

New Nature in Old Landscapes: Some Dutch Examples of the Relation Between History, Heritage and Ecological Restoration

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ABSTRACT

For most of the twentieth century, nature conservation activities were connected to the protection of agrarian landscapes. During the late 1980s, the introduction of the concept of ‘new wilderness’ offered new opportunities for ecologists, but at the same time produced conflicts with traditional nature and landscape conservation. At the heart of the conflict were different visions of the relation between nature and society, sometimes resulting in a polarised debate, with opposing Arcadian and wilderness visions. In this paper, the new wilderness will be described from a landscape perspective, envisioning these wildernesses as a phase in the long history of human influences on landscapes and as part of a landscape that is complex and multi-layered. Some examples will show how a sectoral approach to nature leads to projects in which opportunities to integrate the new wilderness into a wider context of landscape and society are missed. In the final part, a prospect will be shown in which (new) wilderness is seen as part of a layered landscape.

KEYWORDS

Landscape, cultural landscape, wilderness, planning, Netherlands

INTRODUCTION

Over the past decades, many renaturation projects have been planned and (partly) executed in the Netherlands. These projects are the result of a changing paradigm in nature management, from a defensive to a more offensive attitude. Since the early conservationists more than a century ago, the sector

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had been characterised by a ‘culture of loss’ (Kolen, 2007), a general feeling that nature was under threat and had to be defended against the forces of change. During the 1980s, this was replaced by a more offensive approach, in which ‘new wildernesses’ took the place of former agricultural land, a process that is nowadays usually called ‘rewilding’.

This sometimes brought ecologists into conflict with agriculture, and in some regions the ecologists’ new claims brought about a serious power-struggle for land. The major conflict was with landscape heritage, particularly with heritage experts and parts of the local population who defended historic agricultural landscapes (Metz, 1998). In this paper we look at these conflicts.

The research questions are: 1) what are the main conflicts between the proponents of renaturation projects and those who defend historic agricultural landscapes? and 2) how are these conflicts related to different – and changing – visions of ‘nature’ and ‘landscape’?

To elaborate on these questions, we start with an introduction to the concepts of nature and landscape. This is followed by a discussion of three prominent visions of nature and landscape, with the so-called Arcadian vision as the traditional foundation for landscape protection and with the emerging interest in wilderness creating a new situation (the third, functional, vision is less relevant for the present paper). In the meantime, not only ecologists but also landscape historians and heritage specialists have changed their old defensive approaches to more offensive attitudes, and at the same time have adopted more dynamic visions of the past. In these new visions, neither for the Arcadian landscape nor for the wilderness can the aim still be found in a stable climax situation. The reconfigured arena is illustrated in three case studies, each of which shows an aspect of the relations between new wilderness and historic landscapes. The conflicts between these approaches arise in part from a vision of wilderness that denies history and context as part of a cultural landscape. An alternative is presented in a return to landscape and, within this framework, the concept of layeredness.

NATURE AND LANDSCAPE

The terms *nature*, *landscape* and – to a lesser degree – *wilderness* are used by many people on a daily basis. Nonetheless, these terms have complex and often confusing meanings. Therefore, some introductory terminological remarks are necessary.

Landscape is a term that has been heavily discussed over many decades (Olwig, 1996, 2002). The original medieval meaning of landscape is a territory, including the institutions that govern and manage it. This territorial meaning can still be found in, for example, the Dutch region of Drenthe, which in the past described (and sometimes even today still describes) itself as ‘the

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old landscape'. A number of territories in the former Dutch East Indies, which were subjected to indirect rule, were also known as 'self-governing landscapes' (Bongenaar, 2005). Elsewhere, Swedish provinces are still called *landskap*, and in Germany some regional governmental institutions that are particularly involved in planning carry the name 'Landschaft', such as the *Ostfriesische Landschaft* and the *Landschaftsverband Rheinland*. These territorial definitions of landscape can be traced through the old German *Landschaftsgeographie* to modern landscape ecology. Landscapes in this sense are of course subjectively defined, but at the same time they can be investigated and mapped by fieldwork and archival study.

The second meaning developed when Renaissance painters started to depict rural scenes and called these paintings 'landscapes'. In due course, not just the paintings but also the objects themselves became known as landscapes. Painters from the Low Countries re-introduced the word landscape into the English language, where the old Anglo-Saxon word *landscipe* (meaning 'district, region, tract of land, country or simply land') had disappeared (Olwig, 1996: 645). The word therefore still has a stronger visual meaning in Britain than on the Continent. These visual definitions make landscape into a composition that is created within one's mind. According to these definitions, without observers there is no landscape (Jones, 2003).

Nowadays, these different definitions of landscape exist side-by-side (Kluiving and Guttman-Bond, 2012: 11). The English geographer John Wylie (2007: 4) asks: 'Is landscape a scene we are looking *at*, or a world we are living *in*? Is landscape all around us or just in front of us? Do we observe or inhabit landscape?' Today, the answer has to be: both. The visual definition is prominent in art history, in landscape psychology (research into landscape perceptions) and also among the general public; the more territorial definitions are used in landscape ecology and physical geography, and also in most inventories and GIS systems that document landscapes.¹ Such definitions often start with the word 'area', as does the definition that is currently most popular,

1. A recent handbook on landscape ecology (Gergel and Turner, 2017) starts with the following definition: 'A landscape is an area that is heterogeneous in at least one aspect of interest. The concept of a landscape can include other ideas, an area that is very large in extent, or the inclusion of multiple different ecosystem types.' Another definition from a landscape ecologist is: '[L]andscape is a set of relations, together shaping a recognisable part of the surface of the earth, that is made and maintained by the interrelations between living and non-living nature, including human society' (Schroever, 1982; my translation). There are numerous such definitions. One of the first found on the Internet is in *Introduction to Landscape Ecology* by Kevin McGarigal, who defines landscape ecology as 'the study of landscapes; specifically, the composition, structure and function of landscapes'. Next, he defines landscape: 'Thus, a landscape is simply an area of land (at any scale) containing an interesting pattern that affects and is affected by an ecological process of interest. Landscape ecology, then, involves the study of these landscape patterns, the interactions among the elements of this pattern, and how these patterns and interactions change over time. In addition, landscape ecology involves the application of these principles in the formulation and solving of real-world problems' (McGarigal, n.d.).

from the European Landscape Convention: “‘Landscape’ means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’ (Council of Europe, 2000). This definition is a compromise that includes territory as well as perception, and focuses on people and their relation to the environment.

Landscape represents ‘a thoroughly humanised world’ (Tuan, 2002). Both groups of definitions are related to human perception and, in fact, human control of the environment. At first this seems to be fundamentally different from *nature*, which is usually defined as that which exists and reproduces itself without human intervention. The Oxford English Dictionary describes *nature* as: ‘1) The phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations’, with the example: ‘*the breathtaking beauty of nature*’, and ‘2) The basic or inherent features, character, or qualities of something (as in “human nature”)’ (Oxford Dictionary, 2018a). So *nature*, defined by the absence of human influence, seems to stand against *landscape*, defined by human, physical, or at least mental interventions.

And yet, as in the definition above, nature is often described *as* landscape. Television documentaries do not show nature in the form of a complex ecosystem, but instead present beautiful pictures of animals in their environment. Furthermore, the division between nature and culture is not a position accepted generally worldwide, but is rather one typical of Western society, with its roots in the colonial and capitalist exploitation of the world (Sundberg and Dempsey, 2009). Moreover, while nature may exist without humans, it is only invested with meaning by human society. In fact, the idea of nature is useless without the opposite, culture. And, aside from this, all ecosystems, including those that are often described as nature, are influenced by human activities.

The third word, *wilderness*, stands for wild and untamed, sometimes with a secondary meaning of a landscape of brushwood that is rather connected to deserted land (IVDNT, 2018). It is nowadays mainly used with the meaning of ‘unspoiled nature’, as something to be treasured (Warren, 2009). This positive connotation is a relatively recent phenomenon. During most of history, wilderness stood for ‘an uncultivated, uninhabited, and inhospitable region’ and ‘a neglected or abandoned area’, as for example in sentences such as ‘the garden had become a wilderness of weeds and bushes’ (Oxford Dictionary, 2018b). Such definitions imply a retreat of human influence, which usually means that these wildernesses bear traces of human occupation or (at least) activity. Many areas that have been described as ‘nature’ or ‘wilderness’ are the result of disastrous and traumatic histories (Renes, 2011), in which a local population has been evicted. Examples are the Scottish Highlands during the eighteenth and nineteenth centuries, and the zones along the Iron Curtain under the post-war communist governments (Richards, 2008; Coates, 2014). In a number of cases, people were even evicted in the name of nature, as in ‘nature parks’ where the

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local population, who had managed the area for thousands of years and were often responsible for the landscape's diversity and aesthetic qualities, were reframed as poachers and threats to 'real' nature (Stevens, 1997).

In practice, the word 'wilderness' is often used as a synonym for 'new nature'; this is land – usually former agricultural or industrial areas – that has been set aside to develop semi-natural ecosystems. For planners, this means that areas are labelled 'nature', with the facilitation of ecological processes or the protection of species or ecosystems as their main function. In this respect, nature differs fundamentally from landscape. Landscape can be a planning category, but management of landscape always functions by way of other activities. In the past, Dutch regional planning recognised this by using descriptions such as 'agricultural land with landscape values'.

THREE VISIONS OF NATURE AND LANDSCAPE

With regard to the relation between human society and nature/landscape, three principal conceptualisations are often distinguished from each other: functional, Arcadian and wilderness (Keulartz et al., 2004, 2008; Van Amstel et al., 1988). These are summarised in Table 1.

Table 1. Tracks in nature and landscape management (after, with additions, Keulartz et al., 2004; Van Amstel et al., 1988)

Nature vision	Wilderness	Arcadian	Functional
Tracks	Natural	Semi-natural	Multifunctional
Ethical basis	Nature, Ecocentric	Art, Anthropocentric	Economy, Anthropocentric
Aim	Processes	Patterns	Production
Management	'Hands-off'	Traditional techniques	'Hitch-hiking' on other processes
Minimal area	Large	Small to medium	Small to medium
Reference period	Prehistory (Mesolithic?)	Pre-industrial	Present

The *functional vision* refers to the nature of farmers, recreation managers and planners. In this vision, functionality is central, although this in itself is also a normative viewpoint. Dynamics are accepted, and the relations between nature and human activities are often described as unproblematic. The functional vision has been predominant in Europe for many centuries, probably influenced by Christianity, which tends to see humans as the summit of the creation of the world (see, for example, White, 1967) and hence the ones who may exploit it. In general, the functional vision is utilitarian and accepts the

resulting landscape. Within the present paper, the functional vision is less relevant than the other two visions.

The *Arcadian vision* is related to the picturesque in art, and suggests a certain degree of harmony between the forces of nature and society. Nature is described as part of a landscape that is essentially influenced by human society. It is the landscape depicted by sixteenth-century Flemish and seventeenth-century Dutch landscape painters. It is also the landscape that most people imagine when looking at the detailed nineteenth-century military-topographical maps that are the single most important source for studying historic landscapes.² For planners, those topographical maps are the standard depictions of the pre-industrial landscape, inspiring and convincing us by their beauty and suggesting a long-term stability.

The Arcadian landscape contains nature within man-made landscapes. Arcadian landscapes stand for a long-established and partly negative, partly positive human role. They are also valued for aesthetic reasons. The ethical aspect of such landscapes has received little attention, but has most in common with discussions on the ethics of the interaction of society with art. The Arcadian vision is often combined with a sense of threat and loss. Connected to the Arcadian vision is the concept of ‘traditional’ landscapes, landscapes that have developed slowly during a long period and are now threatened by modernisation, particularly by urbanisation and large-scale agriculture. In this view, landscape protection means that landscapes have to be shielded against modernisation (Renes, 2015a). Throughout the twentieth century, Arcadian landscapes have been the focus of landscape conservationists.

The *wilderness vision* is related to the sublime in art: these landscapes are overwhelming and sometimes frightening, and have only been discovered and described as beautiful since the late eighteenth century (Rees, 1975; Schama, 1995). Wilderness has been the leading nature-model in North America since the nineteenth century, but is relatively new in most of Europe. There, self-regulating ecosystems have until recently been almost non-existent in ecological discussions, but have become important since the late twentieth century, when changes in agriculture and society in general made possible the large-scale conversion of former agricultural land into new wilderness.

This division into three types of vision is still valid as an analytical tool, although it seems less valuable in contemporary society, in which many people combine the three types. Within a single walk, one can see a large-scale agrarian or mining landscape, a tract of new wilderness and parts of a historic landscape – and can enjoy them all. But new research into landscape

2. These topographical maps, printed at 1:50,000 scale, have been reprinted during the 1970s. Even more importantly, the basic manuscript maps, in colour and at 1:50,000 and (partly) 1:25,000 scales, are generally available too (Figure 3 shows an example). Parts of the series of 1:25,000 topographical maps, which appeared between 1869 and 1933, have also been republished (Figure 2 shows an example).

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history has also partly replaced the Arcadian vision with more dynamic visions of the long-term histories of man-made landscapes; these new visions have consequences for the management of landscapes as heritage.

LANDSCAPE AS HERITAGE

Heritage can best be defined as those remnants of the past that are seen as valuable for the present and relevant for the future. This includes some degree of assessment and selection, as not everything that comes from the past is seen as valuable. Although older examples of valuing historic buildings and townscape exist, the idea of heritage mainly took shape during the French Revolution and spread throughout Western Europe during the nineteenth century (Choay, 2001). The emphasis was originally on large buildings, usually of medieval origin, such as cathedrals, castles and town defences. In the course of the nineteenth century, the protection of nature also became accepted, with the designation of the first National Parks in the United States (Yosemite in 1864, Yellowstone in 1872) as landmarks. For these areas of protected nature, the term ‘natural heritage’ came to be used. These areas were typically framed as pristine nature, although they had been – and still were – used by the original population (Jacoby, 2014; Spence, 1999) and carried the imprint of millennia of human activities (Cronon, 1995). American wildernesses can be seen as landscapes that were partly deserted as a result of the catastrophic post-Columbian population decline (Denevan, 1992; Mann, 2005).

The protection of natural and cultural heritage was often anti-modernist as well as nationalist: the main symbols of the nation had to be guarded against the forces of modernisation. Sometimes the protection of natural and cultural heritage went together, for example in the English ‘National Trust for Places of Historic Interest or Natural Beauty’ (founded in 1895), and the Dutch ‘Society for the Protection of Natural Monuments’ (founded in 1905). Over the course of the twentieth century, more and more remnants of the past were described as ‘cultural heritage’ and designated for protection; from the medieval castles and cathedrals, the scope widened to include farms, archaeological sites, labourers’ cottages, town quarters and landscapes.

The idea that man-made landscapes could be protected, as testaments to former human activity, took shape in different parts of Europe in the second quarter of the twentieth century. In the Netherlands, the first proposal for a national park came from a geographer, Louis Van Vuuren, who selected a landscape of agriculture and forestry around a landed estate (see Van Vuuren, 1933). At the time, this choice of a man-made landscape was not seen as problematic. Until the 1980s, the core of conservation efforts in the Netherlands – and elsewhere in North-west and Central Europe – was what we could call the ‘Arcadian coalition’, in which ecologists and landscape preservationists

co-operated on an agenda of protecting 'traditional' cultural landscapes with high nature values. Most of the efforts aimed to protect those parts of the landscape that were used in an extensive way by farmers, making the survival of plant and animal species possible. Many such areas were bought by conservationist organisations that often had nature as well as landscape on their agenda.

In the Netherlands, the swan-song of this coalition was the 1970s, when the Dutch government introduced systems of National Parks and National Landscape Parks (later to be called National Landscapes). The National Parks were selected for their nature values, although they mainly consisted of forests and heathlands that had been strongly influenced by past human activities. The National Landscape Parks were man-made (in most cases agrarian) landscapes.

THE GREAT DIVIDE: ARCADIAN LANDSCAPE VERSUS 'NEW WILDERNESS'

In the rural areas, the 1960s and 1970s were characterised by the gradual industrialisation of agriculture that, sped up by European subsidies, aimed at maximising production. To support this development, a system of land consolidation was developed, heavily facilitated and subsidised by the national government. The result was a growing polarisation between agriculture on the one hand, and nature and landscape interests on the other.

Particularly in the Netherlands and neighbouring countries, productivity rose to unprecedented levels, leading to substantial – and costly – overproduction of dairy produce. The National Landscape Parks were originally planned as a measure against overproduction, by taking some of the remaining agricultural landscapes with high nature and landscape values 'out of the race'. The National Landscape Parks were relatively successful in some regions that were seen as marginal for agriculture, and in which the farmers were interested in nature management grants combined with recreational activities. In other regions, however, farmers obstructed the plans. In 1983, after the Ministry of Agriculture and Fisheries took over nature and landscape protection, the National Landscapes were abolished.

Within the new Ministry of Agriculture, Nature and Fisheries, a situation arose in which the agrarian interests could continue their old policies of technical innovation and enlargement of scale. At the same time, the introduction of quotas (in 1984) meant that production of dairy products for the country as a whole was stabilised. The combination of the two resulted in an excess of agricultural acreage that could be reduced by taking land out of production. Over the years, this resulted in huge tracts of land losing their agrarian function. The ecologists that had now become part of the Ministry of Agriculture were bought off with these hectares.

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The new hectares, however, were not used to protect historic landscapes, by (for instance) reviving the National Landscapes. Most ecologists had by that time lost their faith in cooperation with agriculture, and the Arcadian coalition fell apart. At the same time, an alternative showed up in a forgotten part of the newly reclaimed Flevoland polder landscape (set aside for future use as an industrial estate), which had developed into a wilderness with ecological values of international importance, particularly in its variety of bird species. For ecologists, this Oostvaardersplassen region proved the possibility of wilderness even in the densely-populated and intensively-used landscape of the Netherlands.

In the course of the 1980s, a paradigm shift took place in Dutch nature conservation, moving from protection of extensively-used agrarian lands and semi-natural ecosystems towards the creation of 'new wilderness'. The National Nature Management Vision (Ministerie, 1989) reflected this new, offensive attitude among ecologists. It proposed an integrated system of 'core regions' and 'connecting zones' throughout the country, known as the 'Ecological Main Structure'. As much as possible of these areas was to be developed into 'new nature' or wilderness.

Since that time, tens of thousands of hectares of agricultural land have been turned into new wilderness. In most of these areas, the aim has been to minimise human influence, and they have often been promoted with a rather negative view of how humans influence the landscape. Humans are described as the agents that destroyed paradise (even though the Bible describes paradise not as nature but a garden); man-made landscapes are described as overgrazed and degraded. This approach brought the advocates of new nature into conflict with farmers and landscape protectionists. The conflict with landscape preservation was not only practical but also strategic: whereas landscape is an integrating theme in which nature as well as human society has its place, the new nature is often disconnected and isolated from the surrounding landscape.

The new policy brought immediate success, but also much discussion. The spectacular plans for the creation of wilderness in the floodplains along the main rivers, aiming at an east-west natural corridor through the Netherlands, were made possible when farming retreated from these floodplains. Part of the same plan was the primacy of farming in the rest of the fluvial region (De Bruin et al., 1987). In the new wilderness and the agrarian regions, the position of historic landscape features and structures was severely weakened. In many projects, in the fluvial region and elsewhere, conflicts arose over the loss of agrarian landscapes that were seen as valuable for heritage as well as food production. Heritage discussions focused on historic landscapes that were transformed by new nature, perhaps most by the intensive reshaping of land to speed up natural processes.

On a more theoretical level, the suggested points of reference for creating 'original' or 'pristine' nature brought ecologists into discussions with

archaeologists and historical geographers who pointed at the strong human influence throughout the Holocene. A related discussion during the 1990s was about whether the new wilderness was shaped by natural processes or, at least partly, by design (Bijlsma, 1995). Two main arguments support the latter view. The first is the amount of preparatory work required to make the desired natural processes possible, or at least (if they exist already) faster. This work includes removing the topsoil and bringing in more variation in the geomorphology. The second is related to the introduction of large grazing animals in reserves that often have relatively little variation (for example, floodplains without neighbouring hills or other biotopes) and that lack large predators. In such cases, the number of grazing animals is often on a relatively stable but very high level, without the limitations and fluctuations of a natural system (Van der Maarel, 2013). The number of grazing animals, however, determines the proportions of forest, bush and open land in the reserve. Numerous such decisions mean that we must view most new wilderness as partly designed and (hence) influenced by normative ideas on how nature should look. Such wilderness can best be described as a ‘cultural landscape’ (Drenthen, 2003, ch. 6).

THE SEARCH FOR A DYNAMIC LANDSCAPE HISTORY

The discussions above focus on the conflict between new nature and old landscapes. Behind this lies the widely-held view that the recent and current transformations of European landscapes are more or less unique. Recent dynamics are presented as being opposed to ‘traditional’ landscapes, defined by the Belgian geographer Marc Antrop as

those landscapes having a distinct and recognisable structure which reflects clear relations between the composing elements and having a significance for natural, cultural or aesthetical values. ... They refer to these landscapes with a long history, which evolved slowly and where it took centuries to form a characteristic structure reflecting a harmonious integration of abiotic, biotic and cultural elements. (1997: 109)

From this viewpoint, human influence grew gradually, and landscape diversity as well as biodiversity grew with it, reaching a maximum in roughly 1900. There is a long tradition of this view among Dutch ecologists. During the 1930s, the ecologist Victor Westhoff, a key figure in the history of Dutch nature conservation, had already made a distinction between the earlier human activities that enriched nature and the recent human influences that had diminished diversity (Westhoff and Van Leeuwen, 1959; Van der Windt, 1995; Schouten, 2005: 222). In these views, the twentieth century is seen as not just more dynamic than, but also fundamentally different from, earlier periods. The main aim of landscape preservation is then the safeguarding of those landscapes that have ‘survived’ the assaults of twentieth-century modernisation. In an influential

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paper on this topic, the English landscape archaeologist Christopher Taylor (1972) distinguished between 'Zones of Survival' and 'Zones of Destruction'.

This simplistic view of 'traditional' versus 'modern' landscapes has been challenged in recent decades by research from archaeologists, historical geographers, historians and others, into the long-term histories of man-made landscapes. One of these recent developments in landscape studies is the concept of the 'landscape biography' (Kolen, 2005; Kolen et al., 2015; Roymans et al., 2009), which in fact is more a set of ideas than a clear-cut theory or method. It is inspired by anthropologists, who wrote biographies of objects that were passed from one owner to another and in the process changed functions and meanings. An African religious object, for example, could be bought by a foreign tourist as a souvenir and end up as a heritage object in a European museum. In the same way, a landscape could be seen as an item that is handed over from generation to generation and that changes in content and meaning throughout the process. This leads to an interest in the long-term history of landscapes. Another theme is the authorship of landscapes, connected to the old metaphor of landscapes as texts that can be read and therefore written (Widgren, 2004; Drenthen, 2016). This has also increased interest in the role that individuals play in shaping the environment (Samuels, 1979; Purmer, 2015).

Over the long term, landscapes show both periods of stability and periods of transformation. In the North-west European landscape, for example, periods of population decline – such as those between the third and sixth centuries or fourteenth and early fifteenth centuries AD – were traumatic developments, leading to thousands of settlements being deserted and the remaining population spending their lives surrounded by ruins. During such periods the landscape was reorganised, as arable gave way to pasture and forest and the surviving farms grew in size. Periods of population growth, such as the High Middle Ages, also led to landscape transformation (Renes, 2011). The landscape of the tenth century AD was characterised by dispersed settlements, mixed farming and large forests; four centuries later, the majority of the forests had disappeared, almost all the present villages and towns were already in existence, and some regions were transformed into huge grain-fields. Regional landscapes have their own stories of drastic, sometimes even traumatic, developments. One need only think of the population movements after the First and Second World Wars in Central and Eastern Europe.

One tool for describing such histories is the concept of 'layeredness', which is often used in landscape biographies. The concept of historical layers was first defined by geologists and archaeologists, who were able, when looking at a quarry or a cross-section, to distinguish between layers that corresponded to different historical periods and circumstances. In the same way, different materials and architectural styles make it possible to discover the traces of subsequent periods in a building or a landscape. Buildings, landscapes and even

objects have their own life histories that can be reconstructed from changes in appearance but also from immaterial meanings; a factory that becomes an empty playground and then is converted to flats may have changed little in its external appearance, but has accumulated stories and meanings that can also be discussed in terms of layers (Renes, 2015b).

In the practice of planning and landscape design, the term ‘layeredness’ usually refers to the possibility of recognising traces from different historical periods and therefore of perceiving the historical dimension of the landscape. This aspect is relevant in relation to the planning of new wilderness, where it refers to the wish to keep traces of former human activity visible in the new semi-natural landscape (see Hourdequin and Havlick, 2016 for examples of new wilderness on former military training grounds).

In the following section, the conflicts between new wilderness and the management of historic landscapes will be elaborated in three case studies (see Figure 1).³



Figure 1. Locations of the three case-studies.

3. The case studies are partly the result of the author’s long-term involvement in landscape management and in discussions on landscape management and nature.

CASE STUDY 1: DISCONNECTION OF NATURE AND LANDSCAPE IN STREAM VALLEYS

The first example is mainly based on an analysis of different editions of the 1:25,000 scale topographical map, with additional information coming from literature, reports and websites. Three fragments of topographical maps show the changes to the landscape in the south-eastern part of the province of Groningen (see Figure 2). The oldest map (1902/1916) shows this landscape a century ago. The agrarian landscape then consisted of dispersed farms and hamlets, each with their arable lands, stream-valley pastures and meadows, heathlands and some woodlands. Together they formed a village territory in a small-scale agrarian landscape surrounded by large uncultivated commons, mainly peat bogs. Each farmer owned arable fields and some land in the stream valley, and had rights of use in the commons. The whole village territory functioned as an economic unit.



Figure 2. Agrarian landscape near Weende (Groningen), with the Ruiten Aa stream in 1902/1905, 1982 and 2005. Source: Topographical maps at 1:25,000 scale, sheets 155 (1902), 173 (1905) and 13C (1982, 2005).

This region has since become less isolated, as the peat was excavated and gave way to a new arable landscape. The reclamation of the former peat bog brought a larger water discharge and this, combined with the wish of farmers to intensify land use, was the background for straightening the stream during the 1960s (see the second fragment). Land consolidation brought with it a modernised, large-scale agricultural landscape. Recently (see the third fragment), part of the stream has been 'restored' and is now again winding through

the landscape (Hendriks et al., 2010).⁴ The water board lists a number of reasons for this: improved facilities for fauna (especially fish) and flora, better recreational facilities, an improved landscape quality, and the restoration and protection of archaeological and historic landscape values (Projectgroep EHS Westerwolde, 2018). A comparison of the three maps, however, shows that the claim to have restored an older situation is not justified.

The most recent map shows a winding stream that at first sight gives the impression of a natural, meandering watercourse. Streams such as this one, however, rarely changed their course, because the discharge was too small to erode their banks (Eekhout and Hoitink, 2014). The new meanders are completely the work of draglines, and will probably remain the same for a long time. But there is more: the course of the stream a century ago was the result of water that had found its way through the landscape and was helped by small-scale measures made by many generations of farmers. During the late Middle Ages, sea incursions downstream made the stream subject to tidal movements, which were later stopped again by dike-building. Another source of human influence was the building of water mills (Delvigne and Koopman, 1991, ch. 5). Altogether the stream showed long-term and intensive human influence.

Another important factor was the local geomorphology. Just upstream of a narrowing in the valley, the stream was relatively wide and meandered strongly; past the narrowing the stream was narrower, deeper and straighter. This variation was lost with the straightening carried out in the 1960s and it did not return with the 'restoration'. The new stream is meandering but has a rather uniform profile. Its relation with the local geomorphology (or what is left of it) has not been restored.

Furthermore, the stream no longer has a functional relationship with the surrounding landscape. The earlier straightening of the stream made it possible for the farmers to intensify the use of the stream valley and even to extend their arable right up to the stream itself. Some of the farmers, however, continued to harvest hay from the meadows along the stream. The new, more dynamic situation after restoration made the stream valley less attractive to farmers. Most of the stream valley is now a nature reserve with its own management, meaning that it functions separately from the surrounding landscape.

In this case a landscape approach, seeing the stream not as an isolated feature but as part of a complex and integrated system, would have brought about a more nuanced plan and a more varied streamscape.

4. Terms such as 'herstel' (recovery) and 'restoration' are commonly used in publicity; see, for example, Staatsbosbeheer (2018).

CASE STUDY 2: IDEOLOGICAL NATURE IN THE FLOODPLAINS

The main arena for the realisation of new wilderness in the Netherlands is the series of floodplains along the main rivers. These floodplains are considered marginal for modern agriculture, and at the same time offer great potential for dynamic ecosystems. The floodplains are also of growing importance for water management, given their role in the discharge of the predicted increased volume of water passing through the main rivers. To accommodate the higher discharge, extra water channels were excavated; these became the backbone of the new nature. On this point, the interests of ecologists and water managers coincided. There were also potential conflicts, however, where self-regulating nature would inevitably lead to the growth of forests that would then obstruct the flow of water. The cooperation was saved by a new vision of pristine nature that was no longer reconstructed as forest but as a savannah-like landscape, in which large grazing animals would keep the landscape open.

Still, there has been ample debate on theoretical as well as practical levels. Theoretical discussions, still ongoing, are about the question of whether a natural ecosystem in temperate Europe would consist of dense forest or of semi-open landscape. The main advocate of this last vision is Frans Vera, who tried to give his ideas a stronger scientific basis in a historical-ecological study (Vera, 2000); the resulting book, inspiring but disputed, has been popular among ecologists specialising in big mammals, but rather less so among vegetation ecologists (Van der Maarel, 2013). The book's reconstructions of prehistoric ecosystems have been heavily criticised by archaeologists (see, especially, Louwe Kooijmans, 1995, 2012). One methodological problem with Vera's historical study is that the author does not think in terms of historical processes; his examples are taken from the prehistoric and medieval periods, but the differences between the two are not problematised. The medieval forests, for example, are not described as secondary forests that developed after the late-Roman population decline, but as remnants of 'original' forest (Vera, 2000: ch. 4.1). The main similarity between all these periods is that ecosystems were influenced by humans. In fact, in this part of the world the landscapes that might have existed without human influence never did exist during the Holocene: before flora and fauna could fully develop, there was already human influence, traceable in forest fires and the hunting – sometimes to extinction – of large predators. It is telling that the landscape of the New Forest in Southern England is often presented as a typical example of the desired new nature. It is a landscape that was partly laid out over former agrarian land during the eleventh century and that, since then, has had a continuous history of intensive management aimed at maximising the number of game animals and ensuring a substantial timber harvest (Smeenge, 2003).

The new landscape of the floodplains was subject to other debates. The additional riverbeds, which were in the best cases reconstructions of past river

courses, were presented as a characteristic part of a natural river landscape, as shown by old maps. This, however, was the result of incorrect interpretations combined with wishful thinking. When an old map shows two riverbeds in the same floodplain, this is a snapshot of the middle of a process in which one riverbed is growing while the other is silting up. The construction of a series of parallel riverbeds in a floodplain was welcomed by water managers, but was not a reconstruction of a historic situation. The present landscape no longer shows historic layers and historic processes but an unhistoric pattern.

One of the methods used to gain public support was the framing of the floodplains as a young landscape that had always been dynamic and was therefore without historic value. Again, this image is not in line with the results of historical research. The river dykes were built between the twelfth and fourteenth centuries AD, in a landscape that had been inhabited at least since the Bronze Age and that was, together with the coastal marshes along the Wadden Sea, the most densely inhabited region in the present-day Netherlands during the Iron Age, Roman period and Early Middle Ages. The dykes were built within this intensively-used landscape, and parts of the floodplains must be full of traces of medieval and older human activities. Parts of the floodplains certainly had a dynamic history, but even there the pattern of natural and man-made water courses could have existed for a long time. In one area of floodplains along the Meuse River, historical research shows that every individual field visible on early twentieth-century maps already existed around 1500 (Van Eeten, 1993; see Figure 3).

During the 1990s, the savannah-like wetland landscape, managed by large grazing animals, became the archetypical new nature. Of course, ecology is more about processes than about landscapes, but as I noted above, wilderness is often presented as landscape. Also, the frequent use of terms such as 'pristine nature', 'original nature' or 'nature before human intervention' makes clear that matters are not so simple in practice. Wilderness requires large territories for the development of ecosystems that function more or less independently. For a proper functioning ecosystem, large predators are necessary; they influence the whole system in a top-down manner, the so-called 'cascade effect'. We could seriously question the possibility of such systems in a densely populated country like the Netherlands. This means that human interventions remain necessary, and in practice, such interventions are heavily influenced by aesthetics and by value judgements of the way a natural landscape should look.

A broader vision, which sees the new wilderness as a new (semi-natural) cultural landscape, would allow the possibility of leaving traces of human activities visible. Examples include remains of dykes, brickworks, ferry landings and dwelling mounds (see, for example, Kuijpers, 1995).

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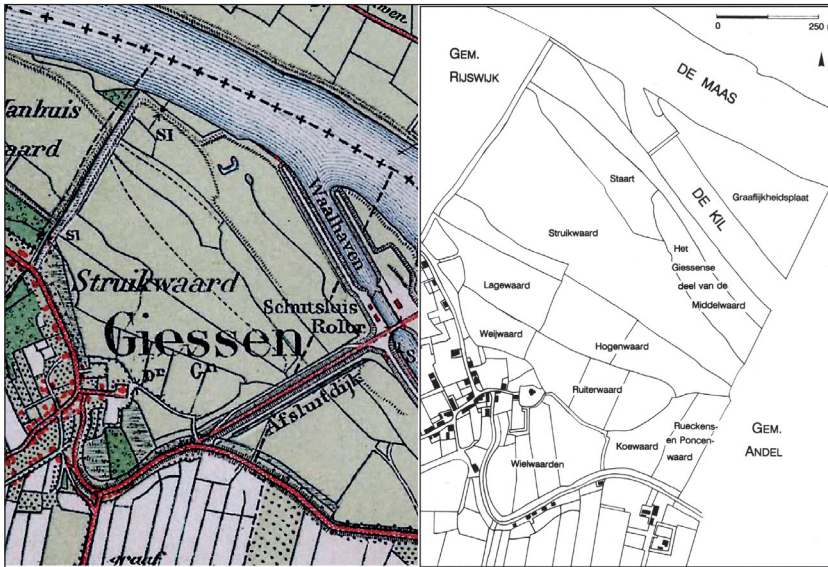


Figure 3. The floodplains along the main rivers are often framed as young and dynamic landscapes without historical values. In this case, however, most of the landscape structure dates from the late Middle Ages. The Middelwaard was an island in the fourteenth century and the connecting Struikwaard existed in 1506. Right: Van Eeten (1993: 98). Left: manuscript topographical map c. 1840.

CASE STUDY 3: NEW NATURE IN THE LAYERED LANDSCAPE OF THE HEDWIGEPOLDER

A negative attitude to man-made landscapes and the idea of layeredness can be illustrated in the third example, that of the Hedwigepolder on the Scheldt, downstream of Antwerp. After a decade of discussion, it is now clear that this polder will be abandoned to make way for new nature; this is intended to compensate for the deepening of the river Scheldt, which was necessary in order to make the harbour of Antwerp accessible to a new generation of container vessels. The polder was reclaimed between 1904 and 1907, after the land had silted up. This means that a substantial upper layer of the soil has to be excavated to make frequent flooding and therefore dynamic nature possible.

Ecologists welcome the extension of the estuarine ecosystem, and claim great advantages for wildlife. They describe the present polder as uninteresting, giving the impression that no historical landscape values are at stake.⁵ The

5. The official website of the Province of Zeeland gives the following historical description: ‘The Hedwigepolder is one of the youngest polders of Zeeland and was only reclaimed in 1907’ (Provincie Zeeland, 2018; my translation).

'renaturation', however, is contested in the region. The south-western delta in the Netherlands has a long history of sea intrusions, loss of land and people, and successive reclamation. The last great flood (in 1953) remains within living memory. The struggle against the sea is part of the chosen identity of the local population, and is even symbolised in the provincial logo (a lion emerging from the water) and motto (*luctor et emergo*, 'I struggle and emerge'). Opponents of the renaturation often make reference to this local identity, and add arguments about the loss of some of the best agricultural land in the country. The farmers in the region, in particular, are strongly attached to their land. The Belgian author Chris de Stoop (2015) comes from a neighbouring polder and ran his parents' farm for a few years after the death of his father and brother; subsequently, he wrote a book that was full of nostalgia towards the old farming society and highly critical of the claims made by ecologists. When reading De Stoop's book, one cannot help getting the impression that the change from agricultural land to nature is felt as a much greater loss than the continuous loss of ecological values through the intensification of agriculture or intermittent extensions of the harbour.

The first inventory of the heritage of the Hedwigepolder showed that the ecologists' negative image of landscape and heritage was not justified (Renes, 2009). The road and field patterns of the polder are well preserved, and the polder has been used by the owners for a combination of agriculture and recreation (hunting). The unusual combination of agriculture and hunting means that a substantial number of landscape elements, such as small woodlands, still exist. It makes the polder more interesting and aesthetically valuable.

Moreover, the polder proved to have a long and complex history, making it an important archaeological resource (see Figure 4). Hidden deep beneath the present surface lies a sandy landscape with traces of Mesolithic and Neolithic human activities. In the course of the Neolithic, the land was drowned by rising sea-levels, and a growing peat-layer covered the older landscape. From the tenth century AD, these peatlands were colonised and used for agriculture and (later) peat-cutting. The village of Casuwele developed into a centre of trade in peat, which was used as fuel in the growing Flemish towns. Agriculture and peat-cutting both lowered the surface and made the polder vulnerable to flooding; after floods in 1530 and 1570, the dykes were repaired, but military inundations in 1584, connected to the siege of Antwerp, meant the end of both village and polder. A new embankment and reclamation in 1650 was initially successful and a settlement with the name Stalpaert was founded, but the dykes breached during a flood in 1682 and were never really repaired. Fifteen years later, the polder was abandoned again. Only in 1904 did the reclamation of a new polder start, the present Hedwigepolder, which will now be 'given back' again to the sea. Altogether, this seemingly young landscape hides a complex layered soil-archive with archaeological traces from the prehistoric, medieval

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and early modern periods (Van Roeyen et al., 2001; De Kraker, 2002; Renes, 2009).

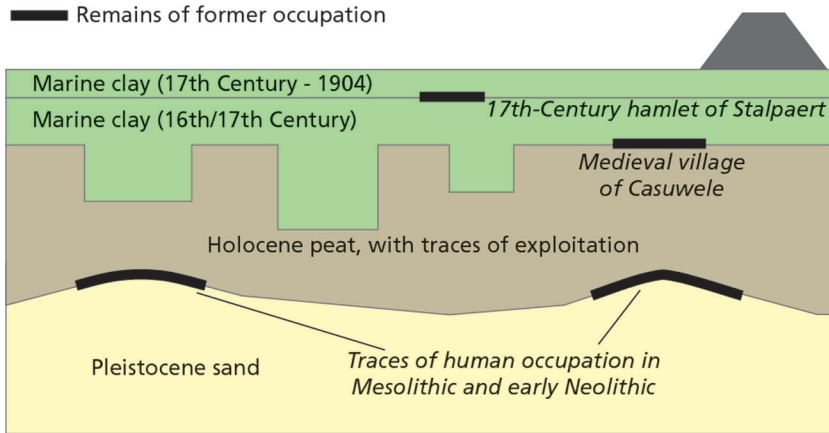


Figure 4. Historical layers in the landscape of the Hedwigepolder. Beneath the soil of this polder from 1904–1907 are the traces of a seventeenth-century hamlet, a medieval village and traces of Mesolithic and Neolithic human activities (black lines and italics).

Most ecologists have failed to realise the complex historical layeredness of this landscape. Only late in the planning process did it become clear that an intensive archaeological investigation was necessary prior to the planned removal of the topsoil. But even then, this was only seen as an unwelcome delay in a process that would lead to the creation of wilderness, not as an opportunity to gain a better insight into the landscape's history, and obtain results that could be integrated into the plans. Again, a landscape vision would have provided the possibility of adding a historical dimension to the new wilderness, by preserving fragments of the dykes and employing artists to act as a 'reading aid' to the history of this landscape (Drenthen, 2016: 250).

DISCUSSION

In the present as well as the past, almost all 'rewildings' have taken place on lands that have been used by people whose histories and stories were about the area, and who had connections to it. (The Oostvaardersplassen, in newly reclaimed land, is a rare exception.) This leads to conflicts between the advocates of (new) wilderness and those who defend historic landscapes. Part of these conflicts is philosophical, concerning the relations between humans and their environment, and the question of whether the new wilderness is human-influenced. In some cases, it may be the illusion of the recovery of

pristine nature that provides the arguments for an almost complete destruction of human traces. Another discussion is whether the new wilderness must be viewed as (part of) a 'landscape' that is essentially connected to society. On a practical level, discussions focus on the removal of historic landscape features, but also on the possible roles of the local population in the realisation of the new wilderness.

In the late twentieth century, the newly-popular 'wilderness' vision, which aimed at semi-natural ecosystems in which the role of humans was minimised, stood against an 'Arcadian' vision of man-made landscapes with heritage, aesthetic and ecological values. Each of the three case studies shows conflicts between the making of new nature and the management of historic landscapes. In each case, the negative attitude towards traces of human influences in the landscape leads, or has led to, the destruction of those traces. In the stream valley (Case Study 1), the stream is seen as an individual object and not as part of a wider landscape. Furthermore, the application of historical knowledge could have improved the plan. In the floodplains (Case Study 2), a landscape with millennia of human influence is treated as a *tabula rasa*. In the Hedwigepolder (Case Study 3), the important archaeological heritage will disappear completely when the top soil layers are removed.

The new wilderness is not only dehumanised, but also disconnected from the surrounding landscape and its inhabitants. In all cases, the wilderness vision aims at creating nature reserves, as against alternative visions that see the new wilderness as part of a wider landscape. This disconnection causes multiple problems. It disturbs the historic coherence of the environment, but excludes the inhabitants from part of their living environment too.

Instead, a landscape perspective could be re-established, using landscape as an integrating concept that connects visual qualities with management practices. In these cases (and in general), the alternative meaning of wilderness as an abandoned area might be able to provide a more balanced view of history, and bring a more relaxed attitude to traces of human activity. For the present author, and probably for many other people, most wilderness becomes more interesting when there are traces of human history, which can add the dimension of stories and discoveries to an otherwise one-dimensional 'wild' landscape.

But viewpoints about the historical aspects of landscape have also changed. As discussed in this paper, the distinction between modern, dynamic cultural landscapes on the one hand and 'traditional', relatively stable landscapes on the other is no longer tenable. Not only in ecology, but also in the study of landscape history, the former belief in a 'climax' system (the nineteenth-century landscape for heritage, a completely developed ecosystem for ecologists) has given way to new ideas that see the histories of landscapes as dynamic, varied and complex. This also means that the opposition between the creation of new nature and the preservation of 'traditional' landscapes can no longer be considered the core of the problem. Instead of protecting archaeological

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sites or historic buildings and landscapes, heritage specialists nowadays try to take dynamics into account and become part of the discussion on the future of the environment; the sector has evolved from protection to ‘management of change’ (Fairclough and Rippon, 2002).

One contribution of recent historic-landscape research to these discussions is a growing awareness of long-term processes. The concept of layeredness may be a useful addition to the toolbox of planners. Instead of protecting a nineteenth-century landscape, the aim could be reformulated as one of keeping the complex and manifold histories of a landscape recognisable. In new wilderness, as in the case-study areas, this could mean letting existing buildings (such as the characteristic brickworks in the river floodplains) fall into ruins rather than demolishing them, preserving parts of former dykes, and tasking artists with the visualisation of prehistoric finds.

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