Martin Drenthen
ISIS, Faculty of Science, Radboud University, Nijmegen, the Netherlands

Ways to embrace a river?

On the need to articulate a new river ethics

Abstract

River management has recently seen a shift towards a new paradigm concerning the need to adapt our policies to basic river ecology. It is often argued that this new ('Room for Rivers') approach should be complemented with another innovation, namely to involve local inhabitants in the process of policy making, so as to ensure that spatial measures meet social demands. However commendable such an innovative participatory approach is, it runs the risk of remaining only a shallow business if the overall question of what a river actually is*, fails to be articulated into the participatory process. Today's dominant river management view sees rivers as a complex social-ecological system that should be subjected to an intelligent 'integral approach'. However, such a systemic, 'helicopter view' perspective is hard to reconcile with alternative conceptions, such as the view of a river as a dwelling place. In this paper, I argue that more attention should be paid to the different cultural and moral meanings connected to rivers, in order to have a good foundation for doing justice to the different views and opinions of those involved. I discuss some alternative interpretations of the meaning of places and place attachment in the 'new nature' projects that are part of the new river paradigm, and some of the tensions between them.*

Introduction

A large part of the Netherlands lies below sea level or below the high-water level of the major rivers. To protect the land from floods, a nearly completely connected system of dikes arose, as early as the mid-14th century, which determines the image we have of the landscape of the Netherlands up to the present day. However, precipitation levels are expected to rise due to climate change, causing increased peak discharges on the rivers. The traditional approach to flood control – dyke reinforcements – has shown serious downsides, because it causes the peaty soil to dry out and the land

to subside, whereas peak water levels are increasing. A future breach in the dykes will have increasingly serious consequences. In 1996, the Dutch government therefore decided to abandon the traditional water policy of dike reinforcements. Reinforcing the dikes is only considered if other measures are too expensive or inadequate. The new policy of flood risk reduction is aimed at creating more space for the river and lowering high water levels, by means of deepening the forelands of the rivers, placing dikes further inland, lowering of groins, enlarging summer beds, and other interventions. Ecological restoration is an important second objective of the new policy. Former agricultural areas are transformed into new wetlands and floodplain ecosystems (so-called 'new nature') to reduce the risk of floods. This creates robust natural areas and is also meant to improvem the 'spatial quality' of the river region.

Implementation of these projects sometimes runs into problems due to lack of support among local residents. Some of these problems relate to fundamental differences in the way people interpret these projects. Skeptics say that the new policy of 'room for the river' goes at the expense of 'place for the people'. Many local inhabitants regret the loss of old agricultural landscapes that disappear in the process of giving room to the river. They feel that their sense of belonging to the landscape has suffered from the restoration practices. Water managers, 'nature builders' and others involved in the new policy are blamed for failing to recognize the importance of meaningful relationships of people with the landscape in much the same way did the as traditional policy of dyke-reinforcements.

Others, however, believe that many of these problems can be avoided if one involves local habitants in the early stages of landscape planning. Seen from the new paradigm in river management, rivers are complex *social-ecological* systems that should be subjected to an intelligent 'integral approach' that acknowledges both the basic ecology and the socio-cultural context of rivers. In this paper, it is argued that – although the new river management view can be seen as an improvement of the old one – there are some problems connected to this new water management view as well. The reason for this lies in the managerial style of reasoning itself. The managerial view implies a conception of what rivers *are*, that is hard to reconcile with alternative conceptions, such as the view of a river as a dwelling place. Many people are concerned with the possible impacts of the new water management policy, because they conceive the management outlook on the river as somehow at odds with the way they themselves relate to these riverine places. If river managers want to seriously address the social and cultural issues related to river management, they should be prepared to put in perspective the functional managerial river view itself, and open themselves up for competing conceptions of what a river means.

I will discuss three possible alternative interpretations of the meaning of places and place attachment

in the 'new nature' projects, and address the question if and how the difference between these perspectives can be reconciled. But first, let me briefly go into the dominant water management perspective in more detail.

From a traditional to an integral river management perspective

In traditional river management, a river is seen as a *complex spatial system* with a wide range of functions: water discharge, transport, irrigation and agriculture, recreation, flood safety, water supply, habitat et cetera. Traditional river management policy was focused on somehow reconciling these different functions, with emphasis on flood safety and other economically important aspects. Until recently, river management mostly focused on control over nature: river managers tried to understand the river system, collect relevant scientific data, and then construct ways of systematically intervening in the system (e.g. by constructing dykes, canals and groins) so as to meet human needs. However, many previous attempts to master nature turned out to have serious downsides. In the last decades, we have therefore seen the rise of a more sophisticated approach to rivers: *ecosystem based river management*. This new paradigm of river management sees rivers as complex *ecological* systems. In stead of attempting to control nature, the new river management regime seeks to adapt to the river. The 'Room for the River' water policy is aimed at reconciling human needs and ecological functions. With technical measures such as lowering of the groins, and building floating houses, it should to a large extent be possible to overcome potential conflicts between humans and the river – a truly sustainable river policy.

Although the ecosystem view of rivers has obviously broadened the perspective, it still shares a common characteristic with the traditional river management paradigm, in that it starts from a *functional, systemic, 'helicopter view' perspective* on the river.[1] One a serious problem remains with this perspective. Any functional approach to rivers will have difficulty to clearly see how rivers are always also places that make up a world for people living there, a world that is filled with all kinds of non-functional meanings. River management institutions cannot trust that local people will somehow manage to articulate these non-functional meanings and drive them into the river manager's ear. If the river managers cannot open up their own perspective, they risk shouting down the other-

[1] For a thorough critique on the functional view of ecology, see: Katz 1992.

than-functional perspectives in much the same way as the traditional policies did.

For that reason, some have argued that the scope of river management should be broadened even further, to what could be called a truly comprehensive river approach. This paradigm sees rivers as complex *social-ecological* systems and acknowledges both basic river ecology *and* the socio-cultural context of rivers. This, however, will not help deeply, because also the comprehensive approach starts out from the basic idea that rivers are complex systems that have to be modeled in detail if we want to comprehend and control its different functional properties. It remains rooted in a functional outlook on the world: once we understand the functional properties of a river system, we can consciously influence that system according to our own goals. Even if people are invited to actively participate in policy making, the overall context of the water policy is determined by the same functional river view that has dominated water policy for centuries, and non-functional meanings will be silenced, outflanked by the functional way of looking at and dealing with the landscape. To strengthen my case, let us look at the way that some non-functional aspects are dealt with in the comprehensive approach to rivers.

Some have presented comprehensive river management as an opportunity to not only increase biodiversity but also increase the overall 'spatial quality' of the river landscape. The term 'spatial quality' is introduced to give voice to place-based concerns within the overall framework of the room-for-the-river plan. In a process of public participation, the local population is actively involved in the renovation design process of the river landscape, and special attention is being paid to the interests of local inhabitants (quality of housing, possibilities of recreation, involvement of local entrepreneurs). But although terms like 'spatial quality' and processes like 'participatory spatial planning' are meant to address issues of place, they do not give voice to feelings of place directly. They supply a procedure and not a content. They allow local people to speak but do not offer a substantive platform for local people to speak on. They do not invite or help articulate what local people may be struggling to find words for. And finally, they do not supply the river manager with any notion of what might be possibly be *heard* in all these words.

In the recent past, interventions such as large scale dyke reinforcements have lead to many local protests, because people experienced the interventions as disrupting. Meanwhile many of these protesters have shifted their attention to the consequences of the new river paradigm, such as scraping off clay recent deposits, digging new side channels, cutting down exotic trees, or 'cyclic rejuvenation' in which whole hectares of forest are periodically removed.

Many inhabitants report that the new policy reduces their feeling of connection to the land.

By way of first conclusion, river managers who are interested in adapting their river policies to a cultural context should be prepared to put in perspective their management view itself, and consider what other, non-functional perspectives have to say. In what follows, I will discuss several alternative conceptions of what rivers actually are, focusing on the meaning of 'new nature' along the rivers for the experience of place. This exercise should help understand the rich cultural context in which these new river landscapes could become meaningful places. I will also discuss tensions between these perspectives, and problems that arise as soon as we confront them with each other. The question of the nature of place does not have easy answers, but that should not prevent us from thinking about them.

The legible landscape as an ethics of place

In the late 1980s and early 1990s, the Dutch Directorate for Public Works and Water (Rijkswaterstaat) planned to heighten old embankments along the major rivers Rhine, Waal and Meuse. The old river dikes had to be reinforced, and to be cost-effective, the plan was to replace the often century-old, small-scaled, winding dikes with higher, more robust and straighter ones. The plan provoked a lot of opposition. According to the protesters, large scale renovation of the river landscape from a purely functional view neglects important aspects of what it means to live in these places, destroys regional diversity and produces an empty and altogether mute landscape that alienates local inhabitants from their own neighborhoods. Landscape activists and many local inhabitants pointed out that the measures would destroy the traditional typical Dutch river landscape, made famous by the works of 17th century landscape painters like Jacob and Salomon Ruysdael. This landscape contains century-old remains of former human inhabitation: wooded banks, terraces, dikes and mounds all testify of a long history of human habitation, dating back to Germanic and Roman times. Some traces reflect previous natural events (e.g. flood pools), others testify of past human-nature-dialogues; many provide a habitat for rare species of animals and plants. Legible signs add diversity and reflect local differences in 'place culture' but also in geomorphology.

According to poet and novelist Willem van Toorn, one of the spokespersons for the protesters, the Dutch landscape is a 'legible landscape' that tells a story about the place, the

way that humans have dwelled there, how they related with each other in this landscape; it reflects the (past en present) socio-economic efforts of people trying to survive along the river. We should protect this old landscape, because "we have to stay in touch with this past – not because the past is better than our present, but simply because we owe it our existence, our identity, our vision of the world, and because we can only think about the future by making use of our past experiences." (Van Toorn 1998, p.66) We should preserve these old landscapes because the legible features enable humans having a meaningful relation with the land.

The landscape protests against large-scale dyke reinforcements were partially successful. Eventually, the Dutch government decided that new dykes had to be integrated into the existing landscape more carefully. But from the perspective of the legible landscape, the shift to the paradigm of ecosystem-based river management is hardly an improvement. The 'Room for the River' project will have a similar disruptive result: the creation of wetlands and forests in the floodplains implies removing human signs and imprints in the landscape, nature development will eventually wipe out all traces of human history in the landscape, and thus transform the legible landscape into an a-historical and mute space. According to Van Toorn, "the type of nature that nature developers aspire does not have anything to tell to humans. […] Humans are strangers in these areas, merely visitors in their own landscape. […O]ne can create something like nature, but […] never restore a cultural landscape that has grown in a process of many centuries, once it is destroyed" (Van Toorn, 1998: 77-78).

The commitment to the old cultural river landscape, at least as expressed by Van Toorn, clearly has an ethical side to it: it reflects an ethics of place. For the "residents for whom the signs and the narratives of the land are food for the spirit", the meaning of their lives derives from these places and from history. The ability of inhabitants to "read the signs in the landscape" provides them with a moral measure (a sense of what is and what is not appropriate here) and a sense of belonging. The traditional sense of place and sense of belonging relied upon a specific knowledge of what was appropriate, what was 'in place'. The moral ideal is a harmonious intersection of nature and culture in which the landscape is saturated with meanings and signs and populated by those who can and who care to read these signs. A landscape should be a place where one can belong, and a sense of place should add to one's feeling of identity.

The ethics of place rejects any managerial perspective because that fails to recognize the specific ethos of each specific place; the manager is a distanced stranger to the landscape. What is rejected is the

management view that sees the landscape is a blank slate that can be rewritten at will, and sees people as free to decide whether to organize a landscape with purely functional considerations in mind, or take into account considerations of 'spatial quality.' At issue, however, is not just how we make places, but also how these places make us to who we are. Are places merely interchangeable, manageable entities, to be reorganized by humans at will? Or do they have an internal ethos that humans have to adapt to if they want to be truly human?

Regrounding our Sense of Place

But the traditional landscape activists are not the only ones interested in an ethical relation with places. Many restoration biologists also reject a purely technical approach of 'constructing nature' and the idea of nature as being malleable. But instead of rejecting ecological restoration, they argue it should be reinterpreted: as an attempt to reach a more sensitive relation with nature and landscape. Restoration ecologist Wouter Helmer, a staunch defender of the ideas behind 'Room for the river', argues that nature developers should respect the "genius of place" (Helmer & Overmars 1998). This does not mean that we should always leave everything the way it was, but that we should start with a meticulous examination of each particular place. In stead of just 'digging side channels' to help the water discharge, one should 'peel off' old clay depositions and thus uncover ancient river branches. Respecting the genius of place implies that we take into account the deeper geomorphological structures of a particular place, but also that people should be allowed to interact with these natural processes in ways that are both physically and economically sustainable. By showing how the landscape must have been like before humans dominated the landscape, restoration can provide place-history with a broader context: a broadening and deepening of the ethics of place, rather that a destruction of it. The idea is that if people are confronted with the way in which a river has changed its course during the past millennia, they can more easily connect with the first inhabitants of the land, who had to deal with natural forces that were much stronger. Such awareness can also help people to 'embrace' the river again, and learn to live with its dynamic nature instead of trying to control it.

The 'regrounding perspective' implies a place-based ethic as well. By confronting us with a deeper 'truth of place', it helps to limit our cultural appropriations of place, and in stead corrects, broadens and deepens our sense of place. Proponents of this idea of 'regrounding' our sense of place criticize the defenders of the old cultural landscape for their anthropocentrism (and conservatism): in the idealized view of the cultural landscape, nature does not really have voice of its own. Nature development can help to correct this human-centeredness. The legible signs inscribed by humans are not the only ones that tell a story: many nonhuman beings and natural processes too have made these places into what they are. Humans are merely co-authors of the landscape, and the first chapters of the

narrative of each place were written by nature alone.

In the 'regrounding' perspective, an emphasis on a new 'natural' baseline does not make the new nature areas less cultural. On the contrary, they should be seen as new dialogical human-nature practices that enable both nature and humanity to express themselves in a particular way. If we recognize that human signs and traces can add to the meaning of a landscape, why then should not also the present generation be allowed to leave signs in the landscape, provided they are in tune with the land? Embracing a river would mean finding a new way of dwelling in a place, investing meaning to the land, while acknowledging the meaning of what is already present.

The two alternative views presented above differ considerably, but reconciliation between them is – at least in principle – conceivable. Both are interested in acknowledging the past, they mainly differ in their time horizon. A common ideal could be a multi-layered 'palimpsest' landscape, with different legible layers on top of each other, that reflects human history *and* 'grounds' our sense of place in an understanding of the earlier and deeper layers. The big challenge would be, of course, how to uncover deeper layers (for instance clearing older river channels) without destroying more recent traces. One could start very pragmatically by preserving those signs that actually tell a meaningful story. In the Groenlanden, an ecological restoration project along the river Waal, remnants of defensive works from the cold war are actively maintained and the structural features caused by a 19th century waste dump were considered to create an interesting diversifying gradient for future natural development.

Artificiality and place detachment

We should, however, be cautious not to hasten to the conclusion that all tensions can be solved. Despite the obvious similarities between both approaches, some problems will not be that easy to reconcile. Willem van Toorn, for one, does not buy the rhetoric of 'genius of place'. For him, new nature merely serves those who visit a place for shallow leisure and consider themselves "self-invented, autonomous beings" for whom "history is merely a grab bag" (1998, p.76-77). In fact, historians and ecologists will *invent* a narrative that makes a particular place 'legible' again, in stead of actually reading the deeper layers of the landscape. "The type of nature that nature builders aspire does not have anything to tell to humans – that is why these newly created nature areas have to be provided with information pavilions, signposting, treasure hunts along tree species and ponds with half domesticated otter. Humans as strangers, as visitors in their own landscape." (1998, p.77) Van Toorn's worry is that the new nature narrative is utterly superficial and that its proponents see ethics as just another social engineering tool. The deeper textual layers that interest restoration biologists are not

legible to most of us: we need experts to explain them to us and draglines to bring them to the surface. The danger, therefore, is that not nature, but the 'nature experts' provide us with a new sense of measure or baseline. The question, of course, is whether Van Toorn's mistrust is justified.

At this point, it can be helpful to look at the work of the French anthropologist Marc Augé. Augé starts with the idea that place is culture localized in time and space. Augé distinguishes three aspects of place: (1) places are historical; inhabitants of places do not make history but find themselves in it (2) places help constitute the identity of those living there, and (3) places define relations: places link one person to others living there (Augé, 1995: 52). However, according to Augé, we now live in a 'supermodern' age in which more and more locations lack these features. Due to the acceleration of history, the feeling of being a successor of our predecessors is more and more strange to us. Due to increased mobility, different places in the world more and more resemble each other, preventing us from really connecting to specific places. And finally, due to the rise of individualism, we do no longer collectively share places as a shared frames of reference, but in stead, all of us have our own 'trajectory' in space. As a net result, more and more locations lack the aspects of place that enabled people to integrate place in their lives in a meaningful way. Typical examples of non-places are airports, service stations, and shopping malls. To be sure, these non-places *can* be filled with meanings by advertising campaigns and corporate identity projects. But, according to Augé, these new place meanings are in constant need of explanation by experts, and they do not reflect a genuine history or define a person's identity; neither do they genuinely help to define the relationships that people have with each other.

So far, Augé seems very similar to Van Toorn. We can, however, extend Augé's critical reasoning a bit further, and question the credibility of the 'legible landscape' ethics as well. According to Augé, 'places of memory' can also be considered as non-places. Many traditional landscapes are merely an expression of a nostalgic attitude that uses traditional cultures of place – like (reinvented?) folklore, local history – to consciously provide a place with a meaning, but in the end most of us will indeed remain (to some degree at least) strangers, visitors, aliens to the landscape. The ethics of the legible landscape assumes that inhabitants share a certain sense of place and ability to read the signs in the landscape. But is this assumption actually justified? Some culture critics would argue that, today, hardly anyone is really deeply connected to a location in the specific sense that Van Toorn is expressing. Of course, we all *feel* connected with a particular place every now and then; moreover, most of us even feel connected to more than one place. Of course, to some extent some places still are shared reference points that partly determine people's relations to each other, but places are no longer the taken-for-granted background shared by all members of a community (if a community exists at all). Often, our reasons for value specific places reveal more about us than about these actual places

themselves. And most of us dare not to pretend to be able to read all these signs without assistance. Furthermore, the places that we have a special connection to are probably very different from those of our neighbors or colleagues (although we will share some of them).

If this interpretation of Augé's work makes sense, then whatever new senses of place we will be able to come up with will always be 'provisional' and far more superficial than they once were or we would like them to be. Moreover, each sense of connection to the land will be accompanied by a sense of alienation. Perhaps we supermodern humans are indeed condemned to be free, and to be "merely tourists". If so indeed, then clinging to the ideal of 'good old' place attachment would eventually be self-deceptive. If, in our longing for a restored place attachment, we neglect the causes behind the changes in our experience of place, we put ourselves to living a masquerade in artificial 'landscapes of memory', that is, museum pieces, ironical look-alikes of places long gone. The opposition against the erosion of place would then be merely another a symptom of the crisis of placelessness, instead of a resolution form it.
Let us therefore consider yet another interpretation of the meaning of the new places along the rivers that does not start with the deep spiritual connection between humans and place, but in stead with an acknowledgement of an irreducible detachment as well.

New Wilderness as an Effort to Emplace our Placelessness?

Would it be possible to come up with a more positive interpretation of what new-nature reserves mean for our relation to place? We can learn from the ethics of legibility that past traces in the landscape reflect earlier human-nature interactions and that these traces together tell stories that enable people to have an ethical relation to the land. From the perspective of regrounding the sense of place, we can learn that a more positive attitude towards the land should somehow also grant us the possibility to inscribe new traces into the landscape. Maybe we could interpret the new nature development movement as just that: a new, post-modern attempt to invest meaning in the landscape in a way that mirrors our contemporary position in time and space. We could try to interpret nature development as an attempt to ground our new identity in the landscape again, in a post-nostalgic attempt to leave behind supermodernity with its meaningless non-places.

If we decide to follow Augé, then we should start with the observation that today's landscapes do not suffer from a shortage, but – on the contrary – from an overabundance of ascribed meanings (the signposts and information pavilions, treasure hunts and cycling trails). The *post*-modern way of dealing with such a landscape would then be *not* to recall longingly to some premodern forms of connectedness with one particular place, but, on the contrary, to further radicalize the actual

'detached' or 'alienated' relation we have with the land.

Maybe, the "new wildernesses" along the rivers could be interpreted as such: as sites where we 'emplace' our identity once again, but now, paradoxically by acknowledging our 'placelessness', as it were. Ecological restoration practices along the rivers create 'inhuman' places, were one can truly feel 'out of place' in a sense that mirrors who we truly are. In that sense we can experience ourselves in place as beings that are, in some sense at least, out of place; here we can really be the 'natural aliens' that we are. Some restorationists seem to have something like this in mind. Wouter Helmer once used the phrase 'insane oasis' (Helmer 1996) to designate he meaning of these 'new wildernesses': places of freedom, where one can put in perspective the 'sanity' of our everyday moral conventions and regulations, places to celebrate human finitude. In this interpretation, the new 'wildernesses' are places where we can escape from the overabundance of social orders and regulations and, one might add, the artificial (commercial, folklore) symbolizations of place, and again focus on the not-yet-symbolized place.[2] Of course, the idea that these places somehow represent the not-yet-symbolized is itself another symbolized meaning, but whether that paradox will prove to be lethal is yet an open question.

If this interpretation is somehow credible, though, we should stop trying to make people feel at home in these new 'wildernesses' by means of folklore and rituals[3], information pavilions and treasure hunts. We should also invest in a credible interpretation of what it means to be alienated from the earth. The new palimpsest landscapes should not only let us experience a deep connection to the history of a place, but also enable us to make us feel, and maybe celebrate, that we ultimately remain aliens ourselves, postmodern nomads, inhabiting a world that will partially, but irrevocably remain strange to us. We should be open for the 'otherness' or 'wildness' of these places; acknowledge the surplus of meaning that transcends place-culture and also even our most sophisticated 'river models'. Embracing a river also means to be prepared to be alone.

7. Closing Remark

We have discussed three alternative views to the dominant river management view; all of them implied a vision of what places along a river are, all of them also reflect a certain ethical stance on rivers as well. These perspectives on place raise different questions to river management, and open different interpretational alleys on what is at stake in the future management of river. Let me briefly recount a few of them.

---

[2] Cf. Drenthen (2005) for a possible elaboration of what such a paradoxical stance on nature could entail.

[3] Cf. Jordan, 2003.

Seen from the dominant river management perspective, the creation of nature in the floodplains appears merely as a powerful management tool to reduce flood risks while increasing landscape quality. Place attachment is considered a subjective extra but does not play a decisive role. In the end, this perspective is mostly a technical one, in which moral or cultural meanings are almost impossible to articulate.

The perspective of the legible landscape argues that our river management efforts should be strictly confined, so as to prevent the destruction of old legible signs that enable humans to live meaningful 'placed' lives. We should enable people to grow a morally deep, and culturally rich connection to the river and let the meanings and traces that make up the land play a part in the way we occupy our places. The past should not prevent us from making new traces, but guide our efforts to find new appropriate ways to embrace the river.

The second alternative perspective – 'regrounding' the sense of place into a "sense of place v.2.0" – interprets the development of new nature as an opportunity to revitalize and deepen our sense of place as it were. In this approach, the interpretational power of science is used by experts to disclose a deeper story of the river that can be understood by other people as well. The river presents a moral baseline, urging us to put in perspective our anthropocentric fixation on human needs and meanings, and to acknowledge that the river as a basis for what is valuable.

From the third alternative point of view, these new wildernesses along the river could be seen as new, contemporary forms of place-making in which a feeling of estrangement from nature is a key feature. In stead of appropriating the meaning of a river, we let the wildness of the river enrich our lives again, a mysterious place were we can be alone and encounter the unruly.

Not all these modes of reasoning can be equally appropriate at all times and on all places. The real question therefore is: what is at stake in each place? What *do* these places have to say to us? Or, to put things differently: the question is not what these places are, but who are *we* really in these places?

A truly open river management is open to these questions

References

Augé, M. 1995. *Non-places: Introduction to an Anthropology of Supermodernity* (translated by J. Howe). London, New York: Verso.

Drenthen, M. 2005. 'Wildness as Critical Border Concept; Nietzsche and the Debate on Wilderness Restoration', *Environmental Values* **14**(3): 317-33

Helmer, W. 1996. 'Waanzinnige oases', in A. Barendregt, M. Amesz & J. van Middelaar (eds.), *Natuurontwikkeling: zin of waanzin?* (Utrecht: Faculteit Ruimtelijke Wetenschappen Universiteit Utrecht), pp. 81-90.

Helmer, W. and W. Overmars. 1998. 'Genius of place'. *Aarde & Mens* **2**(2): 3-10

Jordan III, W.R. 2003. *The Sunflower Forest; Ecological Restoration and the New Communion with Nature.* Berkeley: University of California Press.

Katz, E. 1992. 'The *Big Lie*: Human Restoration of Nature'. *Research in Philosophy and Technology* 12: 231-41

Toorn, W. van. 1998. *Leesbaar landschap.* Amsterdam: Querido