

In other words “culture” must not be reduced to language and language use per se (*i e.*, to language viewed in the abstract); it has a

very concrete and intimately experiential aspect (this is very much in line with Ingold's approach). We may note here the similarity of this standpoint with what was discussed in the last chapter regarding apprenticeship in the production of artifacts. Here, too, language "participates" but the most significant transmission mechanism in learning a craft is mimesis and practice. Consequently the notion of apprenticeship may usefully be generalized beyond the sphere of craftsmanship – and also beyond the sphere of other specialized cultural practices, such as learning to be a sorcerer or medicine man. Ingold (2000: 37) notes concerning the question of how a hunter learns his occupation:

First, there is no explicit code of procedure, specifying the exact movements to be executed under any given circumstances [...]. Secondly, it is not possible, in practice, to separate the sphere of the novice's involvement with other persons from that of his involvement with the non-human environment. The novice hunter learns by accompanying more experienced hands in the woods. As he goes about he is instructed in what to look out for, and his attention is drawn to subtle clues that he might otherwise fail to notice: in other words, he is led to develop a sophisticated perceptual awareness of the properties of his surroundings and of the possibilities they afford for action.

Consequently, the affordances<sup>129</sup> of items in the environment help in actively shaping the novice's growing experience and knowledge, analogously with the way in which the affordances of artifacts "direct" some human actions in their comprehensive relationships (in-

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129 "The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill" (Gibson 1979: 127). "It implies the complementarity of the animal and the environment" (*ibid.*). "The different substances of the environment have different affordances for nutrition and for manufacture. The different objects of the environment have different affordances for manipulation. The other animals afford, above all, a rich and complex set of interactions, sexual, predatory, nurturing, fighting, playing, cooperating, and communicating. What other persons afford, comprises the whole realm of social significance for human beings" (*ibid.*: 128).

cidentally, this must be part of what Hornborg refers to as a “co-evolutionary” relation). In this line of thinking, then, we seem to be on our way to *abolishing* the culture-nature distinction. It should be kept in mind, however, that we have not yet considered the socio-ecological role of language (or, more appropriately, of linguistic constructions, symbolisms, stories as they occur in actual contexts). We may get there by thinking about what Ingold, very appropriately, calls the “education of attention”. A crucial observation in this regard is that

there is no limit to what can be perceived. [...] one can keep on seeing new things [...] by a sensitisation or ‘fine-tuning’ of the perceptual system to new kinds of information. [...] one learns to perceive in the manner appropriate to a culture [...] by ‘hands on’ training in everyday tasks [...]. [...] learning is not a transmission of information but [...] *an ‘education of attention’*. [Ingold 2000: 166-67; my emphasis]

Now, how is this education of attention, this opening up and fine-tuning of a person’s perception, achieved? By means of stories, as we saw already in the last chapter. It is worth quoting the seminal statement by Ingold (*ibid.*: 190) once again:

Telling a story [...] is not like unfurling a tapestry to cover up the world, it is rather a way of guiding the attention of listeners or readers *into* it. A person who can “tell” is one who is perceptually attuned to picking up information in the environment that others, less skilled in the tasks of perception, might miss, and the teller, in rendering his knowledge explicit, conducts the attention of his audience along the same paths as his own.

As a result, one may say,

social agents can not only directly perceive their mutual affordances for one another, but also *share* the direct perception of other constituents of the environment. Attuned through prior training and experience to attending similar invariants, and moving in the same environment in the pursuit of joint activities, they will pick up the same information. [*ibid.*: 167]

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This applies generally to any human activity and to any “scale” of relationship – whether limited to the actual circumstances prevailing in a patch of forest, or extended to of the relations between humans and environments in general. Through all these stories and their import language is in actual fact deeply embedded within the human environment in all the three senses we have considered (focusing on the organism, artifacts and living beings respectively). And this applies whether we are thinking in terms of *Umwelts* or in terms of the wider ecological environment. A consequence of this is that “language” is not an entity in and of itself; it does not have an abstract existence of its own (*cf* Ingold 2000: 407-10). Language is both immanent to *Umwelts* and an aspect of the ecological environment. So, when stories of very general import are told we may expect them to embody, so to speak, this state of affairs by being *foundational for what may be known within a given ambience*. Think of what Nelson (1983: 18) says regarding the Distant Time stories of the Koyukon; they

also provide the Koyukon with a foundation for understanding the natural world and humanity’s proper relationship to it. When people discuss the plants, animals, or physical environment they often refer to [these] stories. Here they find explanations for the full range of natural phenomena, down to the smallest details. [...]

The narratives also provide an extensive code of proper behavior toward the environment and its resources.

What, then, is culture from this perspective? *Culture is the means of educating people’s attention from childhood on*; its basic mode of existence is story-telling and song, but it cannot, for the reasons we have considered, be limited to language per se. It is, nevertheless, first and foremost the symbolic apprehension and construction of the “interface” between human organismic *Umwelts* and the ecological environment (in *all* its aspects, whether “natural” or “artificial”, whether immanent or transcendent). And because of this language use is very much, but not wholly, constitutive of human *Umwelts* – both private ones and those shared on an intimate group basis. However, since language (even if “immersed”) has its own systemic rules and, through them, open-ended construction possibilities, there is at the same time introduced into the world an element of relative arbitrariness.

ness. This, I think, is (or can be construed as) the basis for Hornborg's (2002) further argument that culture, in contrast to autonomous natural processes, is "arbitrary":

Ingold's point [...] that 'meaning is immanent in the relational contexts of people's practical engagement with their lived-in environments' (Ingold [2000]: 168) is a pertinent dismissal of cultural solipsism but hardly of cultural relativism [...]. The fact that the communicative relation between person/organism and environment is mutually constitutive [...] does not detract from the idiosyncratic, arbitrary, and contingent nature of this relation.

And this arbitrariness, as I see it, follows from the intrinsic nature of language<sup>130</sup> itself. Language use thus *introduces a unique element of potential*<sup>131</sup> *arbitrariness in ecological relationships* – given that language use is, as we have conjectured, very much embedded in all kinds of human-environment relationships. This arbitrariness (or, in practice, cultural "idiosyncrasy") is, in turn, to some extent *limited* by the circumstances of the wider ecological environment. In the long run the latter will, because of the co-adaptive<sup>132</sup> relationship hinted at ear-

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130"Language" here means any system of "relatively arbitrary" code, although I think that spoken and sung language (whatever its exact nature; cf R. Harris 1996) is a prerequisite for any other more or less "arbitrary" sign system; sign systems that are "really" arbitrary in a logical sense, for example, presuppose writing (cf Ong 1982, Olson 1993), which in turn presupposes speech and certain material items. In view of my discussion in this section, I further think that there does not exist any truly arbitrary language acts; hence I speak of "relative arbitrariness".

(This topic, however, is far too deep and far-reaching for me to be able to do it any justice here, although I find it necessary to call attention to it. Cf also what Ingold says on meaning in a passage cited in Chapter III: 2, Section g; Ingold's as well as my position entails, contra, e.g., Rappaport (1994), that the world is *not* "devoid of intrinsic meaning" (*ibid.*: 154). See also note 134.)

131The arbitrariness is potential, because true arbitrariness is only a theoretical possibility (which may be exploited in specialized mathematical contexts). We must consider not only the ability of language to generate novelty and idiosyncrasy but also its often very conservative nature over very long time periods, evidenced by the phenomenon of virtually universal conceptions on certain matters.

132I prefer the term "co-adaptation" to "co-evolution" because of the unfortunate connotations of the latter.

lier, “correct” any excessive idiosyncratic arbitrariness on the part of culturally constructed Umwelts and socioecological ambiances.<sup>133</sup> Thus those existing symbolisms that have endured for significant stretches of time, have been pruned by circumstances and are, consequently, less arbitrary than they theoretically might have been. This may explain why, *e.g.*, the food symbolisms (taboos) discussed by Hornborg (2002) are *both* arbitrary in certain ways *and* ecologically co-adaptive in other ways.

I think it is fair to summarize the import of what has been said here (and in the last chapter) regarding the symbolism inherent in stories, and in items belonging to the same cultural ambience, by saying that this symbolism opens up dimensions of human experience transcendent in relation to what is immediately apparent to sensual perception. And *if it really does that, it is not really arbitrary*, but

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133In this connection Rappaport (1994: 156) is right when he says that language is “fundamental to the human *mode* of adaptation” (my emphasis), but this, to my mind, presupposes what may be called a human-environment “dialogue”, and Rappaport seems to think so too, when he writes that “meanings and understandings not only reflect or approximate an independently existing world but *participate* in its construction (*ibid.*; my emphasis). If human linguistically encoded meanings participate in the “construction” of the world, then who is (are) the other participant(s)? And if there *are* other (than human) participants, then “the world” cannot really be “devoid of intrinsic meaning” (*ibid.*: 154), for surely they too, in that case, “construct” meanings (but not necessarily in the same sense or way as humans do; I see no reason to confine “meaning” to linguistic constructions only). Logically this follows also, I think, from the following statement: “The worlds in which humans live are *not fully* constituted by geological and organic processes, but are *also* symbolically conceived and established by performative actions” (*ibid.*: 156; my emphases). The “also” here I interpret as indicating some sort of “dialogue” (meaningful interaction). I do not wish to ascribe to Rappaport this interpretation; I just note that *if* Rappaport’s basic contention, that the world is indeed “devoid of intrinsic meaning,” holds, then the above assertions *would* entail a totally fundamental dichotomy between “physical nature” and “human culture” (and the “participation” referred to would become problematic in the same way as the Cartesian dichotomy between *res cogitans* and *res extensa*), but *if we drop* the basic contention, this dichotomy is transformed into “dialogue”, on a basis of (at least some) intrinsic meanings, rather than their radical absence. Other texts by Rappaport (*cf* Rappaport 1999: 456f) would seem to endorse this, and the “devoid of intrinsic meaning” bit, regarding “the world”, seems almost to be dragged in along the way, like some old adage one cannot quite get rid of, but which one, in practice, does not really believe in any more.

rather constitutes a *mental affordance* for enabling one to attend to the relationships it both implies and makes explicit (both hides and reveals).<sup>134</sup> That is why stories can and really do educate human attention to aspects of reality outside of the Umwelt(s) of the moment.

It seems that I am here operating with a concept of symbol different from the one defined by C.S. Peirce (which is the basis for Hornborg's emphasis on the arbitrariness of linguistic symbolism, and hence also for what he calls "cultural idiosyncrasy").<sup>135</sup> In my usage a "symbol" is not an arbitrary relationship between sign and object; symbols act as bridges or messengers between different planes of reality<sup>136</sup> and it is this bridging function which constitutes symbolizing.<sup>137</sup> Symbols can occur in stories or be actual beings; the Koyukon stories of Raven and actual ravens are in a certain sense equivalent in this regard.<sup>138</sup> Thus actual ravens, for example, are both ordinarily observable birds in a mundane sense *and* signs from and of the spiritual personage who – according to the Koyukon Distant time stories – is the Creator of the world (*cf* Nelson 1983: 79-84); and, importantly, ravens are symbolical *both* as birds *and* as figures in sto-

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134 *Cf* what is said below concerning the symbolic function of the outer shape of manifested creaturehood, in distinction to the unmanifested spirit of personhood within.

135 It would lead us much too far afield to here consider the complexity of Peirce's concept of symbol in relation to the different one I am employing. In the present context Hornborg's very simple use of it is sufficient to bear in mind: a symbol is an arbitrary relation between sign and object. I have no quarrel with this definition per se; I just note that the term "symbol" denotes different things in the two discourses. My usage is by far the older one; it has deep roots in premodern philosophy and theology. One historical example is given below.

136 Readers who do not care for an ontological and also meta-physical gradation of different planes of reality may think of this in terms of different qualities and depths of experience within Umwelts in relation to the wider environment. The practical difference is not so great, since the former notion embraces the latter (but not vice versa).

137 *Cf* original meaning of the Greek verb *symbollo* (from which our "symbolize" derives): to throw together, to unite, to come together, meet (*An Intermediate Greek-English Lexicon Founded upon the Seventh Edition of Liddell and Scott's Greek-English Lexicon*).

138 This is in line with the contention that "language" is not an ontologically separate entity; speech and song, rather, are socioecological "agents" as much as animals are, but in a different mode.



ries. The behavior of ravens, at least under certain circumstances appropriately interpreted by knowledgeable elders, thus give some indication of the character and intentions of the Creator. Now, it is of course not impossible that the raven as a species was focused upon, in some remote time, as a suitable symbol of what was *already*, on other grounds, thought to be characteristic of the world's Creator. This would introduce an element of relative arbitrariness as to the assignation of the raven, specifically in this role (in other cultures it could have been some other animal), but the arbitrariness pertains only to the context of comparing cultural specificities, not to the adequacy of the raven as a symbol of the Creator for the Koyukon. In this way it can be seen how symbolism which is also linguistically expressed, can be both *relatively* arbitrary in one sense, and (supposedly) quite *adequate* (*i e*, not arbitrary) in another sense. The last point means, however, that a limit is put on a too "superstitious" interpretation of everything an actual raven might do; intellectually the raven is more *like* a concept than an animal, but it is also more *than* a concept. In any case, symbolism in the sense at work here must not, for reasons of prudence if nothing else, be understood too literally; but at the same time it must not be understood purely metaphorically either.<sup>139</sup> A symbol is, as I said, an ontological/metaphysical "*bridge*" and bridges are real in themselves even though their whole function is only to provide connection. Traditional symbolism, in other words, calls for discernment, not naive belief.<sup>140</sup> Bearing this in mind it is wise, I think, to grant validity to the assertion

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139 Obviously modern categorizations are inadequate to make sense of this; a fundamental change of outlook is needed.

140 C/Ingold (2000: 99): "Visual sightings of the Thunder Bird [a spiritual "grandfather" of the Ojibwa] in its hawk-like manifestation are exceedingly rare, yet one boy's report of such a sighting – initially greeted with some skepticism – was finally accepted when his description was found to match precisely that offered by another man who had encountered the same bird in a dream [...]. People can lie about their encounters with other-than-human persons, sometimes with dire consequences, but in this case the boy must have been telling the truth. How, otherwise, could he have described the bird so accurately?"

The criteria may not satisfy a skeptical Westerner, but it is evident that not just any hawk is seen as a Thunder Bird person. This strengthens the impression that we are dealing with things of *intellectual* (ontological and metaphysical), not merely narrative, importance.

that the raven symbolism (and other comparable symbolisms) have for ages been adequate enough for their purpose of *really* relating humans to their not simply physical environment. Otherwise it would assuredly have died out long ago.<sup>141</sup>

This ancient symbolic way of seeing presupposes that the human being as an experiential center, through symbolizing items in the environment (and through “resonance” in one’s own self) intuitively the One Center, the Supreme Being, itself above all being. The “symbolizing items”, then, are in effect the myriad manifestations of this truly transcendent Center. The connection between the “lower” centers (human beings) and the One Center is, symbolically speaking, vertical (it cuts through the levels of being), not horizontal (confined to the intramundane level). It is, so to speak, “perpendicular” to the temporal taskscape (*cf.* Nasr 1989: 221-252, 1993: 25-42; criticism and response in McLean & Kuhri 2001 and Nasr 2001). Such a view of significant and “deep” symbolizing is thus anthropocentric in a way which is, I submit, quite close to what is said in the following passages of Ingold.

Since we are human, the world around us must necessarily be anthropocentric: this, in itself, implies no lack of participation, nor does it entail an instrumental attitude. Indeed it is decidedly odd that the term ‘anthropocentrism’ should have been adopted to denote an attitude that, more than any other, *withdraws* human life from active participation in the environment. It is an attitude that might be more accurately described as ‘anthropocircumferentialism’. The term may be an impossibly cumbersome one; nevertheless I believe we need it, if only to distinguish the discursive construction of the environment characteristic of modern Western thought and science from the many pre-modern and non-Western cosmologies that are anthropocentric in the strict sense of placing the human being at the hub of a dwelt-in world, a centre of embodied awareness that reaches out, through the activity of the senses, into its surroundings. Thus the shift from

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141 *Cf.* the pragmatic aspect of such symbolism as outlined by Scott (1996). Generally speaking: deeming from the ubiquitous presence of an otherworldly dimension to all life in this kind of culture, it seems impossible to honestly bracket this from the pragmatic aspect without further ado.

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anthropocentrism to anthropocircumferentialism is tantamount to the withdrawal of the human presence from the center to the periphery of the lifeworld [...].<sup>142</sup> [ Ingold 2000: 218]

Among the Yup'ik Eskimos, the

cosmos itself (*ella*) – sentient, knowing and responsive – was conceived as an immense eye, but it was one that could hear as well as see. It could also smell. [...] The knowledge that the eye of *ella* was watching, and that human activities were visible to the spirit world, controlled every aspect of everyday Yup'ik life. To witness a spirit directly was to see it as a *face* which, like the cosmos itself, was circular in form and centred on the eyes. [...] the face would be revealed through a process of unmasking akin to the retraction of a hood – a dissembling of outward appearance as given to ordinary, quotidian vision so as to uncover the being within. [*ibid.*: 278]

“Between” this all-seeing eye of the cosmos itself<sup>143</sup> and humans in everyday life the various creatures are interposed; what is ordinarily seen is their “hoods”, “cloaks”, or “veils”, their outer shape. The latter, however, function as symbolizing attributes (“signs”) which may, under certain circumstances, unveil themselves to reveal the oneness within. Hence the “cloak” and the spirit within are really one and the same, only perceived in different modes (states of being). From a mundane point of view this unveiling is dangerous, because it involves the translation from one plane to another and

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142(My note): Cf Nasr (1996: 178): “all traditional views of man function in a Universe with a Center, and this includes the Shamanic and Chinese religions, which do not speak of Creation but nevertheless are dominated by a Divine Center so that their anthropocosmism is ultimately none other than a form of theocentrism. In contrast, the humanistic view envisages a man and a world that are ultimately without a center, for to place man [as a purely sensuous plus rational being] at the center of things is to deny the reality of a center, the nature of the *anthropos* [in this case] being too transient and nebulous to be able to act as a center unless the *anthropos* be envisaged in its theomorphic nature, which would bring us back to the traditional view of man.”

143(which cannot be identified with the “total contents” of the cosmos and hence must be transcendent in relation to the actual cosmos)

how does one get back? Viveiros de Castro (1998) notes that supernatural (his own word) encounters “can be lethal for the interlocutor who, overpowered by the non-human subjectivity, passes over on its side”; “[o]nly shamans, multinatural beings by definition and office, are always capable of transiting the various perspectives”. From this it may be inferred that consciously entering the supernatural realm (with any hope of emerging again unscathed) presupposes a certain aptitude and, most importantly, a traditional discipline (discipleship or apprenticeship). Nevertheless this reality, although usually invisible, is always there and must be reckoned with. This the culturally embedded symbolic outlook accomplishes also for the uninitiated. In a sense, therefore, this outlook is quite pragmatical.

To put all of this another way: Everything in the environment is intrinsically meaningful in relation to the human being *because* everything is a symbolizing sign that *manifests* what lies behind it – the realm of spiritual being, and, ultimately, the One Center. Before the modern revolution in science in the 17th/18th centuries a view such as this was quite influential in many learned circles, often overlapping the ones that begot modern science (see, *e.g.* Henry 1989, Webster 1982). One of its foremost exponents in that period was the highly influential theosopher (*cf.* Versluis 1994) Jacob Boehme. One of his works bears the title *De Signatura Rerum* (“The Signature of All Things”, 1622). Its basic tenet is summarized thus by Weeks (1991: 192):

The signature of things is embodied in the individual word, sound, organism, or object, as well as in the world in its entirety. The signature is the externalized “mirror” of the one inner will that moves or animates all things. [...] In *Signatura Rerum* the outer world in its totality is said to be the mirror of the Divine inner world: ‘the inner [world] holds the outer before itself as a mirror in which it beholds itself in the property of giving birth to all forms; the external is its signature’ [...]. This implies that one need not search for the meaning of the world in some occult, fatalistic design, hidden behind the manifest processes of nature and history and hence wholly distinct from experienced nature and history. Understood in its absolute depth, *the world means just what it is.* [...].

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### The Problem of Environment, 3: Living Beings and Symbolism

In the signature, time is assimilated to eternity, as the inner being recognizes itself in the external manifestation [...].

This kind of outlook was intellectually vanquished in mainstream natural philosophy (what in the 19th century became increasingly professionalized and known as *science*) during the 18th century, the consequences for the “losing” party being very much what Ingold (2000: 209-18) expresses in terms of “global” versus “spherical” imagery (“spheres” signifying the centered view of traditional cosmologies, “globes” the neutral view-from-nowhere of modern rational science):

the movement from spherical to global imagery is also one in which “the world”, as we are taught it exists, is drawn ever further from the matrix of our lived experience. It appears that the world as it really exists can only be witnessed by leaving it, and indeed much scientific energy and resources have been devoted to turning such an imaginative flight into an achieved actuality. [*ibid.*: 211]

[...] the Kantian traveller, for whom the world is a globe, journeys upon its outer surface. It is at this surface, the interface between world and mind, sensation and cognition, that all knowledge is constituted. Not only is the surface a continuous one, it also lacks any centre. [*ibid.*: 212-13]

[...] from a global perspective, it is on the surface of the world, not at its centre, that life is lived. As a foundational level of ‘physical reality’, this surface is supposed already to have been in existence long before there was any life at all. Then somehow, through a series of events of near-miraculous improbability, there appeared on it first life and then, very much later, consciousness. [*ibid.*: 213]

[...] it might be argued that the dominance of the global perspective marks the triumph of technology over cosmology. [...] Cosmology provides the guiding principles for human action *within* the world, technology provides the principles for human action *upon* it. Thus, as cosmology gives way to technology, the relation between people and the world is turned inside out [...]. In short, the movement from spherical to global imagery corresponds to the undermining of cosmological certainties and the growing belief in, and

indeed dependence upon, the technological fix. [*ibid.*: 216; cf Rappaport 1994: 162]

Ingold ends this chapter with the words I quoted earlier, concerning the necessary anthropocentrism of the world. Although short and rudimentary, I think that enough has now been said about the way in which symbolism, also as embodied in certain linguistic constructions, contributes to the arising of human Umwelts in a way which *relates* them to the wider ecological environment of a given culture. Should the local ecological environment change significantly, as it did when Amerindian lands were invaded by Europeans, bringing with them totally different ambiences, and, in their coming, altering Amerindian ones, a clash and confrontation occurs. Under the new conditions the former adequacy of the Amerindian collective Umwelts became weakened because the external circumstances changed. However, in so far as the former circumstances still hold, in some measure, the old ways retain their truth.<sup>144</sup>

Let us conclude, then, by giving a tentative answer to the question of how seriously to take “aboriginal” cosmologies. As I have said intellectual prudence is necessary, being a hallmark not only of our academic culture at its best, but also of the wise ones of other cultures. So, the short answer is: We should take them seriously as examples and indicators of a mode of thought and being which seems to be able very economically to express exceedingly complex relationships between Umwelts and the conditions of the wider ecological environment, and between “this” and “the other” world, in a manner which symbolically (in the old sense) captures the essential qualities of these relationships. And consequently, as I wrote in the last paragraph, in so far as the earlier conditions still hold in some measure, the old ways retain their truth, but in a sense which is distinct from modern scientific inquiry. The difference between the two lies in the different nature of their respective extelligences. As we saw in the last chapter we to a large extent *think by means of artifacts*. This means that our thinking to some extent is conditioned by the

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144 Obviously the historical change in the West from religion and hermetic magic to modern science could profitably be seen in the same terms.

intrinsic nature and possibilities of the artifacts in question (*cf* Ong 1982, Olson 1993 for this point in relation to the artifacts of writing and printing). What has been said in this chapter can be interpreted as saying that human beings also, and quite analogously, think *by means of the living creatures* in their environments – especially under non-modern living conditions. In other words, to non-modern, non-industrial people the natural and “supernatural”<sup>145</sup> environment(s) constitute a very significant aspect of *their extelligence*. We are co-adapted to our technologies and urban environment. They are co-adapted to the animals, plants, spirits and natural features of their forest, tundra or rural environment.<sup>146</sup> But the intrinsic human character and basic principles for co-adaptation in the first place are the same in all. Further implications of this point will be explored in the final chapter.

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145 Viveiros de Castro (1998: 472) realizes, rightly I think, the need for recognizing an environment and realm of being additional to, but permeating, the natural: “a relational definition could be given for a category, Supernature, which nowadays has fallen into disrepute (actually, ever since Durkheim), but whose pertinence seems to me to be unquestionable. Apart from its use in labelling cosmographic domains of a ‘hyper-uranian’ type, or in defining a third type of intentional beings occurring in indigenous cosmologies, which are neither human nor animal (I refer to ‘spirits’), the notion of supernature may serve to designate a *specific relational context and particular phenomenological quality*, which is as distinct from the intersubjective relations that define the social world as from the ‘inter-objective’ relations with the bodies of animals” (my emphasis).

146 Of course, there is no obstacle, in principle, to being attuned to both kinds of ecological environment, but I submit that this almost inevitably entails an inner conflict, the intrinsic characteristics of the two kinds of environment being so very different.





## Part IV



# Changes in Umwelts in the Early Neolithic

## a. Relations between Humans and Living Beings

In beginning to relate the theses and contentions of Part III to the problem of the “Neolithization” of Sweden an appropriate question to ask is: Within what kind of cultural and experiential pre-understanding (Umwelt) were the, with the TRB, new organisms and artifacts apprehended? It is highly unlikely that people of the late Mesolithic would have seen things in terms of adopting a new way of supporting themselves, physically speaking. Hence it would be both highly anachronistic and ontologically inadequate to interpret the appearance of the TRB as constituting the “origin of farming” (as it later developed and as *we* think of it) in this area. Ingold (1980: 281 ff)<sup>147</sup> has considered what in certain respects is an analogous problem, *viz.*, the transition from a dependence on *wild* reindeer to reindeer *pastoralism* in northern Eurasia. In this connection he emphasizes the careful respect bestowed on the supernatural guardians of the wild reindeer by hunters (*ibid.*: 282):

Reindeer hunters, it appears, ‘believe that animals will, or will not, be made available to them by a design that is ultimately beyond their own’ [...]. This design is held and implemented by a spiritual ‘master’ or ‘Being’, identified conceptually with ‘reindeer’ as a species but manifested in particular beasts, who is thought to regulate the provision of animals for human consumption, and their subsequent regeneration. The reindeer themselves are credited with powers of rea-

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147 In this early work Ingold thinks within a basic framework very different from the one he presently espouses (notably in Ingold 2000). This shows up in certain expressions in the following quotes; nevertheless his basic point retains its interest, and he has developed it further in later works (see below).

soning and speech, and are supposed to be willing victims, conniving in their own slaughter. Great care has to be taken in the preparation of kills, so as not to offend the reindeer spirit and thereby jeopardize the future supply of game.

Ingold sees the difference between hunting reindeer and herding reindeer in terms of power (*ibid.*: 281-82):

The power of disposal over a wild animal resource, whose reproduction lies outside human control, is generally vested with the supernatural. Therefore, in order to direct the flow of wealth into his hands, a man must use the occult means available to him, or perhaps call upon the services of a specialist shaman, in order to influence the supernatural powers in his favour. But once control over the herds passes from the spirits to men [as in pastoralism], the former cease to mediate between the latter in this way. Rather than causing the spirits to withhold game from his rivals, the 'violent' pastoralist seizes their animals directly.

The crucial question, then, is:

If traditions of this kind are general among reindeer-hunting peoples, we can only wonder how the first incorporation of live deer into human domestic groups *can have been justified*. [*ibid.*: 282; my emphasis]

This question can be generalized and applied also regarding the so-called "Neolithic transition" in Scandinavia. Is it likely that the justification for such a change (from "wild" to "domestic") can be made without having recourse to a cosmological framework able to comprehend *both* situations? I think not. In the reindeer case Ingold thinks (in the cited work) in terms of an "invasion" of domesticated reindeer:

One possible answer lies in the hypothesis [...] that reindeer were tamed originally not by hunters but, as a substitute for the horse, by equestrian pastoralists moving north into the taiga. Once a categorical distinction is introduced between 'wild' and 'domestic' populations,

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it is of course possible for the people exploiting them to entertain different theories as regards the reproduction of each. The domestic herds could therefore have multiplied and spread by diffusion among indigenous reindeer hunters, without contradicting their belief in the indomitability of the wild stock. [*ibid.*: 282-83]

He further contends that “the adoption of domestic herds by specialized reindeer hunters depended on the diffusion of the animals themselves, along lines of trade, from centres of domestication on the northern margins of the steppe” (*ibid.*: 283). In other words, “the growth of pastoral herds took place not through the capture of wild deer, but through the reproductive increase of an original domestic stock.” If we now pause and (assuming an analogical state of affairs) try to “translate” this to the issue of Sweden’s “Neolithization”, the result would be that since the new organisms (cereals, cattle etc) were imported as *already* domesticated, other rules of conduct would apply in relation to them than in relation to the indigenous species. If it is assumed that the people of South and Middle Sweden in the Mesolithic were hunters and gatherers not too dissimilar to the northern reindeer hunters of later days, then the new state of affairs would, inevitably, have meant that a new kind of relationship to other beings was imported along with the domestic species, and that the latter belonged, so to speak, to *this* relationship.

The circumstances were, however, probably more complex than that. Ingold (*ibid.*: 283) thinks that “if the slaughter of wild animals by hunters is a rite of renewal, so every slaughter of domestic or pastoral stock is an act of sacrifice, offered to the spiritual guardian of the herds in order to secure future prosperity”. The latter constitutes a ritual inversion within what is basically *the same kind of cosmology*:

In the hunt, a presentation of animals is made by the spirit to man; in the sacrifice, men present animals to the spirit. In both, the shaman intervenes as a propitiator, ‘calling’ the spirit to *send* animals to the hunter, and to *accept* animals from the pastoralist. Whether hunted or sacrificed, reindeer are, of course, *consumed* by humans: so it is only the soul of the victim that is released to its spiritual ‘master’ in sacrifice, just as it is only the bodily substance of the wild animal that is released to man in the hunt. [*ibid.*]

Thus, on this speculative basis, it would not appear impossible to surmise that, *e g.* cattle were treated according to one form of human-animal-spirit relations, and wild animals according to the inverse one. Cosmologically there was *no fundamental* alteration. In a later work Ingold (1986: 243-76) pursued the above speculations further and reached the conclusion (*ibid.*: 264ff) that what, on a transcendent plane, unites the view of both wild and domestic animals is a belief in the existence of a Supreme Being who constitutes the common essence of all (including humans, and the shamans mediating between animal masters, humans and the Supreme Being itself). Furthermore, he contends (*ibid.*: 271) that

killings of animals by human hunters *are* acts of bloody sacrifice; only they are ones in which the persons offering the sacrifice are other-than-human, namely the spirit masters of the wild herds. Hunting [...] is a rite of world renewal, so too is the sacrifice of domestic livestock [...]. But in the former case the cycle of regeneration begins and ends not in the human community but in the supposedly analogous communities of the spirits guarding each species of wild animal. With them is lodged the *intention* to present particular beasts for immolation. And when they are killed God takes the life, whence it returns to the spirit concerned in the form of the increase of the species under its guardianship. Again as with the sacrifice of domestic stock, should the flow of life back to the source of Being be blocked, animals will cease to multiply and people will starve.

To repeat: in the hunt it is *the spirit masters* of the animals who sacrifice, through the overt agency of humans, in order to keep life flowing; in the case of domestic animals it is *the humans* who both assume the role of spirit master and overtly kill the animal, again in order to keep life flowing between the different planes of existence. Therefore, we may speculate further, the introduction of domestic animals into Sweden in the Stone Age may have amounted to a change in social relations *among the various spirit beings* (including humans) engaged and involved in what we moderns (who only acknowledge the most overt aspects of this cosmic and metaphysical net of relationships) call the local ecology. But, we should note once again, this change did *not* involve any fundamental change in cosmology; per-

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haps it was seen as something that increased the spiritual and hence socioecological power of certain human beings, who attended to and were responsible for domestic herds, *but only in that specific context*. In the context of wild animals the animal masters still held sway.

We may briefly complement what has now been said about hunters with what Ingold, in another context, emphasizes concerning the views of “primitive” horticulturists; for example,

the Achuar [of the Upper Amazon] do not see themselves as engaged in a project of domesticating the pristine world of the forest [...]. *For them, the forest is itself a huge garden*, albeit an untidy one, and the relations between its constituents are governed by the same principles of domesticity that structure the human household, yet on a superhuman scale. [Ingold 2000: 82; my emphasis]

Similarly, in another case:

Completely absent from the [New Guinea] Hagen conception [...] is the notion of a domestic environment ‘carved out’ from wild nature. *Mbo* [‘planting’] does not refer to an enclosed space of settlement, as opposed to the surrounding bush or forest. Hageners do not seek to subjugate or colonise the wilderness; while the spirit masters of forest creatures have their spheres of influence as humans have theirs, the aim is ‘not to subdue but to come to terms with them’ [...]. [*ibid.*: 83]

The difference between “gathering” and “primitive farming” (agriculture) seems, consequently, not to be so great as one might think. The difference between “farming” and “gathering” may be one of *scope of attention*, the former being a more restricted form of care than the latter, but not different in principle (Ingold 2000: 86).<sup>148</sup> In relation to plants too, therefore, it is not necessary to assume the adoption of any new cosmology, when domestic cereals were first imported to Sweden.

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<sup>148</sup>In general, it has been increasingly realized in recent years that the dividing line between “wild” and “domestic” is quite fluid (see also, e.g. D.R. Harris 1996, Dufour & Wilson 1994).

Let us attempt to relate this general line of reasoning to some of the archaeological finds. In Chapter II: 2*b* it was mentioned that a few (burned) bones were found in a fen at the Middle Swedish site Skogsmossen. Of the three fragments that could be identified one was from a ringed seal and two from pigs (Hallgren *et al.* 1997: 72). Otherwise at the same site 26 bones could be identified: 8 cattle, 5 goat or sheep, 5 seal, 5 fish, 1 waterfowl, 1 forest hare and 1 otter or badger (*ibid.*: 94). The fen was (because of other finds, artifacts) seen by the cited authors as a “sacrificial” site. It is therefore interesting to find there bone from seal *and* (possibly domestic) pig. The other bone finds are also from both wild and domestic species. At other sites too bones from both domestic and wild animals have been found, often at the same places. This may indicate that the remains of wild and domestic animals were not treated very differently. At the Skumparberget 2 site many burned bone fragments were found. Those possible to identify belonged largely to cattle, sheep, goats, and pigs, but among them were bones from seal, fish, bird, hare, marten and wild cat (Apel, Hadevik & Sundström 1997: 36). This seems to indicate that these different bones were not treated differently as far as deposition practices were concerned, and in relation to the above speculations it is neither here nor there. But if we single out another factor that not infrequently accompanies the finds – indications of fire – the speculative range is tightened somewhat.

At some sites, human bones have been found deposited in ways indicating, in their placement and treatment, some definite purpose (being burned for example). Furthermore, at the Skumparberget 2 site the remains of a house, thought to have been intentionally burned down (*ibid.*: 39), were found. In connection with other known burnings (bones) or surmised burnings (“swidden” clearings in the forest), the authors speculate (*ibid.*: 41) that

nature became culture through the use of fire [in opening up clearings]. The reverse transformation took place when the settlement (dwelling site) was abandoned. The building was burned down and fire transformed culture back into nature. The use of fire on waste from stone-tool production would also fit the picture of fire as a medium between culture and nature. The porphyrite used to produce thin-butted axes was quarried from dikes [...] and, in that proc-



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ess, fire was probably involved [...]. So it is possible that even the stone material went through the following conceptual transformation:

*nature – (fire) – culture – (fire) – nature*

The use of fire as a rite de passage is also exemplified on the contemporary TRB site at Fågelbacken [...], where the dead were disposed of by fire.

The authors further refer to the find at Östra Vrå of graves with burned human bones and a large number of grinding stones (Kihlstedt 1996) and note that Hodder (1990: 68) regards grinding stones “as mediums between the wild and the domesticated”. So, by means of an implicit association, fire and grinding stones are both seen as “transformational media”.

A similar idea occurs to Nash (1998) when he says regarding decorated bone and antler artifacts of the Mesolithic that an

interaction through visual display stimulates social identity and a desire to relate to the natural. Bone and antler may therefore act as a transition object between the social/domestic and the wild. [1998: 23]

In other places he speculates further in this vein:

In relation to portable art, a link may well be created between nature and culture (the inscribed designs). One can argue that the raw material (the natural) is being neutralised by inscription, and is therefore being tamed, controlled and utilised. [*ibid.*: 43]

[O]nce a piece of antler or bone is chosen for decoration, meaning then changes from an extension of the animal to the social tool. The artifact's origin is transformed (or tamed). Transformation begins when the artifact is scraped, polished and finally decorated. The vertical orientation of nearly all the designs ensures that natural splitting along the grain of the artifact is controlled and hidden from view; the artifact remains socially perfect. The disguising of natural fractioning may be part of the taming process, a social control over nature. [*ibid.*: 52]

This presupposes a society-nature dichotomy in which the former “relates” to the latter as if it was a realm in and of itself “outside” the sociocultural realm. It takes as axiomatic a typically modern dichotomy and gains all of its sense from this. But is it even likely that this basic categorization is analogous or congenial to the original motives behind the action? I think not.

We may first note that neither fire nor grinding stones were new in the Early Neolithic. There is thus no reason to a priori associate them with a wild/domestic dichotomy (unless, like Hodder 1990, one thinks that this kind of categorization *conceptually* predates *actual* domestication). The association of *fire* with grinding stones, on account of both being “transformational”, is also difficult to substantiate, and perhaps gives imagination too free a rein. If we concentrate on the use of fire alone, however, we have here a definitely interesting idea, albeit the categories of “nature” and “culture” are much too vague. In line with my overall argumentation, I think that the transformational effect of fire “mediated” not between these broad categories (a peculiarly modern conception), but between something else best conceptualized in other terms.

A more adequate alternative to the rather loose chain of associations of Apel, Hadevik & Sundström (1997) could be an account that starts from the assumption that these Stone Age people lived in a cosmos constituted in the way we have discussed above, and in the last chapter. Concerning the role of fire, in the context of a spiritual-cum-ecological society, it can be seen as mediating not between “culture” and “nature”, but, first, between different *planes* of being, and, second, between different *beings* who stand in reciprocal relations as well as in relations of power to each other. In one case (the Chukchi of Siberia) involving domestic reindeer, Ingold (1986: 268-71) finds that the fireboard used to make fire *is itself a spirit*, indeed the master of the herd.

Both fire and fireboard [roughly carved in a human form] play an important part in everyday sacrifice of reindeer. The blood of the slaughtered beast, collected in a ladle, is not only scattered in the direction of the spirit invoked in the sacrifice, but is also ‘fed’ to the fire, and smeared over the fireboard. In addition, during the early autumn ceremonial associated with the slaughter of reindeer fawns

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for their skins, members of the household paint designs on their faces with the blood of a slaughtered fawn. Each household has a design of its own which, with other sacred objects, is passed down the generations. The design is supposed to make the face of the wearer like that of the protective Reindeer Being [...]. When we recall that this Being is also identified with the fireboard, it is evident that the rite of face-painting serves to establish a complete identification between the human and the spiritual guardianship of the domestic herd. One could say that the master of the herd is in fact the Reindeer Being, but that this Being has a double aspect of which one is the fireboard and the other the human owner to whom it belongs. [*ibid.*: 269]

I am not suggesting the direct analogous application of this example in order to make sense of the Swedish Early Neolithic finds. What I am suggesting, and what this example serves to indicate, is that any interpretation of Stone Age finds which aims at being adequate to the probable concerns of the people of that time and context, would be better off trying to think in terms like these, for it was very possibly concerns of this kind that gave rise to the archaeological record – in so far as the latter can be ascertained to be of Stone Age provenance and not too much altered by subsequent occurrences at the sites. We must, in other words, especially shy away from definitely modern categorizations like the nature-culture (or nature-society) dichotomy as usually upheld.

I will give one more example of what I, against the background of the preceding chapters, think is an inadequate way of trying to understand Stone Age finds. At Fågelbacken specific areas (*e.g.* pits and stone packings) seem to have been reserved for depositions of burned human bones and ceramics (Apel *et al.* 1995: 49, 51, 67). The bones were from adult individuals of both sexes. The pottery, furthermore, had been *secondarily* burned at the same temperature (800°C) as the bones, suggesting that they were burned at the same time (*ibid.*: 81-82), or at least in similar fires. All of the vessels are small funnel-beakers. Prompted by these finds the authors comment:

The depositions of burned human bones found in connection with many known “ritual” places belonging to TRB culture in southern Scandinavia [...] must in all likelihood be connected with the changes

which appeared with the transition to a settled existence. The introduction of and experimentation with a new kind of economy, with accompanying social and societal changes, also entailed an increasing ritualization. Religion and ritual became the dominating power, the primary means for securing stability and continuity of the social system. Through the very act the members have together had the possibility of displaying their community and acceptance of the social order.

This raises a host of questions. Why would the burned bones be connected with “a settled existence”? Why would “a new kind of economy” (farming) entail *increasing* “ritualization”? What does it mean to say that “religion and ritual” *became* a dominating social power? What concept of religion is implied? Were people irreligious before, or were they “dominated” by some other religion, or some other power? Is the purpose of ritual to “display community and acceptance of the social order”? What might “ritual” mean in this context? Pondering all these questions, and several more not spelled out here, I wonder: Do not the notions indicated *overly prejudge* the issues in certain given, and conceptually not very clear, directions? Are not these directions of association too removed from the minds of “primitives” to be able to encompass their intrinsic social dynamics? What if we assume instead that the subsistence and economy of the Fågelbacken (and other Early Neolithic) people were not substantially different from their forebears? Then the new phenomena of the Early Neolithic cannot be approached in the above terms, and the supposed connection with subsistence/economy is a red herring. And what if we, as I suggest, assume that the actions (leaving archaeological traces) of these people were the outcome of a lived cosmology utterly different from our economy-fixated one? Should we not then give the former interpretive and explanatory priority over the latter?

I realize that we have many legitimate questions that neither can nor should be answered in “congenial” terms. But if what we want to know or speculate about is the dynamics and changes in Stone Age societies, and if we believe that what these people *thought* influenced the way they behaved, then there can be no real alternative to trying to integrate a conception of what *those* thoughts might have

been like with what *we* think concerning the ontology of human societies. I have presented the outline of such an ontology, and I submit that it can encompass this problem – of relating conceptions intrinsic to a society to the more objective consequences of the actions based on them. From its perspective, therefore, I see no contradiction between an “emic” and an “etic” perspective.<sup>149</sup> Both are, rather, subsumed under a conception which indicates how internal and external, subjective and objective aspects of human life interrelate and follow suit at all points, without, however, loosing their respective characteristics. In any situation what is “emic” and what is “etic” can shift places. This has consequences not only for how we view past historical processes, but also for how we view ourselves in our present contexts. I will discuss the latter in the next and final chapter, but first I would like to say something about Early Neolithic *artifacts*, artifacts being especially ambivalent in regard to the subject/object duality.

### **b. TRB Pottery as a Powerfully Symbolizing Extended Artifact**

Let us recall some of the salient points I have made regarding artifacts. Most importantly, I have subsumed the conventional artifact concept (a thing “authored” by one or more human beings for a certain purpose) under an ecological conception, denoted by the terms “extended artifact”, “artifactual ambience” and “Umwelt (of extended artifacts)”. In the extended artifact concept human beings always figure as more or less intermittent, more or less permanent components of various artifactual ambiances. Thus an extended artifact has both material, mental and process aspects. An artifact in the conventional sense denotes just an individual material object in the extended artifact (the latter may comprise one or more individual material artifacts). When speaking of artifactual “agency”, therefore, it is not artifacts in the conventional sense that is meant, but rather the

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149“An emic unit” is “a physical or mental item or system treated by insiders as relevant to their system of behaviour and as the same emic unit in spite of etic variability” (Pike 1990: 28). An etic unit is an “outside disciplinary system” (*ibid.*) applied in order to study a non-familiar emic system.

*combined* action of people and thing(s) within a *specific* artifactual ambience, *i e*, “in terms of” a given artifact kind. In some cases (*e g*, using and “being used” by a hammer) the joint human/artifactual action is of limited extent. In other cases (*e g*, the building of a large modern house), the artifactual ambience of the emerging *house* (and hence *its* “agency”) embraces a lot of sub-components and sub-ambiences.

Consequently what is said regarding one particular extended artifact with its own peculiar Umwelt, cannot be translated or transferred *in toto* to other kinds of extended artifacts. The actual or possible interfaces between different artifactual ambiences constitute a further problem area, not only for artisans, engineers, or project leaders, but also for psychologists and social scientists aware of the socioecological roles of artifacts. Some basic characteristics are common to all extended artifacts, however, and that is what I discussed in Chapter III: 2. The point of thinking along these lines is to highlight the fact that human beings, in such situations, are *both* originating and directing agents *and* subservient patients (in the sense of Gell 1998; *cf* Chapter III: 2, Section *d*). In other words, artifacts, as I said, transcend the conventional subject/object boundary, and we are part of them just as much as they are part of us – but *only* so long as intimate relations are upheld. When the latter cease, the whole ensemble (of whatever extension) falls apart and its components become “opaque”; the material artifacts revert to being merely “dead” things, and the human beings go on to other pursuits.

The conventional artifact concept entails regarding artifacts *only* as “patients”. With this concept any social occurrence involving artifacts is interpreted solely in terms of human concerns and desires. The extended artifact concept serves to stress the fact that artifacts occurring in human activities *participate* in and *condition* the way many social occurrences develop and are maintained. We are often, literally speaking, at the mercy of the extended artifacts we live with, in, by, and (sometimes) because of. In such situations it seems inadequate to ascribe only to ourselves all and every agency in the matter. This state of affairs may be more apparent now (at least as far as predominantly material artifacts are concerned) than it was in the Stone Age, but in principle there is no difference. What differences there are lie in the specific artifactual ambiances, not in the nature

of human-artifact relations per se (*cf* discussion in the final chapter).

Against this background it is not unreasonable to venture not only that material artifacts (archaeological finds) somehow reflect the minds of the people behind them (as is commonly done), but also that *these minds were to some extent shaped by these artifacts*, when interacting intimately with them. Now, a preliminary application of this perspective to the case of typical TRB artifacts, introduced in Middle Sweden ca 4000 BC may run as follows.

As I have said before (Chapter II: 4), even if human-environmental relations in the Early Neolithic of Sweden were not in general very different from what they were like before, there were still some ingredients in the environment (notably TRB-type artifacts) that were new. We may thus ask: Given this sameness and difference, what could these new items have meant, and what may have been the consequences of their presence? Especially pottery was definitely (as far as we know) a new ingredient in peoples' lives in Middle Sweden ca 4000 BC. In the case of new animal and plant species with a close relationship to human beings (cattle, cereals), it can be maintained that their incorporation into existing ways of life and thinking, did not necessarily lead to an altered relationship with the living environment in general (*cf* discussion above). In the case of pottery its novelty is of a different order, and it can be asked what alterations may, or may not, have followed in the wake of its introduction. First, let us ask: What was it that was *not* very new with pottery? A reflection by Midgley (1992: 397-98) is pertinent here:

How do we regard the appearance of pottery vessels in these obviously Mesolithic contexts [like the Ertebølle]? It is reasonable to assume that containers of some kind had been used prior to the manufacture of clay pots, especially for the purpose of gathering food plants. They were likely to have been made from organic materials such as leather, wood, or reeds, although they were not likely to have been used for cooking. Indeed, examples of wooden vessels are known from Christiansholm [in Denmark]; typologically they correspond to Ertebølle pottery [...].

As a technique pottery-making was probably relatively easy to assimilate and it certainly did not require [a] long-term accumulation of knowledge [...].

From a purely utilitarian perspective, in terms of “containers”, we might argue that clay pots did not involve any deep change as such. But this is clearly unsatisfactory. From find contexts all over the TRB area, it is evident that pottery was extensively used not only in “domestic” contexts but also in what archaeologists are wont to call “ritual” contexts, for example being regularly deposited at specific wetland sites (Becker 1947). Midgley (*ibid.*: 197) comments:

The nature of TRB ceramics – their stylistic variation and frequent non-domestic associations – naturally lends itself to an investigation of its social significance, and in recent years a number of studies have attempted to interpret the pottery from the point of view of its role in the expression of ideational concepts and in the maintenance of social order within the TRB culture communities.

After briefly reviewing a few such attempts, Midgley (*ibid.*: 199) says, quite rightly:

A socio-cultural interpretation of ceramics (including decorative styles) has to consider not only whether pots are domestic or ritual, but also the kind of ritual in which they were involved. Moreover, we need to find out whether the decoration varies between pots used for the different categories of ritual activities, how these activities relate to one another, and whether they change with time and in relation to changes observed in the use of other elements of material culture, changes in the economy and so on. All these different aspects need to be taken into account and relationships on all levels need to be explored not only in one area, but in the entire cultural complex.

That is a formidable undertaking, and this is certainly not the place to go into detailed investigations of this kind, but I submit that the ontological perspective I have outlined might be of some use, in proposing a way of thinking about “artifactual ecology” (in several interlocking senses), which lifts our minds from the level of specific material artifacts, yet also includes them as component aspects of more wide-ranging entities, entities that are not only “social expressions”, but are also extended “agents” in their own right, because of



the humans partly living *within* them. I have suggested that humans enter into and depart from various artifactual ambiances (extended artifacts) according to the situation, and that some ambiances are more encompassing than others – especially stories (which may be regarded as mental artifacts). Such encompassing ambiances (stories retold over and over again) – as long as they function as such – tend to structure the other crucial but in their reach more restricted “sub-ambiances” of particular interaction rituals<sup>150</sup>, involving material artifacts, by coordinating their emotional impetus in a common and cosmologically intelligible direction. An example of such a “sub-ambience”, or several closely related ones, may be TRB pottery.

In other words, the kind of ontological suggestions I have argued for in Part III, provide a framework within which it can be seen how and why material artifacts, viewed in a certain way, presuppose and in a way form part of stories about the world and people’s place within it<sup>151</sup> – in short, cosmologies. I see this as a way of deepening the discussion of the *role* of artifacts (and of plants, animals, and features of the landscape) “in the expression of ideational concepts and in the maintenance of social order” (Midgley 1992: 197). In my perspective “ideational concepts” are not mere or pure ideas (*i e*, they are not just subjective, as distinct from “physically objective” entities), but are literally present in the Umwelt of any human being, and hence also in the wider ecology.

Jennbert (1998: 31) thinks that understanding the “Neolithization” of Sweden is “all about the way in which we perceive internal social dynamics and the way people change their mental habits. People must have been more conscious of the new ideas if the changes occurred within a shorter time.” Obviously I agree with this, in principle (with the caveat that the domain of “the social” should be viewed as much more comprehensive than is usually done). Since it appears to be established that the first appearance of TRB pottery was a fairly rapid affair, it seems reasonable to assume that these changes were consciously perceived and implemented. Now, the widespread, relatively synchronous appearance of TRB type things in itself indicates a great degree of commonality and contacts between different groups

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150 See Chapter III: 2, Section h.

151 Cf Johansson 1999.

over this whole area. This means that they very probably shared a common cosmology, both before and after the introduction of the new artifacts.

Gosselain (1999) has compared data related to pottery manufacture from 102 African societies, with a view towards finding “the underlying ‘principles’ structuring what initially appears as an infinite and illogical collection of themes” (*ibid.*: 206). He found that pottery making was generally associated with certain recurring prohibitions, whose “common denominator is transformation: physiological transformation (conception, gestation, first teeth, sexual maturity, menstruation, menopause, death), cultural transformation (birth rites, initiation, marriage, funerals, ‘ancestralization’) and mythical transformation (the creation of humans)” (*ibid.*: 214). Following L. DeHeusch, Gosselain suggests a deeper understanding of such associations in terms of a ritual concern “to fight against any form of heating in order to maintain the universe and human actions at a low and constant temperature” (*ibid.*: 215). This is based on the fact that among many of the tribes in question “sexual intercourse, menstruation or sickness are explicitly thought to produce heat. And since pregnancy is compared to a cooking or a firing [...], women must avoid any inopportune heating or cooling which would affect the baby” (*ibid.*). Gosselain’s survey indicates that we are dealing here with the various expressions of *a common cosmological conception*, albeit with manifold local (even individual; *cf ibid.*: 209) variations, as to what specific associations are made in actual contexts: “Here, for instance, the system materializes as a pottery prohibition or ritual involving ‘hot persons’, ‘hot things’ or ‘hot states’ in a very explicit way; there, it shows through the implicit connection between different processes deemed to imply heat” (*ibid.*: 220). Gosselain ends his paper by stating “that the question is not so much to determine where function stops and symbol (or style) begins, but to be aware of their remarkable intricacy. Indeed, making pottery and ‘making sense’ are two compatible, entangled, and above all, complementary processes” (*ibid.*: 221).

As with the previous examples regarding reindeer, I do not suggest that the results of this survey of more or less contemporary (but non-modern) African conceptions, should be uncritically transferred to the context of the Early Neolithic of Sweden. Also, Gosselain’s

type of study is not concerned, per se, with how such conceptions might have originated and spread in prehistoric and “pre-anthropological” times. Nevertheless, the “African universality” of the conceptions found by Gosselain (linking pottery and symbolism), indicates the high probability that specific, recurring and widespread techniques such as pottery manufacture, are not likely, in traditional contexts, to occur independently of equally recurring and widespread cosmological conceptions, and that the two are systemically related. Therefore, it may not be too daring to assume that once pottery, with the techniques (*chaînes opératoires*) intrinsic to it, is introduced where it did not “belong” before, it is (as an extended artifact) intrinsically accompanied by certain specific cosmological ideas. Furthermore, it may well have been that these ideas (rather, cosmic powers; *cf* below) – realized, among other things, *by means* of pottery manufacture and use – constituted the primary reason for starting pottery manufacture in the first place. Pottery may first have come to Middle Sweden with certain categories of people, in the context of marriage exchange for example, as suggested by Hallgren (2000b: 159-60), and this only strengthens this kind of scenario, since those persons then could have been “advocates” of pottery symbolism, on a cosmological basis which may have differed *in import* (if not in basic structure) from native ones (*cf* the reindeer case above). The common basis must have been comprehensible to the eventual adopters, but its new, inverted or shifted cosmological emphasis may not have been wholly compatible with the views of the local inhabitants.

Consequently, when people in eastern Middle Sweden ca 4000 BC first began to manufacture pottery, of a kind akin to other pottery in the rest of southern Scandinavia, and on the continent, this pottery making *as such* (in its “artifactual ambience”) may well have led to new cosmologically symbolic associations, consciously worked out. In other words, the pottery (as an “extended artifact”) constituted *a new symbolizing agency* (in the sense elaborated in the last chapter), and in that capacity it was *a new power* in the spiritual ecology of these people, affecting both their Umwelts and the wider ecological environment. As I said, the extended artifact concept serves to stress the fact that artifacts involved in human activities *participate* in and *condition* the way many social occurrences develop and are maintained. And they do this by being regarded as “powerful” – which is another

way of saying that they symbolize, in the non-modern sense. They do not simply “stand for” something else, like a concept; they *are*, as such, powers to reckon with and must be treated accordingly. What the connections may have been between this power and others, that were apparently introduced more or less simultaneously (both artifacts and creatures), I leave for the reader to speculate upon.

# The Universal Validity of a “Dwelling” Ontology and the Context of Stone Age Archaeology

## a. Prelude

Now, having thought about the antics of various beings and artifactual powers in “primitive” societies, it is time to round off my discussion by setting this in relation to the common ambiances in which *we* function, as scholars and scientists. I will do this mainly by focusing reflectively on a central ingredient in our kind of society: modern technology. How different is this, in principle, from non-modern ambiances? What does its experiential predominance entail when we try to think about non-modern human contexts?

Technological achievement is the pride of our civilization and generally we find it hard to think of civilization and its historical and creative background in any other terms, even though some intellectuals among us have for a long time derided the idea of social progress in the wake of technological development. The uniquely human achievement of *technological* progress (never mind the social bit) remains a paramount feature of our thinking about the vicissitudes of history, especially in the long term – and, consequently, about the nature of human being. In Ingold’s words:

despite the anthropological critique of the evolutionist doctrine of technologically-driven progress, no-one seems to doubt that there is a sphere of capability in every human society that can be identified by the concept of technology, and that in primitive societies (and above all in societies of hunters and gatherers) it may be characterised by its relative simplicity. Indeed in their self-conscious and often contrived attempts to avoid the derogatory connotations of the notion of primitiveness, anthropologists are inclined to qualify their references to ‘simple societies’ with the rider that ‘simple’ denotes *technological* simplicity,

and carries no immediate implications as regards social organisation and culture. Thus we are told that hunting and gathering is essentially a technological regime, and that we are not entitled to draw conclusions from the rudimentary nature of this technology about the form or elaboration of the social relations in which its practitioners are engaged. [Ingold 2000: 313]

The basic assumption still directing thought on this issue is that “technology can be scaled in terms of degrees of complexity; [and] that technology comprises an objective system of relations among things, that is wholly exterior to the social domain of relations among persons” (*ibid.*). The consequence is that technology has been relatively ignored among anthropologists, and, conversely, that it has been very much the focus of archeological studies, naturally, since the latter’s research materials largely consist of tools and other implements.<sup>152</sup> Now, because agriculture in its own way can be regarded as a technological achievement, especially as it was conducted in the great civilizations of antiquity, the nature of technology in relation to what is *not* or *not really* technology, is an issue that must be added to the list of other timeworn yet ever renewed questions, that seem to lie at the heart of almost all our thinking on the issue of “Neolithization”. The other such issues (nature or society, biology or culture, animal or human, mind or matter) all seem to have their home in peculiarly modern conceptions of the world, and so it is with the singling out of technology too, as being something very special and distinct, particularly if set against the background of the vast expanse of prehistory.

Against this background (*i e*, the modern fixation on technology as something in, of and for itself), I would like now to discuss a farreaching distinction that Ingold (2000) makes between technique/skill and technology (*ibid.*: 315 *et passim*). This discussion will, in conjunction with what has been said in earlier chapters, help us focus upon very basic questions of what it may be that is *similar* and *dissimilar*, respectively, when we compare our society to Stone Age ones. Such comparisons and their outcomes are, in one way or an-

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152Taffinder (1998: 21-22) notes this as a rather serious hindrance to the application of anthropological studies in connection with archaeological problems.

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other, the very basis for any thinking about the archaeological finds and what they signify, both as such and for us. If Ingold’s distinction holds, then we (technological manipulators of nature) come out as very different from Stone Age people. If it does not hold, then things get a little more complicated.

Technique/skill is “the capabilities of particular human subjects”. Technology is “a corpus of generalised, objective knowledge, insofar as it is capable of practical application” (Ingold 2000: 315). Ingold approvingly cites Mitcham (1978: 252) who thinks that “tools or hand instruments tend to engender techniques, machines technologies”, and, further, that technique involves the training of body and mind while technology involves rationally manipulating exterior things. In Ingold’s (2000: 315) words technique “places the subject at the centre of activity, whereas technology affirms the independence of production from human subjectivity”. We may associate this distinction with the idea put forward at the end of Chapter II: 3: “Cosmology [in the traditional sense] provides the guiding principles for human action *within* the world, technology provides the principles for human action *upon* it” (*ibid.*: 216). This may be further related to Ingold’s “dwelling ontology”, his most basic governing idea. Since this conception, in Ingold’s scheme, is so basic it must, in effect, apply to *any* human activity. That would mean, then, that modern technological thinking and activity too are in fact “modes of dwelling”, modes of being-in-the-world. And Ingold indeed says as much (*ibid.*: 42):

hunter-gatherers do *not*, as a rule, approach their environment as an external world of nature that has to be ‘grasped’ conceptually and appropriated symbolically within the terms of an imposed cultural design, as a precondition for effective action. They do not see themselves as mindful subjects having to contend with an alien world of physical objects; indeed the separation of mind and nature has no place in their thought and practice. I should add that *they are not peculiar in this regard*. My purpose is certainly not to argue for some distinctive hunter-gatherer worldview or to suggest that they are somehow ‘at one’ with their environments in a way that other peoples are not. [last emphasis mine]

The “other people” mentioned here must, reasonably, *include technologists*, and the same surely follows from Ingold’s further assertion that his

ontology of dwelling [...] provides us with *a better way of coming to grips with the nature of human existence* than does the alternative, Western ontology whose point of departure is that of a mind detached from the world, and that has literally to formulate it – to build an intentional world in consciousness – prior to any attempt at engagement. [*ibid.*; my emphasis]

So what becomes of the technique/skill-technology distinction then? On the basis of a universalized dwelling ontology, it is most logical to assert that what Ingold with Mitcham designates as “rationally manipulating exterior things” is *a peculiar form of subject-centered activity*, or “dwelling”. Who can be rational except human beings? And if so any rational operation per definition involves, *at its center*, human subjects. If the mind/world of any organism/person is *one*, in action, as it is according to Ingold’s ontology, how could there exist something human (which technology surely is) that is not dependent on human subjectivity in this very sense?

## b. The Universality of “Dwelling”

Now please keep these introductory remarks in mind as we proceed to analyze Ingold’s distinction between technique/skill and technology in some detail. My comments will center on the relationship between epistemology and ontology. Ingold has much to say against the *imaginary* transcendent position of modern natural science and technology. I tend to agree with this but I also note that this is an *epistemological* critique. The kind of transcendence that I think is necessary, in order to consistently argue for the “centeredness” of reality (of which Ingold’s taskscape is one dimension) is *ontological* and its epistemological consequences – the education of attention, “revelation” – follow from this; similarly Ingold’s stress on the epistemological nature of actual living activities (epitomized in the concept of skill) presupposes an ontology where human beings (and/or organisms) are central. But even though ontology and epistemology



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always follow suit in any consistent metaphysics, they must not be analytically confused. Unfortunately, Ingold tends to do just this in the distinction now to be scrutinized.

Basically, what Ingold aims at is to uphold a definite boundary between the *technical* and the *mechanical*, the conflation of which “lies at the very core of the modern concept of technology” (Ingold 2000: 315). He wants to demolish that conception because

what this concept does, in effect, is to treat the workman as an operative, putting into effect a set of mechanical principles that are both embodied in the construction of the instruments he uses, and entirely indifferent to his own subjective aptitudes and sensibilities. [*ibid.*]

But that a certain *conceptualization* tends to regard a workman as an operative of mechanical devices (machines) is not the same thing as saying that technique (skill) does not have anything to do with *the actual processes* of embodying these principles (which is what technology amounts to), or indeed with the operation of many of the finished devices. What Ingold seems to object to is the very notion that human beings are treated as, or become, *components* in a mechanical operation resulting from the application of technological/scientific principles. He says that by means of technology “productive work is divorced from human agency and assigned to the functioning of a device” (*ibid.*). Equally objectionable to Ingold is that in this case “technique appears to be ‘given’ in the operational principles of the tools themselves, quite independently of the experience of their users” (*ibid.*). Now this is all very well if one wants, as Ingold does, to attack the notion that *technique* somehow resides “outside the user, in the tool” (*ibid.*). But when he, in the next sentence, states that “*to the contrary* [...] technique is embedded in, and inseparable from, the experience of particular subjects”, and that this “stands in sharp contrast to technology, which consists in a knowledge of objective principles of mechanical functioning” (*ibid.*; my emphases), this seems to go against the grain of his own basic ontology. According to Ingold’s own ontological assumptions, as we have seen, there can be no knowledge application of “objective principles of mechanical functioning”, *i e.*, no technology, apart from human subjects, and since this knowledge is human, and since all human knowledge involves practice

(skill), *it follows that technology cannot be fundamentally distinguished from technique*, if we are speaking ontologically and not epistemologically. Ingold argues against this conclusion, however. In the context of the statements quoted above, he goes on to criticize the supposedly modern notion that “where there are techniques there must be technology, for if skill lies in the effective application of knowledge, there must be knowledge to apply” (*ibid.*: 316). This is mistaken, according to Ingold, because “acting in the world is the skilled practitioner’s way of knowing it” (*ibid.*); in other words: knowledge does not and cannot exist outside the practice of human subjects. But, curiously, he fails to see that this, by definition must apply to mechanical technology as well, *and* to the (false) dichotomous understanding of it.

There is no law which says that human practice, because it is grounded in experience, cannot be divided against itself and result in a “false” (in relation to its wider context illusory) reality (*cf* Rappaport 1994: 157). False understandings, only seemingly paradoxically, presuppose and engender their own skills! The resulting ambiances – when externalized in extelligent human-artifact ensembles – become ontologically as well as epistemologically deceptive. Hence illusions can take on a semblance of reality and result in *actual dwelling conditions*, for a while. The difference between ancient techniques and modern technologies cannot involve a difference in subjective (“Umweltian”) activity itself, and, from the fact that modern technology and science (in Ingold’s sense) constitutes a false understanding, it does not follow that this falsity does not engender its own Umwelt. In other words, the difference between technique and technology – I certainly do not deny that there is a difference between the computerized mechanical production of auto parts and the knapping of a flint axe – cannot be a matter of the one being a subject-centered Umweltian activity and the other not. The computerized mechanical production of auto parts also involves technique and human skill at all levels, in different respects. That it takes place in another intellectual and socioecological context than the quarrying and knapping of flint in the Stone Age does not make it any less human, or any less a matter of “dwelling”. If it engenders a totalized world-view (cosmological ambience), however – as it tends to do in the modern world – it can be said that this dwelling mode is ontolo-

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gically as well as epistemologically deceptive. The heart of the *epistemological* deception lies in an unrealistic decentering of human subjects in the dominant *thought* pattern; the heart of the *ontological* deception lies in the creation of an extelligent (ecologically real and functioning) ambience that, literally, *realizes* the epistemological irrationalism and, because of this, subjectively reinforces it. Consequently people come to live not only mentally but also bodily in their own thoughts, in a collective Umwelt that – in the long run – does not attune with the wider ecological environment. But it *is* an existing Umwelt within a set of ecological conditions, some of which are of its own creation, and it *does* demand its own skills.

To sum up so far, I agree with Ingold that the view that knowledge and subject exist apart is false, and that the view that knowledge can rightly be treated or discussed apart from existential and social considerations is also false (if adequate understanding is the goal). But for these very reasons I cannot accept a dichotomy between *techné* and technology. Adopting such a dichotomy amounts, incongruously, to accepting – in this one context – a division which must not be accepted in *any* context. The problems with modern industrial technologies – and there are severe problems; I am the first to admit that – have nothing to do with the conceptual conflation of *techné* and technology, but rather with modern technology’s “dwelling” characteristics, among which the false notions criticized by Ingold and others must be *included*. (It is very important this – to include conceptualizations *as real parts* of the ecological environment and, intermittently, Umwelts of persons; cf Hornborg 2001: 157ff.) I can discern the possibility of uncritically and somewhat hastily reading Ingold as essentially saying something very like this. But literally he does not say this; or, more precisely, he does not always say it. Consider closely the following paragraph:

Now it is precisely the notion that society and technology are external to one another that I wish to challenge. In my view, far from being a timeless datum of the human condition, this externality is a product of history, and a relatively recent one at that. It has emerged in the West, in the last few centuries, hand in hand with what could be called a ‘machine-theoretical’ cosmology. We cannot, I think, retroject into history or prehistory the modern separation of society and technol-

ogy, nor can we impose it on non-Western societies, without seriously distorting our understanding of them. My thesis, in a nutshell, is that in the societies we study – perhaps even including our own – technical relations are embedded in social relations, and can only be understood within this relational matrix, as one aspect of human sociality. [Ingold 2000: 314]

In the first sentence, Ingold says he wants to criticize the *notion* that society and technology are distinct entities. In the next sentence he says that *this* (the notion) is a recent historical development. Next he says that *it* (the notion) has emerged together with a “machine-theoretical” cosmology. Now, what is the difference between

1. the notion that society and technology are distinct entities, and
2. a mechanistic cosmology?

Substantially there is no difference, because a mechanistic cosmology by definition treats the world and the scientific principles of technology (primarily Newtonian physics, later other theories subsuming and reinterpreting this) as wholly distinct and apart from human society and human subjectivity; the latter are rather, fundamentally, to be understood in terms of the physical principles.<sup>153</sup> Hence a mechanistic cosmology presupposes, in practice, a dualism between society and the science behind technology.

Consequently, if we return to Ingold’s argument, he seems so far to speak of nothing but *a notion*. But go back one step. In the second sentence in the above quotation Ingold uses the expression “this *externality*” (*i e*, not simply “this”, as I did in my analysis). Logically this is still most consistently interpreted with an emphasis on “this” rather than on “externality”. But why *does* he add the word “externality” here? Earlier in the same sentence he uses the concept “datum” to denote – yes, *what*? Does it denote the *notion* of the separateness of society and technology, or does it denote that the supposed actual content of this notion *has also become a lived reality*? It is not clear which. If he means that it is a reality (and hence not, or not only, a

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153A theoretical exception seems to be quantum mechanics, but in practice this theory is used just as “objectively” as Newton’s equations are; the philosophical conundrums presented by the former seem to be of no practical consequence.

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notion), this means that the emphasis in the expression “this externality” should be on “*externality*” (and, implicitly, on an actual state of affairs). This interpretation is supported by what he says further on, *viz.*, that “in the societies we study – *perhaps* even including our own” technology is “embedded” in society. Why “perhaps”? In the overall context of the chapter it can only mean that Ingold rather strongly thinks that in modern society technology *is*, in effect, separate from social relations, and the “perhaps” here, then, rather means “but not”. He also says why he thinks so: the subject is “peripheral” to modern machines and technology but it is “central” to pre-modern and non-modern artisanship (Ingold 2000: 316-17); he sees the modern society-technology relationship as a “disembedded” condition. We will return to this in a moment, but first some more comments on the paragraph at hand. When Ingold says that the notion that technology and society are separate should not be retrojected into history or prehistory, or imposed on “non-Western” societies, this only makes sense if he *also* means (but does not say) that it *can* be properly applied to the modern “West”. In sum, in the analysis of this paragraph it becomes obvious that Ingold’s reasoning wavers and hesitates in a way which curiously, and unfortunately, tends to distort the import of his general stance when it comes to modernity.

But what about the “inhumanity” of modern technology, compared to (manual) techniques. The short answer is that if there is something machinelike (*i e.*, “unnatural”) to logic, for example, this can then only mean that there must be something machinelike to *us* (*cf* Talbott 1995: 29-36). The “personal” is, ontologically, not simply a matter of some existential presence; it is a central feature of reality itself. This certainly goes against the grain of the current use of these terms,<sup>154</sup> but it seems difficult or impossible to deny the logic of it, given the assumptions we have made. The assumption that the personal is an irreducible and central property of *reality* leads logically, and only seemingly paradoxically, to the conclusion that *the impersonal must be personal as well, while seeming not to be*. In other words, there is more to *person* than meets the eye. The promoting of personhood to center stage in reality must not be confused with the philo-

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154 Where “personal” becomes conflated with “individually subjective” and even with “idiosyncratic”.

sophical stance of a subjectivism pure and simple, and still less with a well-meaning humanism. This may be related to the concept of “embeddedness” (*cf* Giddens 1990). Ingold writes:

My contention [...] is that technique is embedded in, and inseparable from, the experience of particular subjects in the shaping of particular things. In this respect it stands in sharp contrast to technology, which consists in a knowledge of objective principles of mechanical functioning, whose validity is completely independent both of the subjective identity of its human carriers and of the specific contexts of its application. [Ingold 2000: 315]

Here the first contention (on technique) is ontological while the second (on technology) is epistemological. This stance may be the ideology of technology (or the view of a negative critic) in some quarters, but it is really very strange. Mastering the use and import of a technology – *including*, obviously, its theoretical principles – is highly contextual and in its own way quite practical. Hence it crucially involves skill/technique in Ingold’s sense. Instead of distinguishing radically between technique and technology, it should be emphasized that what Ingold designates as “technology” is *a special kind of socially embedded technique(s)*, and hence something not “unnatural” to human beings. If that was not so the very rapid transition, in one society after another, from “low” to “high” technology would be quite inexplicable. Furthermore, if one thinks that modern technology is “bad” – in whole or in part – this means, following my argument, that the ontological ambience, the very *life* of this technology is “bad”. It is not just “bad” because it is epistemologically false; it is “bad” because it constructs a world (a mode of dwelling) which deludes people on ontological matters as well. It is not only a “false consciousness”; it is a *false life*, a life unworthy of a transcendently centered being because its intrinsic hopes tie us to the events in the temporal world *only*.

Ingold, as we have gathered, reserves the concept of technology for *modern* society: “the notion that society and technology are external to one another [...] has emerged in the West, in the last few centuries, hand in hand with what could be called a ‘machine-theoretical’ cosmology” (Ingold 2000: 314). “Technology”, for Ingold, means

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technical operations *envisaged* as taking place “outside” society. This is an epistemological definition of technology predicated on what he otherwise sees as a modern *mis*conception. His own alternative to this unfortunate separation of technology and society is to hold that “in the societies [anthropologists] study”, *i e*, more or less non-modern, non-Western societies, “*technical relations are embedded in social relations*” (*ibid.*; my emphasis). This is an ontological assertion. As regards modern society, in contrast, “what is usually represented as a process of complexification, a development of technology from the simple to the complex, would be better seen as a process of externalisation or of disembedding” (*ibid.*). An externalization or a disembedding *of what?* Is this disembedding epistemological only or is it also ontological? That it might *not* be ontological is hinted at in a curious caveat in one sentence already quoted above. The full sentence reads:

in the societies [anthropologists] study – *perhaps even including our own* –  
technical relations are embedded in social relations. [my emphasis]

Once again: why *perhaps*? If “technical relations”, which in modern Western societies *are* “technological”, are embedded in social relations, then they must be so also in the modern West, and to say that they are not is to obscure what should be quite clear. Furthermore, it makes no *ontological* sense to say that the development of modern technologies entails a “disembedding” of technology. Ingold here seems to confuse a certain *notion* of technology with the *realities* of technological operations. One could say, however, that the epistemological separation of technology and society constitutes (as a mental artifact) an intimate *component* in the real social workings of technology in modern society (*cf* Hornborg 2001). Hornborg (*ibid.*: 143ff) sees this as being part of a “mystification” of “the machine”; it is in other words a false conception that does not really describe what is actually going on, while at the same time, ventures Hornborg, it forms an essential precondition for the workings of modern industrial society. But Ingold seems in many places to regard technology as *in fact* disembedded from (not intertwined with) society in the modern West.

If Ingold was right, the Cartesian-wise “disembedded” techno-

logical-scientific approach should work well enough in understanding *its own environment*, e.g. in the design and production of computers and computer programs. In fact, however, it does not (see, e.g. Kuutti 1996: 17f, Norman 1998, Gedenryd 1998). This fact reveals a deep incongruity within the larger context of modern society, *viz.*, between practice and theory, or rather between two more or less incompatible practices – since “theory” always entails its own mode of practice, if allowed to go off at a tangent of its own. Now, this could be interpreted either as a kind of schizophrenia (supporting Ingold’s contention), or, more realistically in my view, as indicating that the rationalistic and dichotomizing *practice* has *its own social rationale*. The latter then “runs over” other possible approaches because it is constitutive of powerful institutions (*cf* Saul 1992). What we have, then, is two kinds of dwelling modes, forced to work together by overarching circumstances, one of which seems to be more powerful – at least in the imagination of many educated Westerners, in the thrall of institutional rationalism.

As I see it, the situation of the modern world is that parts of the ecological environment (and attendant *Umwelts*) have changed in many ways but the basic principles behind person/*Umwelt* ensembles have not changed. In other words we live in a socioecological environment different from that in the premodern (Christian) West, and this both entails and is constructed by the various person/artifact ensembles typical of the modern world.

Ingold (2000: 314) sees a parallel to his treatment of technology in the view of economy-society as it has developed in anthropology. He says that “in pre-capitalist societies economic relations are embedded in social relations” but “with the development of market-oriented capitalism – economic life was progressively disembedded from social life”. I would rather say that, parallel to the case of technology, what happened was that social life (*including* economy and technology) changed its character and was “divided up” into several different kinds of “dwelling modes” (in the ontological sense, equivalent to *Umwelts*). These are intermittently and recurrently, *not* continuously, inhabited by human beings in the course of a day or a week.

The “scientization” and “technologization” of the world, then, is a matter of extending the scientific and technological *mode of dwelling* into more and more different domains of human life. Modern



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technologies (their products, actual artifacts) become increasingly important as social quasi-agents – “quasi” because they have to be allowed by humans to *assume* that role. Once this allowal is present, they become real agents – or, rather, the human-artifact complexes (the human’s Umwelts when co-operating within these artifactual ambiances) become, together, new kinds of agents. This state of affairs can be criticized from various angles, of course, but not on account of constituting a “disembedding” of technology from social life. Technology constitutes a technological *life*. Disembedding, therefore, must always ontologically entail a *reembedding* in a new *modus vivendi*. Thus it must be recognized that different kinds of “dwelling” and different kinds of “embedding” have *different qualities* but they are all still dwellings. One can “disembed” or “become disembedded” relatively speaking, but never absolutely; one always goes from one kind of “embedding” or “dwelling” to another.

### c. Some Reflections on the Ultimate Business of Stone Age Archaeology

The “ultimate” of the heading should be taken in contrast to “proximate” in Alexander’s sense (1987: 13-20; see note 83). Not being one myself, I have no intention of trying to tell professional archaeologists their proximate business. The ultimate business of archaeology, however, is an issue of interest to any thinking person, since it deeply concerns our very image of ourselves. I would like to articulate the connection of the last section’s discussion with archaeology as follows. Archaeology is part and parcel of the emergence of modern technological civilization from the 18th century onwards (*cf* Trigger 1989), just like political economy or evolutionary theory. As Schnapp (1996) says in the heading for one of his chapters, archaeology as a modern discipline was an *invention*:

The scholars who explicitly asserted their archaeological credentials aimed to create a new branch of knowledge which was not subservient to philology but embraced the entire material part of human history. In order to achieve this they undertook the construction of a specific tool for the classification of objects: typology. But typology alone could not provide a full framework for the reconstruction of

the past. It was necessary to assign groups of objects and monuments to specific periods, and then to observe the soil, distinguish the layers and recognise the human activities of ancient times. To this end archaeology salvaged the idea of stratigraphy, the foundation for which had been laid by geologists. [*ibid.*: 275-76]

So: “What the founding fathers of prehistory gave to modern archaeology derived from a triangle of reciprocal relations: type, technology and stratigraphy. From these three concepts was to emerge the archaeological positivism which would give archaeology its scientific foundations” (*ibid.*: 303). Archaeology became, in line with an “intramundane” evolutionary view (predating Darwin; Trigger 1998), a matter of establishing the “facts” of prehistory. As a result an implicit agenda of much of modern archaeology has always been – especially from the mid-19th century onward, but with earlier roots – to promote the idea of purely historical origins, archaeologically ascertained, set *over against* the traditional Christian story of creation, and anything else which, to the secular “historically informed” mind, smacks of religion and superstition. In Sweden this direction of prehistoric research was evident at an early date. J. Wilde (1679-1755) wrote in 1738 concerning the changes within nation states that they

do not occur by any coincidence, but follow, next to the providence of God, certain causes and circumstances, and have a both rational and natural connection: Thus they can not rightly and thoroughly be understood each by itself, and the basis for the younger must always be sought in the older, and accordingly be found, that they are like so many joints in a body or links in a chain, which must of necessity be stirred as a whole, when only one joint or link is severed.<sup>155</sup>

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155The somewhat archaic Swedish original runs: “[...] icke hända igenom någon slump, utan komma, näst Guds försyn, utaf wißa orsaker och omständigheter, samt hafwa ett både förnuftigt och naturligt sammanhang: Så kunna de hwar för sig icke rätt och grundeligen begripas, och måste alltid grunden til de nyare sökas uti de äldre, samt således finnas, at de äro lika såsom många leder uti en kropp eller kädia, som nödvändigt hel och hällen måste röras, när en enda led eller ring skal uplösas” (quoted in Jensen 2002: 138).

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In the early 19th century S. Nilsson (1787-1883), the grand old man of Swedish and indeed international archaeology, and a pioneer in geology and zoology as well, promoted the view that “the evolution of society and of science can be understood as a process of natural development following a certain pattern” (Hegardt 1997 110); he believed, however, in the Creator who gave rise to the *laws* of the physical world order (*ibid.*). Nilsson invested the Three Age System of Thomsen with its evolutionary significance, and brought to it a perspective prefiguring systems theory, which was to be characteristic of archaeology well into the last century, and still is for that matter (*ibid.*: 116-17). Hegardt too views modern archaeology as a 19th century *invention* (*ibid.*: 19), from the start and henceforward very much imbued with the ideology of material and social progress, stemming originally from the French Enlightenment. This is tantamount to saying that archaeology is indeed part and parcel of the emergence of modern technological civilization. Consequently, the discussion above concerning Ingold’s unhappy distinction between technique/skill and technology bears very much on archaeology and its place in contemporary society as well. We may ask with Shanks (1992: 55):

By what right does the archaeologist pass judgment? The archaeologist is seen as having expertise. They have the ability to make archaeological inquiries, speak verdicts and write them down as record. Where does this agency, the power to act as an archaeologist come from? Why does society sanction such activities? Archaeology is hardly a natural custom. [...] Is archaeology really gathering knowledge for the sake of knowledge? [...] Where do archaeological values come from? [...] Is it not that the power to adjudicate the past comes from being an archaeologist, being a member of the community of archaeologists?

One is and becomes an authorized archaeologist by “writing up” in a certain manner:

Writing-up is a translation of archaeology’s outer experience. Outer experience is experience in which my self was absent or denied. This denial of self is about purifying and making virtuous our faculties of

perception and sensibility; it is about being ascetic, a negative obsession with the body. [...] And in doing archaeology in this outer experience I worry. That I might slip up and get it wrong, failing in those scholarly virtues to which it is my duty to conform. About letting myself and the present spoil the past. About letting reason be tainted. These are worries about conforming with what other archaeologists are doing, with the authority of archaeology as a discipline. They are worries about what the Father requires of us. [*ibid.*: 68]

And they are worries that are virtually identical in essence in whatever discipline of modern society one is engaged in: engineering, marketing, auto assembly, Public Revenues, military activities. All call for the setting aside of “sensibility” and the subordination to artifactual ambiances imbued with and requiring an emphasis on rationalist thinking, generally along the lines of the institution in question.<sup>156</sup> This phenomenon, peculiarly inflated in modern society, is of course a longstanding and wideranging topic of inquiry and debate, but it is nevertheless important to think deeply about the specific *role* which archaeology plays in all this, not least against the background which I have suggested in this work. I will therefore end by saying something about this, and specifically about what Stone Age archaeology – favorably envisaged – could contribute to the under-

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156The effects of this are succinctly summarized by Saul (1993: 8) in these words:

“Never before in history have there been such enormous elites carrying such burdens of knowledge. This success story dominates our lives. [...]

The possession, use and control of knowledge have become their central theme – the theme song of their expertise. However, their power [which belongs to their institutional, hence “artifactual” ambiances as much as to themselves; my comment] depends not on the effect with which they use that knowledge but on the effectiveness with which they control its use. Thus, among the illusions which have invested our civilization is an absolute belief that the solution to our problem must be a more determined application of rationally organized expertise. The reality is that our problems are largely the product of that application. The illusion is that we have created the most sophisticated society in the history of man. The reality is that the division of knowledge into feudal fiefdoms of expertise has made general understanding and coordinated action not simply impossible but despised and distrusted.”

Saul substantiates this assertion with a numbing wealth of historical cases.

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standing of the nature of human “dwelling” in various contexts. Another reflection by Shanks (*ibid.*: 105) can be interpreted in line with a point made by Gell (1998) on the moral agency of extended artifacts (artifactual ambiances animated by human interest):<sup>157</sup>

Archaeologists *want* what they find. What is found is not naturally ‘authentic’; its ‘original’ context is not natural. (What is natural about the commingling of the cultural garbage heap, of the abandoned home? Only perhaps the decay and entropy; disruption and disorder.) There is no ‘archaeological record’ as such. What is found becomes authentic and valuable because it is set by choice in a new and separate environment with its own order and its own temporality – the time coordinates of the discipline archaeology which give the object its date. This is a moral setting.

The archaeological record, archaeological chronology, archaeological reports, archaeological interpretations, archaeological excavations, archaeological departments, archaeological museums, and so on and so forth, are all artifactual ambiances with their own intrinsic characteristics and demands, into which human persons (individual archaeologists and others) nowadays *enter*, initially as apprentices. “Archaeologists gather [materials] with particular meanings in mind” (*ibid.*: 105); these meanings are concurrently artifactual and long-standing, *as well as* human – and in the latter regard at worst superficial and fickle, at best quite deep and enduring. The moral (or, as some would have it, political) implications of archaeology in all its dimensions has been much discussed in later years, especially since the first appearance of *Re-Constructing Archaeology* (Shanks & Tilley 1992; first edition in 1987). The matter goes deeper, however, being in effect a matter of comparative cosmology, and we may interpret Thomas (1999b: 70) thus when he writes: “Our understanding of materials relating to the past will be generated through a mode of knowing [and being] which is qualitatively different from that which characterised its use in past contexts.” Thus the actual con-

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157 Gell’s point was that artifacts “are objective embodiments of the *power or capacity to will their use*, and hence moral entities in themselves” (Gell 1998: 21); see Chapter III: 2.

temporary ambience<sup>158</sup> of archaeology must be taken into account, in a comparative manner, when we try to think about the remote past, and this taking into account (or its neglect) is what *makes* archaeological and related studies moral, although ostensibly they only concern “facts”.

In line with the circumstances of archaeology’s emergence as a discipline, its current cosmological ambience is still very much imbued with the notion of progress and evolution. O. Marquard (2000: 50), not an archaeologist but a philosopher, notes that the modern concept of progress appeared around 1750 and *at the same time the first museums appeared*. He sees this as an aspect of the inverted or reverse side of the modern “culture of innovation”, *viz.*, what he calls the “culture of rejection” (*Ausrangieren*). The latter takes three forms (*ibid.*: 50-51):

1. The methodical *neutralizing* of the world of tradition.
2. The *forgetting* of the world of tradition.
3. The *throwing away* to make room for the new.

This complementary process is necessary if the culture of innovation shall be able to prosper and develop along its self-appointed trajectory. The discarding of the old is, however, for many reasons unsatisfactory, if it becomes too much a wholesale affair. As human beings we need a sense of connection with what went before, hence museums and equivalent phenomena. In them we can preserve what we like and need to keep of the past, at the same time as it is, by this very process of conservation, effectively *neutralized* and *forgotten* in relation to most of our current innovative concerns. In our technology fixated society these remnants do not serve any forward-looking *creative* purpose. Thus far Marquard.

But exactly because it is the *culture of rejection* which gives birth to museums and the like, it also becomes intrinsically difficult to study

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158I generally prefer this term (with the connotations I have given it) to the Heideggerian concept of “world” used by Thomas. In Thomas’ understanding, a “world” is “*a structure of intelligibility*. When human beings encounter phenomena on a day-to-day basis, they can make sense of them by assigning them to a meaningful context” (*ibid.*: 65). As I have made clear, I do not think that “a meaningful context” is solely a matter of *our* assigning meaning to phenomena. Phenomena are *also* intrinsically meaningful, but in ways which we may not be able to perceive or comprehend.

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and *make sense* of the preserved and retrieved items. After all, they *are* discarded. Old tools, customs and ideas are of “no practical use” *as such*. At least this is the common feeling, and its consequences include the semi-automatic rejection of any modes of thought and being that seem – to the prejudiced modern eye – to “belong in the past”. That, I submit, is why almost all studies of past ways of life and thought, and of past cultural changes, are conducted on *our* terms. The idea that *we* might be wrong, or misled, in relation to certain past ideas of nature for example, is simply too much for the culture of rejection to bear. And yet, I submit, this is exactly what we should be open to, because this is the only way to really learn anything worthwhile from the past.

No, I am *not* arguing that “the past is better than the present”. Such associations are entirely beside the point. What I am saying is that ways of thinking and living no longer present in modern “hi-tech” society, or indeed anywhere soon, are and were *different* (yet *deeply* similar), and it is only if we learn to appreciate the import of such differences (against a background of deep similarity) that we can have any hope of beginning to understand the character of pre-modern cultures. This leaves us with the question of why and on what basis we should try to understand the character of non-modern cultures in relation to our own.

The upshot of the alternative ontology argued for in this book, is that the origin of *current* circumstances (whatever the time period) is never simply historical. It has a *present* aspect which can never be reduced to or expressed in terms of historical (temporal) progression or succession, and this present aspect belongs to the metaphysically and ecologically central ontological position occupied by human beings. This position, and with it a basic aspect of human existence, is, I have contended, *always and everywhere* of the same basic nature. This is the fundamental reason why the historical and causal origins of phenomena must not be confused – causes of a ubiquitous nature cannot be tied to specific circumstances.<sup>159</sup> And for this very reason it is possible to rationally discuss and compare temporally and spatially local Umwelts and their particular ecological environments. And *this*, I further contend, is central to the *ultimate* business of archaeol-

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159“Causes” in a general, not mechanical sense.

ogy and history as interpretive endeavors, not the search for more or less imaginary temporal origins. The truly transcendent dimension of human life makes it possible and worthwhile to study different modes of being-in-the-world – what they demand and comprise, how and why they transform into one another, not simply historically but ontologically (in terms of specific *and* general Umweltian relationships to changing ecological environments).

#### d. Final Remarks on Transcendence

This referring to a transcendent dimension can be confused with a rationalistic theory of knowledge. It is not just a matter of epistemology, however, but first and foremost one of ontology and metaphysics, realistically conceived. The difference may be highlighted by returning, once again, to Ingold. He, as I see it, speaks of *rationalism* when he, in various places, discusses “the sovereign perspective of abstract or universal reason” (Ingold 2000: 15), and states that it “treats the lifeworlds of people of different cultures as alternative constructions, cosmologies or ‘worldviews’ superimposed on the ‘real’ reality of nature”. It can easily be seen that, from the standpoint of this kind of epistemology, the results and conjectures of natural science and those of cultural anthropology (and other humanist disciplines, or “the arts”) are *dissimilar but perfectly compatible* companions in that they *never need to meet*, because, somehow, universal reason transcends them both (*cf ibid.*: Figure 1.1). The latter constitutes the abstract common denominator of all academic studies, however different in style and subject matter (barring certain “postmodern” exceptions, perhaps).

Ingold’s dwelling ontology, however, leads to a much more disturbing view, focusing on the fact that all human social activity (*including* rational thought and argument) is always situated in some specific environment, “and the sensibilities built up in the course of [the] unfolding [relationships in a given environment], underwrite our capacities of judgment and skills of discrimination, and scientists – who are human too – depend on these capacities and skills as much as do the rest of us” (*ibid.*: 25). This leads Ingold to admit that “our very activity [as intellectuals and academics of ‘the West’], in thinking and writing is underpinned by a belief in the absolute worth of



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disciplined, rational inquiry” (*ibid.*: 6). I completely agree with this, but I do not think that the ability to conduct rational and comparative inquiries and studies, is founded on an *illusion* of detachment. Abstract reason is, rather, one possible *mode* of detachment and ontologically presupposes (but is not identical to) a real “*non-embeddedness*” in particular “*dwelling*”.<sup>160</sup> Rationalism would then, in effect, be a “*fetishistic*” *misconstrual* – tied to practices connected with certain artifacts (Olson 1993) – of a much more profound situation. In terms of “*dwelling*”, it could be said that human beings are (or can be) transcendent “*dweller*” as well:

He is still weak for whom his native land is sweet, but he is strong for whom every country is a fatherland, and he is perfect for whom the whole world is a place of exile

wrote the decidedly non-modern thinker Hugh of St Victor (1096?-1141; cited in Ross & McLaughlin 1950: 590). He also wrote:

Reason uses imagination as a vestment outside and around it; if reason becomes too pleased with its dress, imagination, this imagination adheres to it like a skin; separation is effected only with great pain.<sup>161</sup>

The common denominator behind all particular human *Umwelts* is, I submit, exactly *acts of imagination*, not in the sense of “*fantasy*” but in a more literal sense – of creating and being created in an *image* of the real, but possibly also of illusions. Some of these acts are internally generated by the human organism according to its species-specific characteristics; others are contributed by parents, peers, other living beings, and artifacts, in social interaction. Thus there is a certain limited realism to imagination in this sense, because it is shared, also across species boundaries (*cf* Chapter III: 1). However, not least

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<sup>160</sup>It may be argued that this detachment is made possible by language (*e.g.* Rappaport 1994: 155), and there is truth in this, but with the view of meaning I have espoused, largely along with Ingold, it could also be argued that language – in this case – makes possible the *expression*, and further articulation and understanding, of a state of affairs (the dual character of human being) that is basically the case anyway.

<sup>161</sup>Quoted in Cocking 1991: 146; *cf* Johansson 1999.

because of the relative arbitrariness of language, there is no guarantee of total realism in apprehension and as to Umwelt content. As to their *mode of arising*, nevertheless, these “imaginalizing” acts share a common nature, irrespective of the specific contents of the different “imaginalized” worlds (Umwelts). Furthermore, we thoroughly imagine (confidently believe *and perceive*) that our Umwelts (ontological “dwellings”) are totally real and reliable in all respects, until the moment when something happens to us that shatters that confidence. The “shattering” agency, generally, is most probably something that, before the encounter, resided in the wider ecological environment. Less dramatically, the same principle applies to any genuine learning situation, meaning that learning, from this perspective, is a matter of items, entities or situations “revealing” themselves to a potential knower who is prepared to “see” them (perceive, acknowledge and come to an understanding of them, based on relationship). The preparation involved, in line what has been discussed earlier, is most effectively provided within the pragmatic framework of story telling, as has already been discussed.

The connection of this kind of discussion to the practice of archaeological interpretation is not as farfetched as it may appear. Archaeology is an endeavor in *learning*. Given the richness and variety of its finds from different times and places, it has great potential for inducing challenges to our collectively established Umwelts – *provided*, I submit, the interpretation of the finds is *not* conceptualized in terms of “the historical origins of” whatever we deem to be retrospectively important. All conceptualizations in this vein will, because of their intrinsic logic, force us to see past lives in *temporal* connection with ours, and ours as simply successive in relation to theirs. This postulate of temporally mediated connection means that *we have come farther...*, or that *we have overcome...*, or that *we are on our way to...*, or that *we have lost...* – all of these connotations precluding any possibility of learning from past lives anything other than what fits into our already established Umweltian preoccupations. It encourages, in other words, our uncritical immersion in mundane, contemporary concerns, and it discourages the detachment that would make it possible for us, to get to know ourselves and the paths taken by humanity, in a more profound sense than as being – when all is said and done – no more than one kind of transient phenomenon among others.

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### Coast to coast books

1. Per Persson, Neolitikums början – undersökningar kring jordbrukets introduktion i Nordeuropa. Göteborg 1999. 263 p., 89 figs., 44 tab.
2. Helena Knutsson (editor), Halvvägs kust till kust – stenålderssamhällen i förändring. Uppsala 2000. 342 p., 103 figs., 27 tab.
3. Jan Apel, Dagers, Knowledge & Power – The Social Aspects of Flint-Dagger Technology in Scandinavia 2350-1500 cal BC. Uppsala 2001. 368 p., 73 figs., 21 tab.
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