Drawing time

The representation of change and dynamics in Dutch landscape architectural practice after 1985
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3. Drawing landscape; drawing time. History, theory and current state

3.1 Introduction
Time, drawing, and landscape architecture are the major terms that structure this research. In this chapter primary and secondary sources are explored, focusing on the areas in which these words meet and interact. The first of three parts is titled ‘Time, landscape and intervention’. Time is in question, but only in so far as this is relevant to the way we look at, or think about, landscape. This is again restricted by the word intervention, which brings human beings in, and the notion of planning, design, and landscape architecture. Via texts from throughout the history of landscape architecture and affiliated disciplines we arrive at a vocabulary with regard to time. The second part is titled ‘Drawing, drawings and the design process’, which is about the drawing as an object, and about the process of drawing. Looking at drawings we see material objects, but we also read, consciously or unconsciously, meaning and messages. The notion of representation is discussed: What is it that a drawing represents? A key topic is the taxonomic system of drawings. How can we think in a systematic way about types of drawings, and where do drawings depicting time fit in? And to what extent is drawing in landscape architecture different? The last part is titled ‘Profession, practice and project’. This is about the daily reality of offices producing designs and pursuing their realization. Firstly design processes are explored from an anthropological viewpoint. The setting in which today’s offices are working is then studied, arguing that the last three decades can be understood as a coherent era.

3.2 Time, landscape and intervention

Time and drawing in early landscape architectural thinking
Landscape architectural thinking about time, drawing or the profession becomes manifest in writing – both in primary sources, such as gardening handbooks, and secondary sources, contributing to a history of ideas. If we search texts about landscape, garden design and landscape architecture for the issue of time, and go back as far as the 16th century, highly valuable contributions can be found. One could even consider it a lens through which a specific reading of the history of landscape architecture is possible, a reading that regards the issue of time, its links with drawing and its position in landscape architecture as a profession. We can trace important steps in the development of the idea of landscape as a time-based medium. Different drawing techniques, and how they contribute to the understanding of landscape, are noted. We encounter opinions on the use of drawings and their role in communication with clients. Ideas on the issue of time are followed as they develop with regard to planting, realization and the strategic long-term perspective a landscape architect must have.

The perspective of gardening
One such secondary source on the topic is Clemens Wimmer’s Geschichten der Gartentheorie from 1987. Wimmer consciously concentrates on texts about gardens, instead of physical gardens, as
The most reliable source for information on their original states. His introductory statement immediately brings in the notion of time, arguing that ‘historic gardens are hardly ever preserved in unaltered condition. Many even have never reached the condition intended by their creators. A garden historian thus has to collect descriptions and illustrations from the time of the garden’s creation, has to interpret, and on this basis seek to communicate to his readers, or his audience, an idea of this per se unreachable garden.’ With this, Wimmer implicitly addresses a large problem in garden and landscape architecture: the discrepancy between drawings, intentions and the actual state. His chronological overview of writings about gardening shows when and how the issue of time became important. Wimmer’s collection of texts suggests that the issue has been interpreted in two ways: the interchange of seasons, and the time it takes to build a garden and to see it mature. In the chapter ‘Zeit, Licht und Farbe’ [Time, light and colour] Wimmer suggests that time has mainly been understood in relation to seasons, as ‘life in the garden obviously always focusses on the warm season and on the light part of the day.’ Gardeners have had for many ages ‘ein unrealisierbare Wünschsträum vom ewigen Frühling’, an unrealizable dream of eternal spring. In that sense, gardening has always had a dialectical relationship with time. Over the ages, the main goal had been to rule out the influence of time -to reach an eternal spring- but in order to do so, very precise knowledge was needed about plant species and their behaviour over time, for example their presence in winter. [Fig.3.1]

From the 17th century onwards, handbooks on gardening became a genre of their own, illustrating that gardening took new roads and that ideas were exchanged internationally, via such handbooks. These books are a rich primary source of thinking about time, landscape and drawing. In fact, they put into words a body of knowledge on gardening. Applied and tested in the garden itself, such knowledge quickly became implicit, integrated into the operation of gardening and handed-down traditions. A striking early example is the 1683 The Scots Gard’ner that speaks, among other aspects, about the practice of planting trees. [4] As the best trees are raised from seeds, The Scots Gard’ner suggests that a garden design should provide space for a nursery, and as trees have to be planted at greater distances over the years, a long-term perspective is needed: ‘When they have stood 3 years at most in this nurserie,
replant them at wider distance in Spad-bit trenches, 3 foot one way and two the other, where they may stand till they be ready for planting out in your Avenues, Parks, Groves &c. Which will be in 3 years, if Rules are observed. 

The relevance of this statement is that it shows how aspects of time have been integrated in the design and the management of that design over time. [Fig. 3.2]

The 18th century saw an emerging interest in aspects related to time, such as night and winter, surprise, dynamics, and decay - a sign of changing styles, but also of a broadening of garden theory. In The Flowering of the Landscape Garden, landscape architecture historian Mark Laird concentrates on bulbs, flowers, and shrubs, which he claims to be a neglected category in conventional garden history. [6] This is, in an implicit way, a history of the thinking about seasonality. The 18th century was a dynamic period of time for that topic. Just as in Wimmer’s overview, essayist and gardener Joseph Addison is quoted: ‘But I have often wondered that those who are like my self, and love to live in Gardens, have never thought of contriving a Winter Garden, which should consist of such Trees only as never cast their leaves.’ [7] Quoting the writer Thomas Whately for a broader perspective on time and change in landscape, Laird points to the important though neglected concept of decay: ‘Maturity is always immediately succeeded by decay; flowers bloom and fade; fruits ripen and rot; the grass springs and withers; and the foliage of the woods shoots, thickens and falls.’ [8]

C. Hirschfeld (1742–1792) helped to establish a clear German gardening tradition with his Theorie der Gartenkunst in 5 volumes. [9] Fitting in the approach of time as discussed by Mark Laird, Hirschfeld concentrates on how different sensations can be de-
signed related to the light, the time of day and the season. As he puts it, ‘nature connects a host of distinctive phenomena to each time of the day’ and this ‘makes it possible to design scenes in which the peculiarities of each part of the day are not just perceptible but, freed of their inconveniences, can also be enjoyed with increased delight’. [10] Sections of his work are dedicated to gardens or ‘scenes according to times of the day’, and the same goes for the seasons. But Hirschfeld, among others, also contributed to a discourse that is very relevant here: how is design related to nature? Hirschfeld takes a seemingly modest position in stating that ‘this art learns from nature in order to be her assistant’ - seemingly, as Hirschfeld just like his contemporaries, was hardly interested in the real dynamics of nature: it was about an image of nature. [11] However, Hirschfeld contributed to a more important role of aspects of time, and put that in a broader frame: ‘[Gardening] offers longer and more enduring pleasure than do statues, paintings, and buildings; for through the process of growth, through the changes of seasons and storms, through the movements of clouds and water, through the passing presence of birds and insects, through thousands of small happenstances affecting regions and views, a garden boasts a multiplicity of phenomena that can never become tedious, can never fail to delight.’ [12] In that same German tradition we find Hermann Fürst von Pückler-Muskau (1785-1871). An interesting description of Pückler is given by Linda Parshall in Nature in German history (2004). [13] Pückler was interested in the dynamism of nature. ‘Careful human intervention’ in that dynamic system could strengthen the effect of natural beauty. As Parshall points out, Pückler was very aware of the time that a designed landscape must be given to mature: ‘Pückler’s vision was long and grandiose; his gardens were intended, like his forests, to reach maturity only after more than a century - that is, he embraced the rhythms of nature rather than of a human generation’. [14] That has an important consequence: his gardens were a state of always becoming, ’das immer Werdende’. [15] [Fig. 3.3] Editor Christof Mauch positions Nature in German history quite precisely within the line of thinking of the research at hand: ‘All the essays in this volume are informed by three fundamental insights: first, that nature is in constant change; second, that our ideas of nature change over time, and third, that these ideas shape our relation with nature and thereby the natural environment itself’. [16]
He argues that ‘real landscape, or that which my art professes to improve, is not always capable of being represented on paper or canvas’. [17] One of the reasons is the problem of scale. Therefore, Repton’s sketches do not attempt to describe the landscape in detail, but focus on the general effects. [18] This can be seen in a tradition of texts on gardening that, next to planting, explain how to draw landscape as a craft in itself.

Repton’s interest in time comes back in ‘On planting for immediate and for future effect’, discussing planting strategies that deal with development over time. Speaking about the formation of groups of trees, he addresses himself to his public, referring to viewpoints he wants to oppose. It is nonsense that one would need an ‘odd number such as five, seven, or nine’, but trees should never be planted in regular patterns, as groups only will appear natural when trees of different age, size and character are combined. [19] Repton contemplates the future of his own designs, which more often ‘may not, perhaps, have been finished according to my suggestions.’ [20] He is also very aware that the landscape architect always operates in an existing landscape, and reacts to existing designs that perhaps are the ‘false taste of former times’. [21] However, as long as the mature trees provide shade, they have to be accepted as part of the new design. For such reasons, Repton’s work offers a rich perspective on the issues of drawings, time, and the conditions of professional practice. Therefore, he will show up repeatedly in this study. Repton is perhaps the first gardener or landscape architect avant la lettre to take an explicit stand towards these three topics as related issues. As such, his work invites us to reconsider the early history of landscape architecture, and to give

Repton a more prominent role in that history.

Frederick Law Olmsted (1822-1903), designer of famous parks such as New York’s Central Park, produced numerous interesting articles and lectures. [22] Olmsted represents an emerging American tradition that, as will become clear, plays a specific role in the discourse on time, landscape and representation. Drawings do not come to the forefront in these writings, while at the same time they have a role, as his texts implicitly speak about the different realms of words and of drawings. Olmsted often explicitly addressed his assumed public, or his client. It is easy to think that drawings are the major, if not only, source for learning about designs. But that is untrue, and it is for this reason that the work of Olmsted is relevant, as it allows for a balanced discussion about text and drawings, and their relationship to each other. Olmsted’s drawings generally suggest a clear final situation, and drawing itself is not a topic in Olmsted’s writing. The implicit message of Olmsted is, however, that drawings on their own are not enough, and especially not enough to keep a design idea alive over time. Olmsted often explicitly addressed his assumed public, or his client. Both the client and the public may change their minds, if the realization of a park does not result in the desired park scenes soon enough, or if changing circumstances necessitate re-evaluating the strategy. Olmsted in 1871 addressed his client, the Chicago South Park Commission, to raise awareness of the aspect of time: ‘It is not to be expected that a plan will be made at the outset so complete, that no additions to it or modifications of it in detail will be admissible, but it is of the utmost consequence that the essential ends should be clearly seen before the work is organized, and that from the moment it begins to the end, be that five or fifty years hence, and under whatever changes of administration and changes of fashion, these great ruling ends should be pursued with absolute consistency.’ [23] It is in such words that we see his awareness of the process of being realized, of maturation, and of the restricted influence of drawings in this. [Fig. 3.4] As his main preoccupation concerned the time it takes to realize a large park, and the potential discrepancy with the needs of society at that time, Olmsted took the far future into account. To stress the need to add a second parkway to Boston’s Prospect Park in the future, he addressed his commissioners directly in his 1866 report. A second parkway was not part of the plan and ‘may seem premature, but there can be but little danger of too extended a prevision with reference to future improvements which may grow out of so important a work as that upon which your Commission is engaged […]’. [24] A landscape architect should not only focus on the demands of users in the immediate future but also dedicate himself to a larger perspective - ‘a long series of years must elapse before the ends of the design will begin to be fully realized’. [25] With such perspectives far outside the immediate planning process Olmsted discussed a new element in landscape architecture: that of a future to be understood as a scenario, with probabilities and uncertainties. The Dutch L.A. Springer (1855-1940) has a comparable position as a ‘writing designer’. A garden architect and expert in dendrology, and interested in the history of gardening, Springer wrote numerous articles, primarily in Dutch. A recurrent issue is the profession itself. Is the garden architect a craftsman closely related to the world of nurseries and the making of gardens? Or is he an independent advisor who is not involved in commercially raising plants.
Fig. 3.4 Winter view of Olmsted's Central Park in New York. Photograph by Ricky Rijckenberg, 2015.
and trees? For some years Springer tried to promote the name ‘tuinbouw-architect’, probably best translated as ‘horticultural architect’, in an attempt to emphasize the difference between his role and that of nurseryman or gardener. [26] Later he stuck to garden architect. Signing his plans with ‘architect’ was an expression of his independent services. At the same time, Springer trained in the profession of gardening in nurseries and became very skilled in dendrology. The worlds of nursery and design practice over-lap in the case of Springer, as was the case for many landscape designers of his time. It was a fertile soil for implicit or explicit thinking about aspects of time - but it also invoked fights on the demarcation of the profession. Not only with his fellow gardeners did Springer debate the limits of the profession; he engaged in fierce debates with architects too. Their influence on garden design inspired him to make this plea, originally in Dutch: ‘A living tree is not a mass of stone, wood or iron which can be moved around and, once positioned, remains as it is. To lay a new park a designer needs a fertile imagination. He needs to be able to see many years into the future. […] What sort of shape will [trees and shrubs] have eventually; what colour will the leaves be in the spring or autumn; which ones flower, and when?’ [27] Via Springer we can see that not only drawing as such is of relevance, but also that particular drawing techniques contribute to the evolution of the profession. Springer was very interested in drawing techniques. His father taught him how to render drawings, and Springer became known for his watercolours. Individual drawings received international prizes. [28] The particular watercolour technique suited his intention to create atmosphere in landscape. As de Jong and Dominicus-Van Soest put it, the ‘painted reality has to coincide with the picturesque quality of the landscape’. [29] In his time, garden expositions were popular, and they thus presented a way to build professional recognition and reputation. However, in Springer’s eyes professional garden designs were neglected in such exhibitions. He initiated his own competition in 1884, in which contributors had to draw all drawings in plain colours so that they would not be ‘regarded as a beautiful picture, and the mark of the creator would not be recognizable’. [30] The tension with the profession of architecture was not only seen by Springer. Wolschke-Buhmann suggests that the ‘wild garden’ as promoted by the German Willy Lange (1864-1941) and the Englishman William Robinson (1838-1935) also helped to claim an area of exclusive competence for the garden architect, as opposed to an architect’s view in which the garden was part of an all-embracing design. [31] As Wolschke-Buhmann notes, the contradictory effect is a weaker position for the garden designer, as the wild garden neither required too much design nor a gardener’s maintenance.

**Time and representation in landscape architecture thinking in the 20th century**

Even if the exact point in time may vary, landscape architecture established itself under that name in all Northern European countries in the course of the 20th century, including the emergence of proper curricula at universities and of professional organizations. In the Netherlands, this can be situated shortly after the Second World War, when a landscape architecture programme was created in Wageningen. In the same years, the Dutch professional journal *De Boomkwekerij* [The Tree Nursery] was the main venue for garden architects to publish their ideas. [32] This reveals a battle between the independent advisor and the gardener-
nurseryman, as also mentioned in relation to Springer. A short article by S. Doorenbos, director of the Parks Department of The Hague, bears the provocative title ‘Een tuinarchitect moet een eigen kwekerij hebben!’ [A garden architect should have his own nursery!]. This article in Dutch is very relevant here. Doorenbos states: ‘The biggest difficulty for a garden architect is the fact that he cannot immediately demonstrate the final result of his creation. [...] When will one wish to see the park completed; fully grown and with great beauty? Within five years, ten years, twenty-five or fifty years? A large number of plants have reached the end of their life after ten years, while others are only just beginning to show their characteristics. Until then, they have only played a subordinate role. One therefore has to thoroughly understand one’s plant material in order to be able to put the right plant in the right place.’

[33] Gardening should not be confused with architecture, as the problems are different because of the living materials that require many years to mature. [34] A photograph shows Doorenbos’s engagement with the issue of planting and time. [Fig. 3.5] In the same volume of *De Boomkwekerij*, Bijhouwer reacted furiously to the article: ‘The dendrologist Doorenbos may well be able to use such argumentation; the garden architect Doorenbos should have silenced him.’ [35] It is a revealing discussion, also for its intensity. Gardening as an activity related to nurseries and engaged in issues of making, growing and maintaining, is confronted with modern (and Modern, for that matter) landscape architecture. As other contributions in *De Boomkwekerij* show, many of the newly educated post-war landscape architects, such as Wim Boer, wanted to be free of these gardening roots; to be closer to architecture and the arts. [36]
tecture was always a bit outside of that debate; it had a relatively relaxed position. Steven Toulmin in Cosmopolis draws a larger circle: that of modernity. [37] The idea of modernity motivated the famous Charlie Chaplin film Modern Times. [38] The title of Charlie Chaplin’s film, and even more the iconic image of the protagonist struggling with the wheels of a clock, seems to suggest that modernity had a particular relationship to time issues. In Chaplin’s interpretation, it is all about control. When it comes to the category of growth and change in landscape, Modernism took a different road compared to the decades before. Aspects of time, such as the understanding of growth and an interest in change, played a less important role. They certainly did not disappear, but in so far as they had a role, this became implicit. If we follow statements made by pioneers of Modernism in landscape architecture, we must conclude that they mainly position themselves in relation to architecture, and to the arts - the debate is inherently tied to considerations on what landscape architecture is, or should be.

Treib in Modern landscape architecture. A critical review collected such texts, and he notes that ‘space became the central element of modern landscape thinking’. [39] Designers like Guevrekian, Noguchi and Burle-Marx ‘created a “modern” landscape by giving primacy to compositional and pictorial values, in a manner not very different from the seventeenth-century French formalist imperative “forcer la nature”’. [40] But even if Christopher Tunnard (1910-1979) took the bold position that ‘the right style for the twentieth century was no style at all’, Treib observes that his designs are an awkward blending of traditional elements and biomorphic forms. [41] Modernist landscape architects still had to cope with horticulture and ecology, and therefore were not as free as the arts and architecture were. Probably Guevrekian came closest to the arts, and as a consequence, his famous 1925 garden was created out of ‘inert rather than living material’, and focussed on the ground plane as a composition of forms. The drawing is as remarkable as the garden, and drawings like this one clearly influenced drawing in landscape architecture. [42] At the same time, Modern landscape architects such as Dan Kiley (1912-2004), James Rose (1913-1991), and Garreth Eckbo (1910-2000) had a clear understanding of ecology and the greater landscape. But their interest in ecology and nature often took on a formal language that resembles nature, without losing its connection to architecture: ‘Conceptually the amoeba had a particular appropriateness for landscape because as a formal motif it looked “natural”, far more natural than the axis or the topiary bush of traditional gardens.’ [43] Garret Eckbo had a particular view on plants: ‘People, not plants, are the important things in the gardens. Every garden is a stage, every occupant a player.’ [44] Even if this seems to downgrade plants to mere decor, plants had an ambiguous position. James Rose expressed this ambiguous feeling in a statement that could be read as ironic, but mainly expresses landscape architecture’s very own position: ‘A tree is a tree, and always will be a tree; therefore we can have no modern landscape design’. [45] At the same time, these landscape architects were very well aware of the individual qualities of plants, which must include growth and change, as they strove to distance themselves from the picturesque mass plantings seen in the decades before. Therefore, Rose stated that intelligent landscape design could evolve only from a profound knowledge of materials. [46] This certainly referred to plants, as ‘the inherent quality of plants will inevitably express
itself. Plants are the saving grace of the landscaper, Eckbo puts it, as they are a ‘construction in space’. [47] The work of Tunnard also reveals the ambiguity towards living materials. Plants in particular were a sensitive topic. In Tunnard’s well-known Gardens in the Modern Landscape of 1948 he spoke of ‘architect’s plants’, as shown in drawings by Frank Clark. Not only the role of time in landscape was ambiguous, but also the role of time in drawings. The typical black and white line drawings of this time contained hardly any information on time aspects, yet some Modernist, such as Christopher Tunnard, did. As Jacques and Woudstra show, Tunnard experimented with representation and its communicative power towards clients and the larger public. [48] Some of his drawings embody an idea about time, for example in explaining how a garden could evolve over time. [49] Also his ‘The man-made landscape’ diagram is of interest. Here he connects instruments in the making of landscape – ‘By this means’ – to an intended final product: ‘To this end’. [50] [Fig. 3.6]

It all illustrates the ambiguous position of landscape architecture in the Modernist era, as is also the case with the Hoge Devel park of the Dutch landscape architect Hans Warnau (1922-1995). A typical orthogonal pattern had to be adapted to a former river arm. [Fig. 3.7] Controlled forms and stable compositions were striven for, but these had to be established with the help of plants, trees, and other inevitably changing materials. Therefore, the topics discussed in the preceding paragraph were never far away. We only have to look at C. Th. Sørensen’s design for Højstrup Parken in Odense, as described in the introduction: even if Sørensen could be understood as a Modernist -the title of the English version of his biography C. Th. Sørensen. Landscape modernist is a case

[47] Ibid.: 57.

Fig. 3.6 Christopher Tunnard, The Man-Made Landscape, 1939, diagram. Part of a series of panels designed for the Institute of Landscape Architects exhibition of 1939.
Fig. 3.7 Aerial photograph of Hans Warnau's Park De Hoge Devel in Zwijndrecht, around 1960.
in point— he was very aware of the slow realization of landscape ideas over time. With Højstrup Parken he produced a landscape design relying on the knowledge of aspects of time in the making of landscape. [51]

Halprin and the RSVP Cycles
Of great importance for the history of ideas I am exploring here is Lawrence Halprin (1916-2009), for his own work and for his implicit comment on modernity. His 1969 RSVP Cycles: Creative Processes in the Human Environment addressed the issue of the representation of aspects of time. [52] Even if not very well known in European landscape architecture today, this book is a milestone in the history of landscape architecture. After his death in 2009, attention to his legacy revived. [53] He proposed considering aspects of time by introducing the score as a particular drawing type in landscape architecture, and as a contribution to the thinking about design processes. The first page of the book defines scores as ‘symbolizations of processes which extend over time’. Halprin proposed to use scores for many aspects of landscape architecture - a score could even guide the exploration of an entire city. [Fig. 3.8] With this, Halprin applied a notation technique from choreography to landscape architecture and introduced a type of representation with qualities not to be found in the existing types of representation. Inspired by his wife, the choreographer Ann Halprin, Lawrence Halprin looked at landscape architecture from a performance perspective. As Merriman describes, gardens in Halprin’s view ‘had to be thought of as stage sets’; landscape architects had to design environments with ‘pleasant movement patterns’, ‘giving our lives a continuous sense of dance’. [54] RSVP Cycles ‘started as an exploration of “scores” and the interrelationships between scoring in the various fields of art’. [55] Ann’s wish to give her dancers freedom to improvise required a specific type of score: They did not so much notate what must happen at a given moment, they mainly organized who has to take initiative, and how. In this way, scores could incorporate the momentary improvisation of the performers. Lawrence followed this line of thinking. Hirsch argues that although Halprin described himself as a Modernist, due to his Bauhaus schooling, his approach was clearly different, especially as he had an opposing view on control and order, two words so characteristic of the architectural Modernist perspective. [56] From my point of view, I see the score as a type of drawing, or at least having the potential to be a one, in the same way (landscape) architects think of a section as a representational type. However, as the score is not currently an accepted part of the representational system of landscape architecture, and as the notation of time in general is not an evident part of landscape architectural drawing, Halprin’s plea for introducing the score it seems was not heard. However his contribution to the debate in this research is revolutionary. The current revival of interest in Halprin does not particularly focus on the role of the score, but this drawing type certainly deserves a renewed exploration.

Ecology
To some extent, Halprin’s work seems to be an isolated incident, and it is true that especially his manifesto for the representation of time, although it had its followers, did not change the course of the discipline. But in a larger perspective we have to situate Halprin in between other persons and other developments that
Fig. 3.8 Score of ‘related urban events’ as taken from Halprin’s RSVP Cycles. Creative processes in the human environment, 1969.
together stand for a substantial change of approach to which Modernism gave way. First of all Halprin is part of a larger change in thinking about nature, ecology and landscape. Secondly, he is part of a movement in which planning, architecture and landscape architecture started to actively involve the people that were affected by it. On this second line of thinking, the Dutch Louis le Roy is a good example. Just like Halprin’s work, Le Roy’s 1973 classic *Natuur uitschakelen. Natuur inschakelen* [Switch off nature. Switch on nature] is an implicit comment on Modernism. [57] This book, meant to flutter the dovecotes, is a strong statement against monocultures, pollution and a separation of culture and nature. Given qualities of the soil and vegetation should be used as much as possible. As Le Roy puts it, ‘it is precisely the factor of time that plays such an important role’. [58] In Le Roy’s vision, time should be available in large quantities, to enable all organisms to adapt to new circumstances. It was this thinking that he applied in the creation of the famous *Ecokathedraal* [Eco Cathedral] project in Heerenveen, started in 1965. It involved the development of a wild wooded area on a former meadow, exclusively using discarded building materials that were salvaged and stacked into larger structures. The Eco Cathedral is fascinating in the context of this research, as the project was consciously developed without drawings - drawings were considered a means of control not beneficial for slow, adaptive development, as can be seen in a comment on gardens: ‘If we are going to focus more on the growth process that shapes the whole garden, then we need to continually change the shape and direction of the paths as well. Generally speaking, that doesn’t ever happen!’ [59] [Fig. 3.9] Le Roy for several reasons was controversial, and his position in the development of landscape architecture is unclear. Not being educated as landscape architect, and consciously distancing himself from being part of a formal discipline, Le Roy is left outside the history of recent landscape architecture by many, and included by some. In the context of this study, we might want to consider his position, and acknowledge the important theoretical contribution he delivered. It confirms the complexity of the discourse on representation, time, and the nature of the discipline.

In *Holland and the ecological landscapes. A study of recent developments in the approach to urban landscapes* the Englishman Alan Ruff puts this changed thinking about nature and landscape in the spotlight, and connects it to the design of cities and landscape. [Fig. 3.10] Written in 1979, this incorporates the work of Le Roy. The relevance for the exploration at hand is immediately clear in Ruff’s goal that ‘it must be possible to restore a meaningful con-

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[59] Ibid.: 170. Original text: ‘Gaan we ons meer richten naar het groeiproces waar- door de gehele tuin gevormd wordt, dan moeten paden ook voortdurend van vorm en richting kunnen veranderen. Over het algemeen gebeurt dat nooit!’
tact with the natural world, in which it is possible [...] to observe
the passing of the seasons’. [60] Ruff interprets characters such as
Thijsse or Landwehr and designs such as the Amsterdamse
Bos as important - they contributed to techniques for ‘artificially
establishing natural communities’. This meant, as happened in
the Amsterdamse Bos, Dutch designers arrived at an ‘aesthetic
based upon nature rather than on art’. [61] Ruff discusses several
designs of which ‘the idea was to assist nature’ - a formula that
brings Hirschfeld to mind. [62]. Jan Woudstra puts this in a wider
frame, already visible in the title of his essay ‘The changing nature
of ecology: a history of ecological planting (1900-1980)’. [63] The
esssay highlights the links between the development of ‘ecology’,
after the term was coined by Ernst Haeckel in 1866, and garden-
ing, or later landscape architecture. Gardener William Robinson
became influenced by ecology in his concept for the ‘wild garden’
for example, but this was primarily based on aesthetic or pictorial
criteria - that is to say, there was no real interest in dynamics or
development over time, and hence little need to spend time on the
representation of change. In the case of the German gardener Willy
Lange, known for his book Gartengestaltung der Neuzeit (1907), it
was a bit different. As Woudstra puts it, ‘Lange saw the purpose
of a biologically designed garden, not as imitating nature but as
advancing the intent of nature’. [64] Both Ruff and Woudstra see
Dutch gardeners, biologists and vegetation experts such as Thi-
jsse, Westhof and Landwehr as having made small steps towards
integrating natural dynamics in the design. Nigel Dunnet points
out Alex Watt’s book Pattern and Process in the Plant Community
of 1947 as the first instance of theorising about dynamics. Plant
communities show ‘patterns in time: they are dynamic and change
over a range of timescales, as a result of ecological processes’. [65]

Fig. 3.10 Title page of Ruff’s Holland and the Ecological Landscapes, 1979.
For landscape architects this is instructive: Any acceptance of an ecologically-informed approach to planting must fully embrace the ‘concept of change’ because ‘change is fundamental to the processes that operate within semi-natural plant communities’. [66] However, these theoretical steps forward hardly affected drawing.

It is perhaps in the Eo Wijers Nederland Rivierland competition entry Plan Ooievaar (1985), mentioned already in the Introduction, that the real living landscape with all its dynamics and surprises is incorporated. For that reason, this plan, aiming at landscape interventions that would invite the black stork to settle again in the Dutch river landscape, is a milestone in the development of landscape architecture, and especially as a decisive moment in the influence of ecological thinking on landscape design and vice versa. In the case of Plan Ooievaar there is no preferential aesthetic outcome other than what nature produces, once certain conditions are offered. Woudstra formulates the importance of this plan in another way: ‘This project represented one of the first holistic large-scale applications of ecological ideas to the repair of a large-scale cultural landscape’. [67] When it comes to representation, however, the aspect of time is hardly visible: only the text unmistakably addresses dynamics. In fact, the precise role of design in Plan Ooievaar is complex. A process of change is set in motion, but it remains to be seen what the precise effect will be on the landscape. And yet it is because of this complexity that Plan Ooievaar can be regarded as a conceptual innovation in landscape architecture.

Representation and Landscape
In 1992 James Corner wrote ‘Representation and Landscape’. [68] This text must be considered an essential contribution to landscape architecture theory in general. It is also crucial for the specific argument being made here. As has been mentioned, landscape as a phenomenon and landscape architecture as an intervention in the landscape are closely connected. Corner speaks primarily about landscape. Landscape in itself is an ‘ambiguous term’. [69] The viewpoint of a painter is very different to how a geographer perceives landscape, and as a consequence the diverse professions that engage in landscape have different ideas about its character, its definition and its representation. Landscape architecture, in between such professions, has its own role, as it not only describes existing landscapes, but also creates new landscapes. To do that, effective representations are needed. However, in Corner’s view most drawings of landscape are ‘radically dissimilar from the medium that constitutes the lived landscape’. [70] The lived landscape is a rich phenomenon, and unique in three aspects: landscape spatiality, landscape temporality, and landscape materiality. These aspects have consequences, as they ‘evade reproduction in other art forms and pose the greatest difficulty for landscape architectural drawing’. [71] In the eyes of Corner, the aspect of time is thus one of the three unique qualities of landscape. In fact, he doesn’t speak about time, but about ‘temporality’. His interpretation is strongly linked to phenomenology, and focusses on experience. The experience of landscape has a certain ‘duration’ and there exists ‘an unfolding flow of befores and afters’. [72] Landscape cannot be spatially reduced to a single point of view, nor can it be frozen as a single moment in time. To experience landscape, we have to move through it, and that takes time - it is ‘an accumula-
tion of often distracted events and everyday encounters’. [73] Seen from the perspective of temporality, we can distinguish landscape from buildings; it is a ‘living biome’ and subject to ‘flux and change by natural processes operating over time’. [74] It is exactly this characteristic that complicates the representation of landscape. Elaborating on this point, Corner lists the very diverse operations that relate to time and landscape: ‘The dynamic action of erosion, deposition and the effects of growth and weather continually transform the structure and pattern of the shifting landscape. Not only does this dynamism challenge the art and intentionality of landscape architectural meaning (because of the impermanence of a medium caught in flux), but it also makes it difficult, if not impossible, to represent and experience it externally, as through a drawing for example.’ [75] Many drawings in landscape architecture can be considered notations, in the way Goodman and Tufte use this word, and relevant here is the specific meaning of notations in relation to time. The link to Halprin is easy to see: ‘Notation systems in landscape architectural design are not only useful for their communicative and translatory status, but also because they enable one to consider the simultaneity of different layers of experience, including movement and time.’ [76] We could say that writings by Repton, Halprin and Corner are cornerstones in the development of the thinking about landscape, landscape architecture, time and representation over 150 years.

In The Landscape Urbanism Reader of 2006 Charles Waldheim refers to Corner and to the phenomenon of time: ‘Landscape is a medium, it has been recalled by Corner, Allen and others, uniquely capable of responding to temporal change, transformation, adaptation, and succession. These qualities recommend landscape as an analog to contemporary processes of urbanization and as a medium uniquely suited to the open-endedness, indeterminacy, and change demanded by contemporary urban conditions.’ [77] Remarkably, at first sight, the discourse is primarily about landscape and not landscape architecture. ‘Representation and Landscape’ mainly uses the word landscape –admittedly from the viewpoint of design– but Corner is not very explicit about landscape architecture and, in fact, he might just as well have been talking about work done by artists or architects. Waldheim’s reader also begins with the topic of landscape. However, later in his essay, he talks explicitly about landscape architecture and about a way of approaching design problems. A group of American offices has taken possession of this ideology, and in some design courses, such as at the Harvard Graduate School of Design, landscape urbanism is an unquestioned topic, in which time and representation are explicitly linked. In the 2012 study guide we find Harvard course VIS-02241-00: ‘Course topics are organized thematically and range from mapping ecological systems to illustrating time-based processes, from manipulating and extracting topographical datasets to generating intelligent terrain models, from synthesizing geological, ecological, and hydrological processes to depicting the flows, flux, and ephemera of floral and faunal communities’. [78] This course description is interesting because aspects of time and representation are explicitly included - as far as I could find out, this is one of the only programs doing so presently.

A variety of perspectives
Introductory books on landscape architecture do not pay much attention to the related issues of time, landscape and represen-

[73] Ibid.: 148.
[74] Ibid.: 148.
[75] Ibid.: 148.
[76] Ibid.: 152.
tation. Only one such book, Motloch's *Introduction to Landscape Design* of 2001, dedicates a chapter to the issue. [79] The title of this chapter, ‘Temporal aspects of perception’, is slightly bewildering, as if seeing and moving through landscape is what counts. But in fact the chapter is rich and touches on many aspects including, although very briefly, the aspect of drawing. The first sentence is telling: ‘The landscape can be understood as the point-in-time expression of the forces that have affected it. It can also be understood as an ephemeral expression. The nature of nature is change; and the natural and cultural landscape is continually evolving. Landscape change is one of the primary considerations of landscape design.’ [80] Motloch observes that the issue of time presents us with a paradox; change may be the essence of natural systems, but what we build is primarily static.

Two recent dissertations, both by landscape architects, address the topic of time in landscape. *Eine Pflanze ist kein Stein* [A plant is not a stone] by Lucia Grosse-Bächle discusses the role of plants in process-oriented contemporary landscape architecture. She suggests a special role for Dutch landscape architecture in this, locating the subject of time in ‘processual thinking’: ‘The influence of processual thinking on landscape architecture can be found back very well in a number of Dutch projects, which engage in water management.’ [81] Novelty in the Entropic Landscape: Landscape architecture, gardening and change by Julian Raxworthy speaks about the recent ‘fascination with change and time, expressed in terms such as “dynamism”, “mobility”, “process” and “flexibility” […], a body of thinking and practice I identify as the “Process Discourse”’. [82] By this, he confirms the wide range of words and phenomena in which we can see manifestations of time. The relevance of his work, which will be elaborated on later in this study, is its focus on dynamics as a process more than the landscape it produces. A third dissertation, Anja Löffel’s *Über Naturgärten. Eine Ideengeschichte und kritische Retrospektive sowie zu ihrer Bedeutung für die heutige Landschaftsarchitektur* (2012), discusses the history of the idea of ‘Naturgärten’, which is translated as ‘gardens according to nature’, and provides a critical retrospective, to find out their meaning for today’s landscape architecture. [83] This text does not speak explicitly about time and drawing, but following the development of the idea of ‘gardens according to nature’ implies that it considers aspects of time. Such gardens are by definition dynamic, and therefore for a researcher a difficult medium: the actual gardens do not verify ideas in text or on paper - as they change. For the same reason, drawings have a marginal role. Gardeners in this field do not favour drawings, as ‘the dynamics and not a fixed state is strived for’. [84] Löffel’s dissertation describes a history of ideas. In this history of ideas she links the role of time to the ‘Verzeitlichung’ of science, meaning that science became time-based, for which Darwin could be held responsible. The relevance of Löffel’s work is that this history of an idea about gardens and gardening is also a history of the influence of ecology on landscape architecture. Löffel comments on the earlier mentioned dissertation of Grosse-Bächle. This opens a discussion on the precise meaning of words like dynamics and processuality. Without entering this discussion, one can say that it reveals an important problem for landscape architecture. As Löffel puts it, it is quite understandable that landscape architect Peter Latz in his well known 1991 competition entry for Duisburg-Nord did not want to draw a plan - ‘for which state should he show?’ But conventional ideas about how to hand in a competition, forced

[83] Löffel 2012: xiii
[84] Ibid.: 6.
Fig. 3.11 Development of trees over time in relation to planting schemes and management. Diagram by Frits Ruyten, 2006.
him to draw a plan. It points out the dilemma landscape architects have to face: how to integrate the dynamics of nature in the rules of a design process? [85]

A 2006 Dutch contribution by landscape architect Frits Ruyten, also a dissertation, and an 2004 American piece by Niall Kirkwood approach the debate from a practical point of view, addressing the durability of a project over time, and the management of it. [86] Ruyten presents a method of planting that efficiently realizes the architectural goals and matures without a high level of intervention. [Fig. 3.11] Interestingly, this work combines drawing, landscape and time, as can be read in this rather practical statement: ‘The planting plan shows the size of a plant at a certain point. As a result there is a problem with the size of the plant as it becomes old, and with the graphical representation of a single plant or all the vegetation at various stages.’ [87] Kirkwood raises the aspect of time in the introduction: ‘Simply stated, the difference between landscape architecture and architecture is the dimension of time as realized through the medium of their respective built work.’ [88] Ruyten proposes film as a technical solution to this. [89] His work focusses on weathering, but one could say that this phenomenon mirrors a more general discussion on time. The vocabulary of Kirkwood has a striking similarity to terms I will discuss later, such as a distinction between ‘cyclical’ and ‘linear weathering’. Landscape historian John Dixon Hunt in his *The Afterlife of Gardens* (2004) presents a view less practical but very relevant. [90] Hunt consciously distances himself from the field of design. To be more precise: Hunt wants to take the garden as a realized object independent from the designed garden. ‘Both journalistic and academic approaches privilege creators and designers’, states Hunt. It is the category of visitors he wants to address. They give new readings of the design throughout time, and these new readings matter. [91] Every design consists of various stages: a design, a construction, a growth, and a mature stage, and perhaps we ought to add to this the stage of decline. The design and construction stages are normally not meant to be publicly visible, but we could look at them from another angle. In a recent article, Roncken, Stremke and Pulselli make a plea for understanding landscape designs in terms of clearly defined stages. They did so for a specific category that they call ‘landscape machines’, meaning designs with ‘the extremely large ambition to design a living system.’ [92] The authors suggest ‘a new, initially even artificial landscape system that will nevertheless develop into a self-sustaining system.’ [93] They describe an ‘initial stage’ in which the landscape machine is laid out, a ‘growth stage’ covering the succession undergone by the newly designed landscape, and a ‘yield stage’ in which the design has reached the level where it ‘entirely regulates itself’ and supplies ‘a maximum amount of ecosystem services and goods’. The ‘steady-state’ describes a long-lasting existence including constant amendments that eventually can lead to decline. Their approach comes from the theory of ecological systems. Roncken et al suggest that designed landscapes should also be understood on the basis of these stages. One consequence of this is ‘the inclusion of a possible alternative ending of the intended design.’ [94] A second consequence is that such differing stages will also be experienced in different ways by the users of the landscape and that may mean that ‘the people involved’ do not consent to the development of the landscape even if that is what the design proposes. The reverse is also true: ‘Initially unwanted results may turn out to become desirable products.’ The authors call for this
Fig. 3.12 Diagram of ‘landscape machine’. *Full Hybrid*, Jonas Papenborg and Remco van der Togt. Wageningen University, 2012.
to be included ‘in the design and modelling of living systems’, and experiment with that in their own teaching. [95] [Fig. 3.12]

Recent contributions
One of the most recent contributions to the discussion was made by Diana Balmori in her 2014 *Drawing and Reinventing Landscape*. While accentuating the role of drawing in current landscape architecture, Balmori also discusses time. [96] As Michel Conan suggests in the introduction, Balmori sees our views of nature as undergoing a radical change. Because of that, landscape architecture is being called upon to reinvent itself. Time is a key issue in this, both from a historical perspective and as a contemporary debate. This historical perspective provokes the cry from Balmori that ‘it is curious that for a discipline in which everything is in constant change, there is so little in landscape representation that reflects time’. [97] Change, as Balmori states, is the major word with which the immediate future of landscape architecture has to be described, and as a consequence there is ‘the need to be able to work accordingly, accepting constant change, and to be able to represent it’. [98] In fact, these words by Balmori perfectly summarize the exploration in this paragraph of landscape architectural thinking in relation to time and representation. It shows that, in the history of landscape architecture (and its preceding professions), a substantial and continuous body of thinking can be found, especially in earlier centuries, i.e. before the Modernist era. However, as pointed out by Balmori, time and the representation of time in landscape architecture are not as present as one would expect them to be, confirming the basic assumptions that guided this research, and highlighting that it is timely.

Before moving to connected fields such as urbanism, we can conclude that the issue of time in relation to landscape and design merits its own historic overview, or better said, it merits being compiled in a history of ideas, for which a start has been made here. In this history of ideas we find many interesting contributions of which a few stand out as fundamental, such as those of Repton, Halprin and Corner, as they connect issues of time with landscape, design, and drawing. As overviews such as those of Wimmer and Löbbecke show, there is no continuous and gradual development in the thinking about time, landscape and intervention. Particularly during the Modernist era attention to these issues was low and ambiguous. This more or less coincides with the ‘official’ start of landscape architecture as a discipline, so that the richer episodes in this history of ideas are to be found earlier. Therefore, there is an interesting relation between these issues and the emerging ideas about landscape architecture, as becomes visible in the work of Repton, Olmsted and Springer, and in the debates on the garden architect as an independent advisor or a nurseryman. Texts by Halprin, Le Roy and Corner represent the fading dominance of Modernism, and the growing influence of ecological thinking, bringing in its own concepts about time. Perhaps Balmori stands for the final act of this change - that is to say for the definitive integration of aspects of time in landscape architectural thinking and drawing. If this is indeed the case, remains to be seen.

Connected fields
Several fields close to landscape architecture have provided important contributions to a history of ideas on time, landscape

[95] Ibid.: 95.
and design, such as archaeology. With the statement ‘Landscape is time materialized. Or, better, landscape is time materializing: landscapes, like time, never stand still’ Barbara Bender gave an adequate time-related definition of landscape. A background in archaeology brought her to think of landscape as ‘always in a process of being shaped and reshaped’. [99] Conceptual thinking about the nature of time in landscape can be found in the works of several authors in fields such as archaeology and anthropology – see, for example, Tim Ingold and his book *Making* (2013) or the article ‘The Temporality of Landscape’, already mentioned and quoted in the introduction for its vocabulary, including ‘temporal rhythms, ranging from the long cycle of its own germination, growth and eventual decay to the short, annual cycle of flowering, fruiting and foliation’.[100] By contrasting ‘human generations’ with the ‘life-cycles of insects, the seasonal migrations of birds, and the regular round of human agricultural activities’ Ingold shows the wide span of time that we should take into account. [101] In Ingold’s view of landscape, time and change are central, as ‘the landscape is never complete: neither “built” nor “unbuilt”, it is perpetually under construction’. [102] In *Making* Ingold connects art, architecture and anthropology with archaeology. In fact, drawing and time are both notably present in archaeology, revealing and registering layers in the historic landscape. [Fig. 3.13ab]

*Cartography*

Cartography is also of interest here. In an essay on mapping, Dennis Cosgrove speaks about the ‘apparent stability’ of maps, to conclude that all maps are ‘provisional’, in spite of the fact that cartographic representation often seems very closed and final.
The suggestion that maps represent or aim to achieve stability must be questioned, especially today: ‘In a world of radically unstable spaces and structures, it is unsurprising that the idea of mapping should require rethinking.’ Apart from the philosophical discussions on aspects of time that are raised by maps in general, time in and of itself has also been a subject of mapping, as can be seen in Rosenberg and Grafton’s Cartographies of Time and in Tufte’s Envisioning Information.[104] How to represent time? Rosenberg and Grafton argue that our understanding of time is deeply connected with a line: ‘In the graphic arts, the same holds true: from the most ancient images to the most modern, the line serves as a central figure in the representation of time.’

Nevertheless, timelines as representations are a rather young phenomenon. Chronological notation before was generally done in the form of a table, on the basis of the invention of Eusebius in the fourth century. This Eusebian model ‘provided a single structure capable of absorbing nearly any kind of data’. [106] Progression in astronomy made chronological representations more reliable, and also had an influence on graphical representation. It is the invention of photography and film, and their sequential nature, that supported the idea of an objective depiction of historical events. A chart made by Charles Joseph Minard in 1860, depicting the Napoleonic march on Russia related to the expedition of Hannibal through the Alps, shows the potential of merging cartography, infographics and timelines. [107] [Fig. 3.14] In that sense, timetables can be considered a rather established concept for thinking about and depicting time.

With regard to types of representation, Corner believes maps are extremely important. It is not easy to distinguish between a plan and a map as types of representation. From a geographical point of view, a map is essentially a descriptive and interpretive document, but not a design. The term ‘plan’ often focuses on objects that are to be built. To avoid confusion, in Dutch landscape architecture the word ‘plankaart’, literally ‘plan map’ is often used for plans on a large scale. However, there is no equivalent in English. Corner refers to Mappings, a collection of cartographic essays including an intriguing text by Paul Carter on coastlines. [108] Carter’s essay covers a wide field but demonstrates how unstable maps are,
and how much they are at the mercy of time. Cosgrove, referring to Carter’s text on maps, uses the term ‘troubling’: ‘Their apparent stability and their aesthetics of closure and finality dissolve with but a little reflection into recognition of their partiality and provisionality, [...]’. [109] Coastlines are a splendid example, as can also be seen in a drawing by Marit Janse. [Fig. 3.15] As Cosgrove puts it, ‘not only are all coasts in fact zones rather than lines – the unstable space between high and low water in tidal zones, for example – which the cartographer has to “fix” according to criteria which are inevitably arbitrary, but their linearity is mapped by determining a finite set of points which are then joined by a sweep of the cartographer’s hand to create a coastline.’ [110]

**Forestry**

Close to landscape architecture, but in another direction, we find forestry. Probably because of its obvious long-term thinking, forestry is a valuable source of information on the subject of time. One of the early authors writing about forestry was John Evelyn, with his 1664 *Sylva: A discourse of forest trees & the propagation of timber*. [111] As was the case with gardening, forestry was for a long time an implicit practice that didn’t require text. The treatise by Evelyn, also considered a gardener and a writer, must be seen in relation to the same evolution that prompted gardening handbooks, including the 1683 *The Scots Gard’ner*, mentioned earlier. [112] The British navy desperately needed timber, and this book was written as an encouragement for landowners to plant trees. Evelyn addresses those who want to serve their generation: ‘To these my earnest and humble Advice should be, That at their very first coming to their Estates, and as soon as they get Children, they would seriously think of this work of Propagation [...] (and to) begin Planting betimes, without which, they can expect neither Fruit, Ornament or Delight from their Labour.’ [113] Improving the soil is a necessary preparation, and after that, a nursery can be started, as growing trees starts with sowing acorns: ‘And when by this husbandry a few acorns shall have peopl’d the neighbouring regions with young stocks and trees; the residue will become groves and copes of infinite delight and satisfaction to the planters.’ [114] After discussing how to raise and to transplant the young trees, and after a brief explanation of the nomenclature of trees, Evelyn presents all relevant species, starting with a long expose on the characteristics of the oak, so important for timber, and the specific difficulties planters have to overcome.
The arts

The arts are an important source both in terms of thinking and drawing. Important here is the Futurist period, in which both the phenomenon of time as well as its representation were debated. The oeuvres of land art artists from 1960 onwards could be discussed. For example Richard Long’s project *A line made by walking* of 1967 is strongly connected with the issue of time - the work results from slow change over time. [115] Andy Goldsworthy not only created pieces of art that relate to time, but also wrote about it in his book *Time*. The introduction reveals a whole vocabulary on the issue, but the main argument Goldsworthy puts forward is about the difference between being a spectator, and working with time: ‘I was always interested in seeing work change and decay, but usually as a spectator. Lately the challenge has been not simply to wait for things to decay, but to make change an integral part of the work’s purpose so that, if anything, it becomes stronger and more complete as it falls apart and disappears.’ [116] This is an important point: Not only the representation of time as a natural aspect of landscape is at stake, but apparently time is also seen here as a specific impulse for the creative process. For several reasons, the *7000 Eichen* [7000 oaks] project by Joseph Beuys as conceived for the Kassel art exhibition *Documenta* 1982 is an interesting example. [117] In the city of Kassel over a period of five years, an indeed huge number of trees were planted -not all of them oaks- as a social work of art: The people of Kassel had to decide on their exact locations. Every tree was to be accompanied by a piece of basalt. The oak ‘as a slow-growing tree clarifies the effects of time’. [118] The basalt stones, roughly hewn, offered protection but were also part of the project. As ‘a visual manifestation of time’, all basalt blocks were heaped up into a mountain of stone that diminished over the years as every newly-planted tree was given one block. [119] In the way Beuys conceived this project, it was consciously non-designed, and therefore included no drawings that we can associate with designed interventions. Consciously non-designed, and therefore not laid down in design drawings, it is ironic that three decades later, the work was nevertheless represented in the form of an interactive map. This was done by the Stiftung 7000 Eichen, founded in 2002 to care for the trees - also an act in time. [118] See Körner and Bellin-Harder 2009: 7

[117] On the 7000 Eichen project numerous sources can be found. I refer to the Foundation7000 Eichen at http://www.7000eichen.de/index.php?id=2. This foundation has been caring for the trees - also an act in time.
[118] See Körner and Bellin-Harder 2009: 7
[119] Ibid.: 7.

In some cases art itself is essentially time-based: Theatre, dance and especially (animated) film work with notational systems orga-
nized in time. They use scores or storyboards, ‘graphic organizers in the form of illustrations or images displayed in sequence for the purpose of pre-visualizing a motion picture, animation, motion graphic or interactive media sequence’. [121] The storyboard is a technique that has received wider recognition. Storyboarding is also used in engineering and software design. In that context it was defined as ‘a short graphical depiction of a narrative’. Specifically in the context of software design, it can be used as an ‘illustration of how an application feature works’. [122] In an article on storyboarding, Truong et al discuss the need to depict time. Their first conclusion is also of consequence to this research, as apparently the representation of time is a matter of choice: ‘Explicit references to time passing are only necessary when time is a significant element in a story.’ [123] The most promising time-based arts are animated film and comics. The objection could be that both are not really representations as they do not precede the performance, whereas representations in landscape architecture indeed precede the making and growing, animation and comics are final products in and of themselves. Even if this is true, they can become representations once they are given that function in landscape architecture. That happens if they start to become ways of depicting a future. Animated film, rather than film in general, is mentioned very consciously here. Film certainly is in itself a promising category in landscape architecture, as explored for example by landscape architect Christoph Girot at the ETH, Zürich [124]. However, animation implies the creation of images, more than the registration of an existing reality. This aspect of creating images brings it quite close to how drawings function in architecture. Animation in technical terms should be understood as a series of individual frames, in large numbers. To suggest movement by static pictures at least 12 frames per second are needed, and to please the human eye and have smooth movement, 24 or more. One could look at animated film as a series of visualizations - the decor of a story. Paul Well’s seminal work on animated film is particularly interesting in this context. [125] He sets animated film apart from other film exactly because of its ambiguous relation to reality. The time aspect is deeply embedded in the idea of animation: ‘Animation is not the art of drawings that move, but rather the art of movements that are drawn. What happens between each frame is more important than what happens in each frame.’ [126] Time in animation -and film, for that matter- is approached in fundamentally different ways. A film can, as an example, take 4 minutes and 22 seconds to see it. In this film a story can unfold that spans seconds, weeks or decades, and use different techniques including flashback and flash-forward to jump over large chunks of time – the narrative time may be very different from the real time it takes to see the film. In so far as animations are stories –often told with voices, sounds and music in the background- they are constructed with narrative strategies, including for example the technique of condensation, by which large jumps over periods of time can be brought in only a few images, taking perhaps a few seconds to watch. Comics, sometimes also described as cartoons, are both close to animation and rather different. Wells touches upon this closeness between comics and animations: ‘Soda jerks (1920) by Hurd and Barre serves as an interesting example of the early cartoon form in the sense that it represents how the comic strip creates a vocabulary for the animated short’. [127] Understanding comics by Scott McCloud reflects on the phenomenon of comics, but is actually at the same time written and drawn in the form of a comic. [128] Despite this unusual presentation format,
it is a very serious and well-informed piece. McCloud speaks about comics as ‘sequential art’, immediately positioning the comic as a time-based medium. [129] We could look at the individual images in a comic as the frames of an animated film spread on a page. [Fig. 3.17]

Architecture and urbanism

Even if in architecture in general design processes resulting in a stable final situation are more obvious, in this discipline too we can find interesting contributions to the exploration here, such as the book ritual house by Ralph Knowles on houses that change over the seasons, and Stewart Brand’s How Buildings Learn. Brand wants to understand ‘building’ as the present continuous: ‘Whereas “architecture” may strive to be permanent, a “building” is always building and rebuilding.’ [130] His ultimate goal is to define forms of design that anticipate, or even invite, change. The most important contributions have been made by Leatherbarrow and Mostafavi in On Weathering, and in Leatherbarrow’s recent Architecture oriented otherwise. [131] In this book, he proposes that we understand buildings in time and introduces the crucial concept of actuality, pointing at the actual building at one moment in time. Leatherbarrow looks at buildings as less static and less durable than we usually think. Diverse forces ‘attack’ buildings, and it is essential to note the building’s ability to resist: ‘The building’s labour is quite simply the amount of effort it takes to sustain this economy, to keep up or play its part.’ [132] In fact, Leatherbarrow introduces a perspective on buildings that resembles landscape architecture. Buildings have a ‘provisional finality’. [133] An experimental ‘building’ by Ferdinand Ludwig il-

[133] Leatherbarrow 2009: 60.
Fig. 3.18 Photograph of part of ‘growing installation’ Plane Tree Cube Nagold, design ludwig schönle, 2012.
lustrates architecture as a temporary business: Growing structures over the years become strong enough to take over the provisional steel frame. [Fig. 3.18]

Literature in urban planning or urbanism may be close to landscape architecture, but reveals itself to be more explicit on the issue of time. A clear account of its relation to time is given in *Het ontwerp van de stadsplattegrond* [The design of the urban lay-out] published in 2002 – now a standard in Dutch urbanism education. [134] One of the headings is ‘De factor tijd: de duurzaamheid van de stadsplattegrond’ [The factor of time: the sustainability of the urban lay-out]. [135] Here it is argued that the ‘city plan’ is essential to urbanism because of the time factor. Urbanism is considered a profession that facilitates the basic conditions for building, and therefore always thinks in large time scales. Once the design of a city plan has been approved, the layout shows a considerable durability, even if buildings change dramatically. The authors refer to the notion of the *longue durée* as introduced by Ferdinand Braudel. [136] Braudel argued that history comes in different layers that all have their own dynamics and time frames. At the University of Delft, this notion stimulated a ‘morphological’ approach in which the very persistent structures in city and landscape were taken as a point of departure. Kevin Lynch gives a concise account of the importance of time in *What Time Is This Place?* Written shortly after Halprin’s *RSVP cycles* in 1972, its back flap is rather explicit: ‘Time - call it change, growth, development - is the missing dimension of place, and Kevin Lynch, a provider of missing links, supplies it in this provocative book.’ [137] The statement on the back flap is particularly interesting as it confirms the definitional problem of time in this context: ‘call it growth, change, development’. One possible explanation for the explicit role of time in urbanism is that the operation of making a city relies on preparatory drawings, formal discussions, and public decision-making before the long process of building starts, and all the while necessarily taking change of circumstances into account. The designed infrastructure system of roads, but also sewers, per definition collides with the former irregular landscape. For that reason there is always a meeting of the (regular) new and the (irregular) old. *Rotterdam, verstedelijk landschap* [Rotterdam urbanized landscape] by Frits Palmboom (1987) was immediately a classic. It opened the eyes of urban planners (and landscape architects) to this meeting of old and new and the substantial influence of the ‘old’ landscape on the seemingly very rational pattern of Rotterdam. [138] Recently, Palmboom with *Drawing the Ground* published a book that ties the links between drawing, landscape, and time even tighter. Together with Lynch’s *What Time Is This Place?*, this is a strong contribution to the argument from the side of urbanism, and Palmboom also engages in drawing. The office seeks to make ‘the operation of time visible’ in drawings. As urbanism often has to deal with uncertainty these drawings ‘practice the art of determining things minimally and leaving as much as possible open’. [139]

It follows from this discussion that connected fields such as archaeology, cartography, the arts and urbanism and writers such as Lynch, Bender, Ingold and Leatherbarrow contribute essential arguments and concepts to the exploration of time, landscape and intervention. Kevin Lynch in particular points out the difficulty of speaking about time. In elaborating on this difficulty, he in fact makes perfectly clear which viewpoints have to be considered, just as for example historian Eviatar Zerubavel does.

[136] Ibid.: 119.
Speaking about time

Augustine’s famous cry ‘I know what time is, but if one asks me, I don’t know what to say’ was already mentioned in the introduction. The work of Augustine has been discussed by numerous authors, and does not need to be repeated here. But referring to him helps us to see that due to this fundamental tension between the evident and the unexplainable, the notion of time in relation to landscape includes words such as change, growth, movement, dynamics, and process. Here, I try to shed light on possible ways of speaking about time in relation to landscape architecture.

Different views

‘We have two kinds of evidence of the passage of time. One is rhythmic repetition—the heartbeat, breathing, sleeping and waking, hunger, the cycles of sun and moon, the seasons, waves, tides, clocks. The other is progressive and irreversible change—growth and decay, not recurrence but alteration.’ [140] With these words, Kevin Lynch in *What Time Is This Place?* gave both a rich and a practical approach to time. His contribution links the thinking about time in adjacent fields to the vocabulary as proposed here. Lynch’s sentences barely reveals that an urban planner wrote them. Lynch comes closer to urbanism and even landscape architecture with the remark that ‘environment is the clock we read to tell real time’ and a statement about parks: ‘One of the great values of the city park or garden is the way in which its plants and surfaces convey the passage of the year.’ [141] Plans, however, rarely ‘refer to desired or expected timing’. [142] In fact, Lynch develops quite an elaborated vocabulary by listing a set of terms that structure the phenomenon of time from the perspective of urbanism: ‘One can think of several dimensions along which time structure can vary: a) its grain, or the size and precision of the chunks into which it is divided; b) its period, or the length of time within which events recur; c) its amplitude, or the degree of change within a cycle; d) its rate, or the speed with which changes occur; e) its synchronization, or the degree to which the cycles and changes are in phase, or begin and end together; f) its regularity, or the degree to which the preceding characteristics themselves remain stable and unchanging, and g) (in the human case and more subjectively) its orientation, or the degree to which attention is focussed on past, present or future.’ [143] This quote by Lynch is very useful because it creates, from the perspective of designers of cities and landscapes, a frame for speaking about time, and for ordering the wide range of possible interpretations that comes with it.

Evidently, in other fields numerous attempts have been made to speak about time in a systematic way. Many such attempts operate on a level of abstraction that is above that of this research. However, *Three concepts of time* by philosopher of science Kenneth Denbigh gives a helping hand. ‘The great value of the time concept is that it provides a systematization’, Denbigh states, and he connects time to change, which in relation to landscape is certainly a useful designation: ‘No doubt [the concept of time] was first created by the ancients to enable them to cope with the fact that things are changing: the clouds are moving and changing their shapes; plants are growing and withering; the positions of the heavenly bodies are slowly shifting; and men themselves progress inevitably from birth to death. [...] all such events and processes of change can be treated as elements within a unique serial order.’ [144] Denbigh distinguishes three concepts of time; it is his third
time concept that is relevant here, a time concept residing in our conscious awareness. It is structured with words like ‘now’, ‘earlier’ and ‘later’, and assumes an on-going movement of time in the direction of ‘the future’. The implication is that every moment is a unique moment that can never happen again. [145]

We find literature on time in very different fields. A very basic and recurring distinction is that of linear time and cyclic time. Linear time is seen as the simple progression of time in between two moments involving now and then, earlier and later, past and future, and the conviction that time moves in one direction, coined the ‘arrow of time’ by Arthur Eddington in 1929. [146] The symbolic meaning is evident: Time is progressing in one direction. This can be contrasted to cyclic time. As Lippincott states in The Story of Time, ‘the sun and the moon are the two great timekeepers in the heaven’, marking the cyclic return of day and night, the rhythm of the months, the passage of the year and the larger cycles, defining both the cyclic occurrence of phenomena and linear growth measured against such cycles. [147]

A very different realm of time concepts is found in text, story and film. A film can span hours, generations, and ages of history in a logical sequence of happenings, but just as easily with jumps in time, by flashing back or flashing forward. Seymour Chatham looks at narratives as having a double time structure: the time of the events in the plot (story time), and the time in which the events are presented (discourse time). [148] Film, books and theatre offer various approaches to construct a story. In books, ‘time can be frozen for a moment’ as Chatham puts it, to describe the landscape around us. Film can give in one shot an almost endless amount of detail, though presented without any order, with no time to linger, as film has too much ‘narrative pressure’. [149] Essential, however, is that time in narratives can be experienced in different ways, as was the main issue in question in the work of Henri Bergson. Time is a flow with ‘durations of different tensions’. Bergson distinguished ‘spatialized time’ being the abstracted clock time, and ‘real time’ or ‘duration’ being the flowing, indivisible time. [150]

When speaking about landscape, it is typical to consider short time spans like a day or a season, the time it takes for an oak to mature, and very long time spans like ice ages – or even much longer, such as the geological concept of deep time. [151] Regarding (very) long and (very) short timescales, Dutch physicians Gerard ‘t Hooft and Stefan Vandoren offer a systematic approach. They rigidly think in timescales defined in powers of ten. [152] Ranging from $10^{-44}$ to $10^{26}$, ‘t Hooft and Vandoren explore which phenomena operate on the diverse time scales, like the circulation of the planet Saturn, or the half-life of an atom. Every phenomenon we could think of related to landscape still fits in only a small part of their scale! In fact, this scale to measure time perfectly matches the second category of Lynch, who spoke about ‘its period, or the length of time within which events occur’.

Zerubavel’s contribution

*Time Maps: Collective Memory and the Social Shape of the Past* by historian Eviatar Zerubavel covers topics such as religion, ancestry and commemoration. [153] That may seem off topic here, but in fact it provides a rather effective framework to speak about time.
concepts. The aim of the book is ‘to depict how we actually map the way time flows in our mind’—in itself interesting for the graphical connotation of the word map. [154] Zerabuvel distinguishes ‘patterns along which we normally envision time flowing (linear versus circular, straight versus zigzag, legato versus staccato, unilinear versus multilinear), as quite explicitly evident in the general plots (“progress”, “decline”, “rise and fall”) and subplots (“again and again”) of the stories to which we usually come to narrate its passage’. [155] Most of these notions are quite helpful in categorizing time concepts in landscape architecture. Zerubavel discusses a series of ‘formal patterns’ in which time is mapped. The first is the notion of progress. This is illustrated with popular perceptions of social rising (‘rags to riches’), perspectives on past and future (‘later is better’) and common phrases like ‘development’ and ‘progress report’. However, the main manifestation is in the idea of evolution, represented as a ladder, or an upward pointing arrow. It is strongly associated with the word optimism, not as an individual notion, but as ‘an unmistakably schematic “style” of remembering shared by entire communities’. [156] The opposite formal pattern is that of decline, graphically represented in an arrow pointing down. This suggests a better past that is lost, after which ‘things usually get worse with time’. It is interesting to observe that such a downward concept of time is almost impossible in the context of plans, as they generally aim to improve. However, often a nostalgic and pessimistic view of the past is a strong motivation for making plans. Particularly in landscape, the deterioration of our environment has motivated many plans. As Zerubavel says, ‘historical plotlines are often extrapolated to imply anticipated trajectories’. [157] Both progress and decline suggests a linear unfolding of time, but linearity is often not the case. Many narratives are based on ‘zigzag narratives’: a rise-and-fall narrative, as was the fate of the Roman Empire; or a fall-and-rise narrative, denoted as the ‘Cinderella-scheme’. In any such narrative the idea of a turning point is crucial. But linear or zigzag, these time concepts are unilinear, or ‘a serial progression of unmistakably successive episodes’. [158] Such schemes are associated with a purposeful enfolding of history—or, probably, if related to design, the purposeful act of making a plan. Zerubavel speaks about ‘stories of becoming’. The opposing concept is that of a multilinear narrative illustrated by cladograms. The branching structure of a cladogram represents
the different paths of evolution. Again, this is not so far away from the practice of making plans, as reality often forces us to think in scenarios, and to cope with unexpected happenings.

Is time always moving forward? No – Zerubavel also describes formal patterns departing from the idea that time moves in circles. An obvious manifestation of this circular concept is the phenomenon of the seasons. Circularity does not contradict forward-oriented patterns – it can happen at the same time. [Fig. 3.19] Independent of circular or forward understandings, ‘historical narratives vary considerably in their perceived density’. [159] Density is a highly personal experience, but Zerubavel looks at it as a social way of understanding time. We construct our past in ‘eventful’ and ‘un-eventful’ periods. With a metaphor again close to cartography and landscape, Zerubavel adds that history thus takes the form of a relief map with ‘mnemonic’ hills and dales. [160] There are ‘two basic modes of envisioning the actual progression of time’ in historical narratives: legato and staccato. Time can flow gradually and smoothly (legato), or confront us with abrupt changes (staccato). Such perceptions of time express the desire to construct the past as continuity, or a discontinuity. The present is ‘largely a cumulative, multilayered collage of past residues continually deposited through the cultural equivalent of the geological process of sedimentation’. [161]

This overview of concepts of time started with Lynch, and ended with Zerubavel. They share similarities, but also bear an important difference, which is the accent Zerubavel puts on the narrative aspect in understanding time. Zerubavel reflects on concepts of time in experiencing, re-telling and constructing history. The fact that he also takes ‘constructed narratives’ into account establishes an important link to the themes in question here. Landscape architectural plans are most certainly constructed narratives, although the narratives are often implicit, with strong ideas about (un)desirable pasts and futures. Zerubavel speaks about our ability to mentally transform essentially unstructured series of events into seemingly coherent historical narratives. This describes, in a surprisingly apt way, an important feature of landscape architectural plans and their rhetoric. Even if the word is absent in landscape architectural theory, it makes sense to think about plans as plotlines. With such notions, Zerubavel, Lynch and others offer a vocabulary that helps us to ‘read’ landscape architectural thinking and draw drawings in a more systematic way. This commences with the obvious division into cyclic and progressive time. It includes words like change, growth and dynamics. It expands towards dimensions of time, such as its length, amplitude and regularity, its direction, its narrative aspects, and the linearity of the episode, bringing in the option of different scenarios.

This section has underlined and elaborated what the introduction put already forward: the complex relation between a landscape on paper and a landscape in reality as a consequence of time at work, with a focus here on the diverse understandings of time at work. ‘What exactly is the role of time in landscape architectural design?’ was asked in the introduction, and at least a start has been made in answering that question. The account given here suggests that we can construct a history and a theory of time, landscape and intervention, and connect that in the next section to the representation of time. With Hunt as cited in 3.2, we should not orient ourselves ‘entirely if at all’ on Freud, Lacan, Derrida,
Fig. 3.20 Page as taken from Dezaillier d'Argenville, 1709/1972. The diagram shows how drawings on paper can be transported to the garden, as the first of twenty 'exercises': Parallelle du papier avec le terrain, en ce qui regarde la manière de tracer, réduit à vingt Pratique.
Foucault or Barthes; it is within landscape architecture itself that we must find ‘the grounds for an adequate theory’. This section widens up Hunt’s statement towards connected disciplines, but indeed an adequate theory is at hand.

3.3 Drawing, drawings and the design process

Introduction
In the preceding section, drawings (as a noun) and drawing (as a verb), and design processes in which they are deployed, had a modest role. This section will take drawing as its starting point. It explores the drawing as an object: a product of craftsmanship with physical characteristics, but also a vehicle in professional transactions, carrying embedded messages. It discusses ‘representation’, and the rhetoric aspects of speaking about what is not yet there. It positions drawings in the process of designing, and speaks about ways of categorizing drawings, to arrive at the specificity of drawing in landscape architecture and the way time is an element of images in various disciplines.

The making of drawings seems so obvious for landscape architects that, in the practice of design, the drawing as a phenomenon is hardly questioned. This contrasts with architecture, where drawing is a topic in theoretical discussions. An obvious reason is the smaller number of theoretical texts, but a more important reason is the restrained role of drawings in the practice of gardening, a predecessor of landscape architecture. Until relatively recently, gardening happened without drawings; it happened in the field. To some extent that also happened on the larger scale, for example in the making of polders. As De Jong notes, land surveyors were important in landscape architecture: One could say that they drew ‘on the spot’. [162] Many drawings from gardens and landscapes as we find them in books, are not so much designs as artistic depictions: (idealized) accounts of existing situations or executed works. Even if such drawings do not reveal the design process, they do show how landscape can be visualized on paper, closely connected to the painterly traditions, and cartographic knowledge of measuring and depicting landscape. We can find them from the end of the 16th century onwards. In *Aardse Paradijzen* and *Landscapes of the Imagination* De Jong et al discuss important emancipatory steps in the development of landscape architecture, and more specifically the development of drawing in and for landscape architecture. [163] An example of this is the work of Hans Puechfelder. In the 1593 *Nützliches Khünstbüech der Gartnereij* he presented some 50 ink drawings of gardens. Puechfelder as a gardener wanted to show that he understood the emerging theory on perspective – an emancipation from ‘gardener to garden artist’. [164] The technique of perspective drawing in particular established a tradition in which the design of gardens was closely related to the depiction of gardens. Many garden designers, among them André Le Nôtre (1613-1700), were educated as painters - and in Le Nôtre’s case also as architect, as is visible in his very skilful plan drawings with careful attention to built structures in garden designs. In Le Nôtre’s drawings, as De Jong comments on the 1694 design for the Grand Trianon in Versailles, ‘word and image belong together’, an important development in drawing that is particularly relevant for landscape architecture, given the complexity of landscape. [165] This connection to the

[164] De Jong in De Jong, Lafaille and Bertram: 40.
Fig. 3.21 Visualization of City Life Park Milan, partially completed 2014, Gustafson Porter.
technique of drawing, and more particularly to painting, deeply influenced new landscape design as it emerged in England in the early 18th century. In the work of William Kent (1684-1748) for example, painting inspired landscape design, and vice versa. Kent was also educated as stage designer, visible in the presence of people in his design drawings. [166] Treatises or garden handbooks such as *La Theorie et la Pratique du Jardinage* (first version 1709) or *The Scots Gard’ner* (1683) reveal the apparent need for information and the evolution in thinking about gardening. [167] These text-oriented books provide some instructive drawings concerning the technique of measuring the garden. An important step forward is the very clear relation between working ‘in situ’ and drawing on paper. [Fig. 3.20] In the vocabulary we use today we would probably call them diagrams. An early 18th century design drawing for the Groot Terhorne estate in Beetgum explores a particularity of landscape architecture. [168] The design shows that an existing road is integrated in the otherwise very orderly design. Landscape often confronts the landscape architect with *faits accomplis* – designs are almost never made on a ‘white sheet’. For that reason, cartography as a means of mapping the existing landscape was closely related to garden design. Nicolaas Bidloo (1673-1735) as a gardener also wrote about his garden, and about the significance of drawings. Bidloo argues that drawings serves as memory, to keep the garden in mind, pointing at the important informational facility drawings offer. [169] The title page of the manuscript depicts Bidloo himself with devices to measure and to draw, such as a compass. At his feet, garden utensils –pruning scissors, a rake and a watering can – connect gardening as an outside practice with geometry and representation on paper.

Obviously, this is not the place for an overview of the history of drawing in gardening and landscape architecture - the introductory remarks only point to some of the themes that will be part of this section. What should be kept in mind is the complex relationship between the making of landscape, the need for drawings to do so and the development of the profession: emerging drawing techniques and an emerging discourse on drawing helped the discipline to establish itself. That is very well illustrated by an 1809 text passage by Goethe. He describes a couple and their friend the captain, walking in a park and discussing changes in the design of the park. The captain observes that the project would benefit from a survey of the park and the landscape. He is able to do so, thanks to his military background. It is precisely through drawing the landscape that comparisons with other parks can be made, and that it becomes possible to speak about the park in designerly ways. As De Jong argues, this marks a turning point in the practice of landscape design: From then on, interventions were generally preceded by drawings, often combined with text, reinforcing the emergence of landscape architecture as a profession distinct from gardening. [170] In other words, the drawing starts to be an autonomous object and an autonomous space of invention.

**Studying the drawing for its own sake**

Once we really start to think about drawings they become strikingly complex objects. If we look at drawings as individual objects, many questions can be posed. Do we know for what moment, in terms of years, the drawing is drawn? Do we know what was already there, as there is always something before the intervention? Contemporary visualizations especially tend towards the very happy
Fig. 3.22ab  Freezone in Port of Rotterdam by RAAA, 2014. Celebrate Mobility drawing by Kasper Jacobs, 2013. Entire drawing (175X25 cm) and 1:1 detail.
side of life: We are always offered sunny panoramas of a mature landscape, in which well-to-do people are enjoying their lives, in clean spaces without disturbing elements. [Fig. 3.21] What should such drawings communicate? What is their rhetoric? How should we understand them, as phenomena?

**Materiality and context**

Most drawings nowadays begin on a sheet of tracing paper or, for that matter, in certain software. A high quality negative or a high-resolution scan enables reproduction to a size that matches the medium of a book or an exposition. Although this may seem to be a practicality, it is quite essential. The specific contexts in which we see drawings, shape our understanding of them. In making such a remark, we enter the domain of art history, or media studies. An important concept in art history is the **materiality of drawings**; another is the **context or site** in which drawings are seen; the third, the **meanings** attributed to drawings. Materiality -a drawing can be made with chalk or ink, to mention but some materials -is obvious, and a fact – or not? We can speak about colour, drawing media, or size. But size as an example reveals the critical aspect of what seems a fact. Drawings in landscape architecture often have considerable dimensions, as they address large areas and must be readable. A reproduction in a journal can never match that size. This inevitably influences how we read such a drawing in reproduced form, as is illustrated by a drawing of the RAAAF office, of which a detail is reproduced matching the original scale of the drawing. [Fig. 3.22ab] Materiality in our digital age is even more difficult to grasp. A file may refer to a material original, but only specified in a specific context, such as an exhibition. For such reasons, both drawing media and size are only given in the captions in this study when relevant and crystal clear. Digital ‘material’ qualities are, for example, a drawing’s resolution, its compression mode, and its software. Do we have to consider software -like AutoCAD- to be a drawing media? Is a line, formerly made with pencil on paper, the same as a trace with help of pixels? These are questions for other pieces of research. Here it is relevant that drawings are very infrequently seen as original, unique objects. We see them as reproductions, as images, or, in semiotic terms, as ‘signs’. [171] Many of these reproductions probably do not even exist as an original anymore, due to the modest standards of archiving. [172] More importantly, they are most often part of a bigger whole. Blau and Kaufman state in *Architecture and Its Image* that representations ‘whether in the form of drawings, prints, photographs, illustrations in books or magazines, or the transient images of film, video, or computer screen, are usually produced and used in groups’. [173] An individual project in an office offers a range of ‘media’ and drawing types. These are presented as ‘packages’. As Houdart puts it, ‘at one point or another in the design development stage, an architectural project takes the form of a package, an A3 size booklet made up of the various representation techniques or graphic steps – concept drawings, perspective drawings, ground plans, elevations or sections, engineering details and so on.’ [174] Project presentations most often contain between 50 to 200 drawings. [175] These are presented in a project book, or a slide show presentation. Different from websites -another important source for viewing drawings- a book also presents an argument or narrative, explaining the project and providing information on its origins and performance. This is


[175] In the context of this study Wageningen University student Romy Zwiers in 2012 studied projects from landscape architecture office Feddes Olthof for their presence in diverse media. The number of images in these projects ranged from 70 to 130. A short comparison with some other offices suggested, very much depending on the nature of the work, a range of 50 to 200 as being adequate.
Fig. 3.23 Plan drawing for Markerwaard polder. Competition entry by Alle Hosper and Lodewijk Baljon, 1983.
relevant, because any reflection on the representation of time may refer to projects, but certainly also takes into account individual drawings. Although most drawings are not meant to be studied in isolation, if we do so, specific aspects come to the fore, such as their meaning, their artistry and the techniques invested in the drawing. We can try to understand the aspect of time in drawings as part of a tradition, or as an innovation.

Drawings made by a landscape architect may become part of a project book and archived in the office, or thrown away, for that matter, but drawings can be disseminated by reproductions and publications. As MIT professor Hélène Lipstadt argues, they can ‘escape from [the design] process into the world of architectural culture, achieving, either permanently or momentarily, the status of (relatively) independent cultural goods, […]’. [176] Lipstadt uses the word ‘escape’ consciously, to indicate the role of exhibitions, books, journals and websites as sites where drawings are shown for their own sake. The Internet especially has made it possible for drawings to travel around the world, to be copied and to be taken as references, often without knowing what the drawing led to in reality. [177] Drawings and buildings have multiple relations to each other. Architecture theoretician Wolfgang Sonne states that the production and the reception of buildings depend on ‘a set of media, in which buildings are anticipated and interpreted.’ [178] Each of these mediums has specific relations with the built thing: ‘Which characteristics of a building, the other way around, can be transported by which medium - what can a plan communicate differently to a perspective drawing?’ [179] Sonne points at two aspects that are very important in the context of this research: It is assumed that a certain type of representation has certain qualities, different from others, by default; and it is implied that a drawing is only one among many other media, such as film, photography, the Internet, books, and cartography.

**Technique and invention**

The material qualities of drawings obviously relate to technique, craftsmanship, creativity and invention. One could speak about the invention of utensils, such as the eraser, and consider drawing techniques such as watercolour. Just as important are techniques that support the making, reproducing and presenting of drawings, ranging from a CAD station to a colour copier to an iPad. Does it matter that Dutch landscape architect Alle Hosper and colleagues in 1983 handed in an entry for a competition on the new Markerwaard polder with the plan drawing copied on the one and only colour copier that was to be found in the Netherlands at that time, the early eighties? [180] [Fig. 3.23] Yes it matters, because they consciously took advantage of the blurred copies this brand new machine produced. It was exactly this failure they were looking for, as it softened the somewhat technocratic feel of the straight polder design. This anecdote confirms a process of innovation, documents the immediate application of a new technique, and reveals why such an application was seen as relevant. Dutch landscape architect Pieter Buys (1923) was admired for his artistry and skilful drawing, and, as his biographer Marinke Steenhuis puts it, this certainly helped his reputation. [181] His drawing was influenced by his stay in Denmark in the early fifties, which inspired a very minimalistic approach with black ink. Apart from plain ink drawings, the office Buys & Van der Vliet explored the use of chalk, and common utensils such as a toothbrush and

[177] See also Adams 2011.
[179] Sonne 2011: 8. Original German text: ‘Welche besonderen Charakteristika des Baus wiederum werden durch bestimmte Medien transportiert - was etwa kann ein Plan im Unterschied zur Perspektive vermitteln?’
Implementing such ‘tools’ to when working with ink, they
strived for a strong identity in their drawings. As De Jong argues,
drawings are not solely intended to contribute to the solution of a
problem. They are a space to experiment; they are given an artistic
quality, and very often they are used in a rhetoric way. [182] The
fact that garden architect Springer was a master of watercolour
not only means that he wanted to stand out as a draughtsman, but
also that he considered watercolour to be very appropriate for his
design intentions, in which colours, the seasons and atmosphere
were very important. In that sense drawings and the deployment
of specific drawing techniques must be seen in strong relation to
the emerging definition of what landscape architecture is.

Concerning the drawing as a space to experiment, De Jong and also
Picon discuss the École Nationale des Ponts et Chaussées. [183]
This school, training engineers and founded in 1747, was highly
influential for drawing in landscape architecture. In the late 18th
century, a modernization of the French infrastructural system was
required, and this involved a new conception of roads and canals
on a national scale. Large interventions in the landscape were
prepared, and mapping had an important role in this. The École
contributed to a systematization of the mapping of landscape.
Many of the conventions in today’s representation in maps and
plans were developed here. Landscape maps now started to be
drawn in a codified language as specified in a legend. Such codes
enable professionals to communicate their idea, they enable other
parties, like contractors, to read the drawings in a protocol led way,
and they enable students to get acculturated into a professional
way of working. Students of the École were invited to participate in
a yearly map drawing competition, challenging them to show their


Fig. 3.24a-c Detail of plan drawing for Valkenbergpark, Breda, B+B,
1992. Three versions as drawn by Adelaida Larrain and Sue Hanover to
test specific ways of coloured pencil drawing.
craftsmanship by drawing a map on a basis provided by the school. The student’s map had to show all ingredients a landscape could have, from swamps to cities to rural landscape. Not the beauty of the landscape design was rewarded, but the craftsmanship of drawing a map. Picon notes that the student maps ‘had a disturbing resemblance to the art of gardens’. [184] In their attempt to show all landscape categories, they strived for dramatic contrasts between the untamed and the tamed, designed landscape. For such reasons, the École functioned as a laboratory and without doubt stimulated innovation in landscape representation. This was not restricted to representation either: the École contributed to the introduction of the word ‘paysagiste’, expressing a new understanding of this emerging discipline. [185]

Meaning

A drawing cannot only be understood by its materiality or by what we immediately see. Looking at drawings is an interpretative act, in which the drawing is considered as an artefact in a social, cultural and economic context, or even as an actor. [186] Art historian W. J. T. Mitchell goes as far as to ask ‘what pictures want’, which is for him an appropriate question, as pictures are ‘worldmaking, not just mirroring’: ‘Images are like living organisms; living organisms are best described as things that have desires [...]; therefore, the question what pictures want is inevitable.’ [187] Drawings in that sense are transactions between those making and those reading the drawing. It means that we understand a landscape architect’s drawing as part of a transaction between a design office and a client. It also implies seeing the office as a social entity in which a group of people work; hardly any drawing is made by only one person. The drawing is a design in itself that has to be tested out, and it has to be drawn in the most skillful way. The office of B+B, founded in 1977, used coloured pencils extensively for many years, in fact using two different colours with one hand, and developed an extremely skilled technique of doing so. [Fig. 3.24a-c] Authorship of a drawing is therefore a fragile concept. [188] The public, or the professional community, will see the drawing in a magazine, on a screen, or at an exhibition. In all these cases, drawings are part of a play. On one side we find the designer’s intentions in the drawing, on the other side the diverse readings the public may have. Art historian Erwin Panofsky distinguishes three ‘strata’: firstly the formal presence of an image or the ‘primary subject matter’ by which the image can be described; secondly the understanding that the image consists of several motives and themes; and thirdly the intrinsic meaning of the image rooted in the traditions of a nation, a period, a class, or a religion. As Panofsky adds, this is about symbolic values ‘which are often unknown to the artist himself and may even emphatically differ from what he consciously intended to express’. [189] It is not perhaps the way (landscape) architects generally think about their plans, but in terms of visual culture, drawings must be understood more broadly than as only communicating landscape or buildings, and interpreted in a way close to our reading of advertisement, imagery on the world wide web, video clips, billboards, and games. In fact, (landscape) architects consciously or unconsciously adopted techniques from films, games and advertisement to give their drawings a seductive quality in many ways. Surprisingly enough, architects’ drawings are hardly ever mentioned in literature deriving from social studies, and considerably less than other ‘visual cultures’. [190] There is something to say for not mentioning a CAD-drawing in the same way.
category as a video clip, but today’s visualizations certainly fit into broader visual categories.

Kress and Van Leeuwen speak about ‘the semiotic landscape’. ‘Semiotic’ refers to the fact that images and text have a grammar and transport meaning. As Kress and Van Leeuwen stress, there are different schools in semiotics, related to the likes of De Saussure, Peirce, or Halliday, but a common notion is the ‘sign’. In semiotic terms, images contain signs, or better said, following Kress and Van Leeuwen, they are ‘sign-making’. [191] Rose in Visual Methodologies prefers the word ‘meaning’. Signs, or meanings, function if they operate between the producer and the receiver. [192] In the theory of semiology this is problematized, as there is no unambiguous relation between the ‘signifier and the signified’. [193] Context, convention and the image itself are important. Landscape architecture drawings obviously are a very specific category of images. But given that they function as instruments to make something happen -the approval and realization of a plan,
for example- they certainly transport meaning, meant to influence the reader. In the professional world of (landscape) architecture, designers often embed, or presuppose, ‘messages’ in their drawings - and this also could concern aspects of time. The exact way in which these messages are received is mainly assumed by practitioners, but theoretical interest in this starts to grow. [194] A striking example of implicit messages in landscape architecture drawing is the use of the colour green. Even if a forest in winter is not green, and even if several tree species are red, brown and yellowish instead of green, the colour green radiates more than the supposed reality alone. Green comes with associations about nature, about friendly, or wild, or beautiful landscapes. [195] [Fig. 3.25] The public may be more positive towards a plan if it reads it with such associations. Architects’ drawings are part of ‘visual culture’, as claimed by Sturken and Cartwright in *Practices of Looking*. That means that images, including drawings, are inevitably part of an array of visual material, and that their meaning and appreciation is formed by relationships existing between modes of imagery. [196] John Berger, in his famous essay ‘Ways of Seeing’, suggests that images ‘invite’ one to look at them in a certain way. [197] Just as Sturken and Cartwright do, he asserts that images never only exist as produced by the maker. They exist in relation to the spectator: ‘Yet, although every image embodies a way of seeing, our perception or appreciation of an image depends also upon our own way of seeing.’ Berger connects this to the issue of reproduction. Seeing an image in another context inevitably changes the image, as ‘the meaning of the image is changed according to what one sees immediately besides it or what comes immediately after it’. [198]  

**The representation of what is not yet there**

‘I made this park’ is easily said by a landscape architect - but is in fact a bewildering statement, as the landscape architect in general did not shape the earth or plant the trees. A 1:1 ‘drawing’ on the actual site is perhaps as far as a landscape architect gets to a real intervention in the landscape. [Fig 3.26] We have to understand this statement in a different way: It is probably an act of mental appropriation, it certainly seeks to underline authorship, and it tries to position landscape architecture as closely related to ‘real’ making. It also suggests that ‘designing’ is used as a substitute for ‘making’. What role do drawings have in this? How do drawings represent a (future) reality? The word drawing is deceptively simple. The French word for drawing, *dessin*, reveals some of the difficulties of this seemingly simple word, as it implies the drawing, the act of drawing, a pattern and the design or plan. In that sense, the practice of drawing is connected with the thinking about landscape and design. Consider also the question of whether a model is a drawing, or if an AutoCAD file is just as much a drawing as the one made by pencil on paper. In both cases the answer is yes. Some may say that a model is not a drawing, but as a model certainly contributes to the same goal, I share Tieskens’ view that a model is indeed a drawing, even if it is a three-dimensional one. [199] As Lipstadt puts it, the main criterion is that they are part of an architectural production, and they contribute to our understanding of what will be built. It is exactly in this way of putting it that drawing and text are closely connected in ‘design productions’. [200] Seen like this, the word drawing comes rather close to the word representation, and that mirrors daily habits of speaking. However, the phenomenon of repre-
Fig. 3.26 ‘s Graveland project by karres + brands landschapsarchitecten. Testing the effect of an intervention by ‘drawing’ the plan in reality. Design 2010-2012.
sentation is even more complex. In a wider context, the word can refer to our potential to influence political processes, or ‘a stock of values, ideas, beliefs, and practices that are shared among the members of groups and communities’, to only point out two very different meanings. [201] Even if we stick to arts and architecture, though, the word is highly complex. Neil Levine speaks in Modern architecture. Representation and reality about representation as concerning ‘the form and structure of rhetoric rather than simply its outward effects. It describes an essentially theatrical situation in which a virtual or ideal set of recognizable figures is perceived as standing for, that is to say, representing, an absent set of real ones to which they are meant and believed to correspond.’ [202] He starts by explaining what sort of interpretations of representation he will not deal with: ‘To begin with, I am not using the word in the technical sense of referring to the two- and three-dimensional means employed by architects to convey their ideas on paper, in models or in digital form. […] Nor am I using the term simply as an equivalent for the concept of sign or symbol. Such uses are common to any semiological system and have no special relevance to the problem of representation as means or mode of architectural expression.’ [203] Ironically, this rejected meaning fits here. Paraphrasing Levine, I will use the word in the technical sense, ‘referring to the two- and three-dimensional means employed by architects to convey their ideas on paper, in models or in digital form’. The fact that I want to use the word in the more technical sense does not oppose the other meanings Levine proposes. His use of the word ‘rhetoric’ is also important, and has been mentioned before. My interest in his ‘technical’ definition derives from the closeness of the words representation and drawing as used in practice.

Rhetorical aspects
It is essential to perceive the drawing as both a material object and a meaningful image. Helmreich and O’Malley show how the material aspects and the rhetorical aspect meet: ‘Presentation drawings, which were intended for the client or the public, were often highly finished, employing perspective views that, according to James Ackerman, tended toward rhetorical exposition’. [204] Concerning representation, landscape architecture and architecture have a shared history, but landscape architecture is also a bit different, and probably exactly because of the issue of time. It is inevitable that most drawings in landscape architecture refer to a landscape, or stand for a landscape, at a certain moment in time. If this moment in time is not specified, which it usually is not, the drawing in fact is highly rhetorical, as it presents this moment in time as evident, which it certainly is not. Helmreich and O’Malley point at specific issues that have influenced drawing in landscape architecture. Maps, especially in America, were crucial as records of exploration and settlement, and disseminated as individual prints or in magazines, ‘they played a formative role in shaping public perceptions of the use of design’. [205] A stunning example of the complexity of representation in landscape architecture is a bird’s eye view by Peter Gordon. [Fig. 3.27] In our general understanding, this drawing hardly makes sense in the context of landscape architectural design, as it shows the landscape unfinished, at a moment that seems randomly chosen. But Helmreich and O’Malley argue that representing the unfinished state was a very conscious act, as these ‘topographical views were shaped by the desire to show the New World as prosperous’. It is exactly this state of being transformed that must be communicated: ‘It portrays a world being transformed, controlled and tamed
Fig. 3.27 'View of Savannah as it stood the 29th of March, 1734' by Peter Gordon as published in Helmreich and O'Malley.
by European civilization’, an interesting instance in which time becomes highly manifest. [206]

Representation here is spoken about in relation to drawings and designs, in the context of landscape architecture. I understand representation as the faculty of a drawing to describe something that does not exist, yet – a projected future. Generally, however, a landscape architect makes many drawings and delivers a product with text and images, so this immediately raises questions: Can one individual drawing represent a park, and if not, should we not speak about the set of drawings and text as representing the park? But if that is true, how then does an individual drawing relate to the object it refers to? As any drawing in the context of a landscape architectural project refers to a certain aspect of the proposed intervention, I conclude that both the individual drawing and the set of drawings can be spoken about as representations, but in different ways: A new park is probably best represented by a presentation book, including text and dozens of different types of drawings, whereas a bridge in the same park is probably represented very effectively by an individual drawing.

Ways of speaking
Both Marc Treib and Nadia Amoroso use ‘representing’ in the title of their books on drawing in landscape architecture, but in very different ways. [207] Amoroso’s title, *Representing Landscapes. A Visual Collection of Landscape Architectural Drawings*, immediately links drawing and representation. We must understand the word as ‘depicting’, or ‘showing’. Amoroso presents some interesting drawings in the context of the argument in this study, such as a diorama by Getch Clark and Schneider. Dioramas can ‘manipulate rapidly changing conditions of temporality, contingency, movement, multiplicity, sensation, and affect in order to prompt potentialities particular to the landscape medium’. [208] This can also be linked to a fascinating ‘living model’ produced by the office of B+B in their contribution to the *Vrijstaat* competition. [209] [Fig. 3.28] Drawings in these cases not only depict change, but change in themselves. The introduction presented a drawing by student Annelies Bloemendaal performing in the same way. Treib uses *Representing Landscape Architecture* as a title. In this case, we should read it as ‘what do landscape architectural drawings tell us about views on, or perceptions of, landscape architecture?’ This is confirmed in the introduction, in which Treib announces ‘a broad investigation of how landscape architecture has been, is currently, and may be represented in the future: for its design study, for presentation, for criticism, and even for its realization.’ [210] The drawing tells us something about the state of the profession. Alberto Perez-Gomez and Louise Pelletier in *Architectural...*

[206] Ibid.: 62.
[209] *Vrijstaat Amsterdam* was part of the fourth International Biennale on Architecture. Nine design offices speculated on the future of Amsterdam.
Fig. 3.29 Plan drawing addressing the storm water concept for Federation Square, Melbourne. LAB and karres + brands landschapsarchitecten 2000.
Representation and the Perspective Hinge start at a high level of abstraction and speak about the relationship of representation to our ways of knowing the world around us. [211] This implies both a philosophical, historical and practical understanding of how sight functions, how we construct perspective, and how we can create mental images of reality. Even if I will not touch these wider areas here, it is important to note that authors such as Perez-Gomez and also Robin Evans have contributed substantially to our current understanding of the different ‘modes of representation’, such as the plan drawing, of which an example is shown, the axonometric projection and the diagram. [212] [Fig. 3.29] It is in this phrase of ‘modes of representation’ that the words drawing and representation come very close, and at the same time have very different meanings. If we discuss drawings and also think of them as physical objects, a categorisation along ‘drawing types’ is adequate. If we are more interested in the more abstract way in which a future reality is projected on a sheet of paper, or on a screen, ‘types of representation’ is more precise. Here I am interested both in the physical aspect of a section on paper, and the abstract notion of how time can be represented in a score. Therefore, both terms are used here, especially as in literature and handbooks on architectural education this is the case. La representation du projet.

Approche pratique et critique [The representation of a project. A practical and critical approach] by J. P. Durand uses ‘modes of representation’, whereas Envisioning Architecture. An Analysis of Drawing by Fraser and Henmi speaks about ‘drawing types’. [213] An orthographic projection from a purist point of view is a mode of representation, but at the same time Fraser and Henmi discuss it as drawing type, and speak about an orthographic drawing. Books like the one by Durand inform us about a possible taxonomy by listing ‘les modes de représentation’ - including ‘la maquette’, the model. [214] This latter category supports my earlier statement that the model is part of (landscape) architectural drawings. I used ‘possible’ in relation to Durand and his drawing system as there are numerous small and big differences in proposals for a taxonomy from various different authors.

Notation

Important here is the approach of art theorist Nelson Goodman. He links architecture to music and dance, as both make use of notational systems. [215] The iconic example of a notational system is the score as played by a musician, but notational systems are also used in architecture, and in this case they relate to representation, and more precisely towards codification in drawings. Very often drawings do not attempt to reproduce reality as we see it outside, but intend to hand over a set of codes that stand for certain actions or objects. A map with its legend is an example of a notational system, as is the representational type of the diagram. In architecture and landscape architecture, the abstract notations (plan, section, diagram) are most often accompanied by what I want to refer to as visualizations, as a specific drawing type. The fact that architecture and landscape architecture combine abstract notations with very concrete images is due to the social context, speaking with colleagues, clients, and the larger public. In the end, a landscape architectural drawing (or better said, set of drawings) represents a future landscape. And here the roads of architecture and landscape architecture, often being very close, diverge, because of the time it takes for a landscape to mature, in contrast to the relative immediacy of architecture.

Drawings in the design process

Drawings are never only an artistic product – drawings and the activity of drawing have a specific function in the subsequent stages of a design process. Bafna speaks about ‘uses’ of drawings: ‘The most direct use of architectural drawings is to specify their subject matter. This is how most construction drawings are used, as are drawings submitted for approval of construction permits’. [216] Such a drawing is ‘notational’, referring to Goodman. [217] The notational drawing is distinguished from the ‘imaginative’ drawing - the second use. Such drawings function as ‘a proxy to the building that they represent, allowing observers to make judgements about the building in its absence’. [218] In this study, I distinguish three main functions. In early stages, drawings create a space for testing ideas. Often this comes with rough drawings – sketches – but just as often with precise drawings, which test if a solution fits. Throughout the process, but certainly at the end, drawings support exchange and communication on the design - the second use of Bafna. If they are made specifically for that goal, for example neatly rendered, we speak about presentation drawings, but almost any drawing can contribute when discussing ideas with the client and the public. If indeed they are presentation drawings, they show in the best way how smart and beautiful the solution is, with the clear goal of being chosen, being executed or (in case of the student in a design studio) getting a good grade. Drawings, in a third role, also function as a preparation for the building process. Working drawings supervise that process. [Fig. 3.30] Other authors such as Fraser and Henmi speak of roles or applications instead of uses, but this is mainly a variation on the same theme. [219]

An aid to thinking

When drawing, unexpected new perspectives are opened up, by mistakes, but just as often by simply looking at what you do. Several authors stress the importance of sketching. Sketching, as Goldschmidt puts it, is vital, as ‘it is not clear at the outset where the process is leading to, and what the end result might be’. [220] New graphical relations are created and may be given meaning. This is very supportive for a design process, argues Goldschmidt: ‘The ability to infer information from the self-generated sketch and to use it in order to enhance the sketcher’s ability to deal with a task or problem at hand may be seen as an expansion of the problem space within which the individual is working.’ [221] Sketches are ‘an aid to thinking’, or, put even stronger, ‘their making is thinking itself’. [222] Sketches help generate ideas, and drive design
Fig. 3.31 Sketch for plan drawing. Entry in Korean competition ‘Central open Space in multifunctional administrative City’, H+N+S landschaps-architecten, 2007. Drawing by Lodewijk van Nieuwenhuijze. Coloured pencil, pencil, coloured felt tip on transparent paper.
processes - they even can be a form of research. For some the word sketch refers to a type of drawing, but I agree with Goldschmidt that it primarily is a drawing manner: ‘Freehand sketching is rapid and direct and therefore cognitively economical, and provides instant feedback: the sketcher can enter into conversation with his or her materials’, or, as Balmori puts it, ‘capturing an idea in a freehand drawing [...] is much like thinking out loud’. [223] [Fig. 3.31] It is for that reason that sketching, also in this digital era, is still done most often by hand. The sketch, materially present in the atelier, becomes a ‘self generated display that serves as a potential source for visual information’. [224] Goldschmidt speaks about sketching as building up an archive of ‘design moves’, a phrase that was also used by Donald Schön: ‘As you work a problem, you are continually in the process of developing a path into it, forming new appreciations and understandings as you make new moves. The designer evaluates a move by asking a variety of questions, such as “Are the consequences desirable?” “Does the current state of the design conform to implications set up by earlier moves?” “What new problems or potentials have been created?”’ [225] Dorst and Cross speak about a ‘creative leap’ that has to happen, but will only happen if the designer recognizes the road to a solution. [226] Cross also puts forward the notion of ‘bridging’, which means to establish a link between the problem space and the solution space. [227] Remarkably, this article does not use the word drawing at all, but evidently the conclusions derive from observing designers at work, drawing and talking. It confirms the intricate relation between drawing, talking and writing in discussing design ideas and considering design inventions.

Debates on the differences between digital drawing and drawing by hand relate to the evolution of drawing techniques. Today’s software, and devices like the iPad, allow for more free ways of drawing, and that is important. Lawson argues that in sketching there are parallel lines of thought that so far in the design process were not linked. Such retardation is useful for design processes, but in CAD-systems this is hardly possible. Studying sketches made by Robert Venturi, Lawson notices that ‘he is not, at this stage, concerned to relate these two parallel lines of thought and is unsure how they will eventually be resolved, although this must happen eventually’. [228] When working in CAD there is a tendency ‘to concentrate on ways of ensuring the resolution’. Obviously, this article from 1997 cannot take into account later developments, but many other authors reflect on the issue. Pallasmaa in 2009 wrote The Thinking Hand, which also addresses the role of the computer: ‘The problems of fully computerized design are evident particularly in the most sensitive and vulnerable early phases of the design process when the architectural essence of the building is conceived and determined. The hand with a charcoal, pencil or pen creates a direct haptic connection between the object, its representation and the designer’s mind.’ [229] Authors such as Balmori and Palmboom make a plea for hand drawing and its craftsmanship. Just as Pallasmaa, they suggest that hand drawing enables the designer to reflect on emerging design ideas. In the context of this study, this addresses the aspect of time: if indeed ‘drawing time’ questions conventional ways of drawing, then an opportunity to experiment and reflect is very welcome.

Types and applications
If I mention the word section, I am referring to a type of repre-
sentation. In daily conversations, drawings are approached with many different words and categories. Consider the word ‘presentational drawing’. This can be any type of representation, but it certainly refers to a specific stage in a design process, or a certain role in the social system of design. More complex is as mentioned the word ‘sketch’. For some this could refer to an embryonic perspective drawing, and in that sense to a specific drawing type. Generally, however, ‘sketch’ implies a drawing that is made quickly, with a rough character, indicating an idea in an abstract way, focusing on what are considered the main qualities. As such, the term overlaps with rather complex notions like ‘concept’, often used to address the ideation of a design. As there is no restrictive definition of ‘sketch’, diverse interpretations exist. For proper use in this research I propose to speak about roles of drawings, or, as Fraser and Henmi do, applications. A sketch, then, fits under this header, as its intention is to show an idea on an abstract level. A drawing can be both a plan (type) and a presentational drawing (role). But we have to consider that many drawings are hard to categorize in the system we have: both their type and their role can be unclear. Seen from the perspective of notational theory this is a problem, as drawings are expected to be self-evident. It is therefore necessary to discuss the representation of time in drawings in connection to their type and role.

Types of representation: an incomplete taxonomy
‘Three to five A1 panels which indicate the argumentation behind the concept, but the emphasis lies on a design drawing and the elaboration at the level of detail 1:10 - 1:200 in ground plan and cross-section. Rough models and a final model are required. Digital
presentations are an optional extra, but are not accepted as substitutes for scale models and panels'. These are the requirements for the so-called second year P3b Public garden project for the Master in landscape architecture at the Academy of Architecture Amsterdam. [232] The comparable requirements for the third year P6 Vision, plan, detail are ‘[...] a diagnosis; developmental perspective, and plan in main lines, making attractively and clearly visible what the vision is and where the areas for further elaboration lie’, but also ‘designs for the different strategic projects [...]’. [Fig. 3.32] The use of the word ‘panel’—which also could be ‘poster’—refers to what probably is a Beaux-Arts tradition of architecture presentations: groups of drawings assembled on panels so that they can be exhibited. [233] The main point here however, is the range of terms indicating types of drawings. Ground plan, cross section and model derive from the drawing system as evolved in architecture. This long tradition has been appropriated in landscape architecture in its own way. In the description of the requirements of the third year studio, the words plan and perspective could be understood in an architect’s tradition, but that would be a mistake. Here, the object is not a garden but an area in a geographic sense, relating the design to planning more than to architecture. Words like diagnosis, developmental perspective and strategy reveal that today’s landscape architecture certainly does not fit into a dominant architectural systematization alone. Such words also show the difficulty of defining what landscape architecture is: How does a development perspective relate exactly to the plan, as a type of representation? At the same time, these words suggest a relative freedom to define the borders of the discipline in respect to the local context or the tasks at hand.

Projections
Architectural theory strive[d] for a long time to define a taxonomic system of drawings, and landscape architecture adopted this system for the most part. Handbooks, often also the basis for instruction in architectural programs, hand over this taxonomy in its theoretical and practical dimensions. Frequently mentioned authors are Ching, Yee, Laseau and Fraser/Henmi, and in French the already mentioned Durand. [234] Catalogues in which large numbers of drawings are classified systematically are also helpful in this respect. [235] All these classifications stem from the Vitruvian notion that drawings are projections. [236] The physical, three-dimensional object is projected onto a virtual two-dimensional plane, and the drawing records that projection. The main category consists of the orthographic projections: plan, elevation and section. Perspective projections and parallel projections like the axonometric complete a basic drawing system. As Riedijk puts it in his inaugural lecture: ‘The architect makes drawings of the plan, section and elevation of the design’. [237] Architecture and its Image classifies drawings in plan, elevation, axonometric, isometric, perspective drawing (also perspective view or view), model and section. [238] Some categories have several subcategories, like cut-away isometric, computer generated perspective or birds eye view. Other terms used are: design, preparatory drawing, construction drawing, sketch, study and combined terms like competition design or advanced concept sketch. Evans opens the catalogue with a description of the longstanding and coherent tradition in architectural drawing, and at the same time the unsolved taxonomic issues. [239] Of plan, section and elevation Evans states that ‘we have come to regard this set of three as fundamental’. [240] Evans stresses that the specific challenges of
orthographic drawing are not only instrumental in architectural design, but also shaped architecture. The use of certain drawings and drawing types relates to styles, opinions, and ideologies. ‘The essentials of contemporary architectural drawing were mapped out during the period of classicism’, as put forward by Evans, and therefore, one would expect to find Modern architecture ‘in mortal combat with these inherited techniques’. [241] But that did not happen - despite all the changes made in Modern architecture, ‘no campaign was mounted against orthographic projection’. At the same time Evans observes a growing role for axonometrics and sketches - introducing two important words relating to a taxonomy. Such new ‘members of the family’ reveal the lack of clarity of the exact borders of modes of representation, and roles drawings can have. As Evans put it, ‘the sketch is a peculiar phenomenon. It is impossible to decide, except by dogmatic means, whether it is a projection or not.’ [242]

In the view of Goodman drawings can be understood as part of a notational system. Such a system describes the grammar and conventions that help to adequately represent a piece of art. [243]

Fig. 3.33 Example of how legends developed over time. Inventarfortegnelse til Udkast til Hauga-Anlæg i den engelske Smag samt Anvisning til at inddele og beplante smaae Partier, 1798, as taken from Danmarks Havekunst part 2.
Goodman is particularly interested in notations for dance, an arts practice ‘without a traditional notation’. Architectural drawings are notations for buildings, and ensure that ‘a building conforms to the plans and specifications’. [244] That may seem obvious, but indeed in dance it is not, and even in architecture it is only true in so far as there is a coherent understanding of drawings. A notational system is a shared understanding by those who have to use the notations. A legend accompanying a map makes sense if we understand the codes with which we have to read the map. [Fig. 3.33] Even if daily practice may be messy, a theoretical framework for drawing must clearly describe the modes of representation. If we speak about a section, every student of landscape architecture knows what is meant by that, or should know. The word comprises an idea about the specific nature of the drawing and a set of conventions on how to draw it. Such conventions follow from the very idea of a discipline, which they also help to establish. Therefore it is important to acknowledge the architectural roots of drawing in landscape architecture, to investigate the particularities of that discipline and to see in how far they invite (or should invite) specific ways of drawing.

**Taxonomy**

A complete system of modes of representation would be a taxonomy, or a classification. A taxonomy, as in a botanical order of plants, presupposes a logic via which individual species can be defined and distinguished from others. Hewitt puts it like this: ‘Architectural drawings may be classified according to medium, to the purpose for which they are made, and to the way in which they represent objects’. [245] [Fig. 3.34a-e] The best places to find something that could be a taxonomy of drawings in landscape architecture are readers, as used in schools, or books, that aim to give an overview. Examples are *Tekentaal. Codificaties en projecties in ontwerptekeningen* [Drawing language. Codifications and projections in design drawings] supporting Dutch landscape architecture students, and *Visualizing Landscape Architecture*. [246] This 2010 book by Elke Mertens does not provide an explicit taxonomy, but her overview of current ways of drawing is on an implicit level a taxonomy. Such books lean heavily towards architecture. Therefore, as a point of reference I take the taxonomy that is presented in *Envisioning Architecture. An Analysis Of Drawing* by Fraser and Henmi. [247] In fact, their system is a matrix combining a division of drawings by type and a division by application. Here it is put in a table.

<table>
<thead>
<tr>
<th>Drawing type</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Orthographic drawings</td>
<td>1. Referential drawings</td>
</tr>
<tr>
<td>1a. Plan ( additionally: site plan)</td>
<td>2. Diagrams</td>
</tr>
<tr>
<td>1b. Section</td>
<td>3. Design drawings</td>
</tr>
<tr>
<td>1c. Elevation</td>
<td>4. Presentation drawings</td>
</tr>
<tr>
<td>1d. Combined views</td>
<td>5. Visionary drawings</td>
</tr>
<tr>
<td>2. Axonometric drawings</td>
<td></td>
</tr>
<tr>
<td>2a. Plan oblique</td>
<td></td>
</tr>
<tr>
<td>2b. Elevation oblique</td>
<td></td>
</tr>
<tr>
<td>2c. Exploded view</td>
<td></td>
</tr>
<tr>
<td>2d. Isometric</td>
<td></td>
</tr>
<tr>
<td>2e. Worm’s-eye view or Choisy axonometric</td>
<td></td>
</tr>
</tbody>
</table>
Fig. 3.34ae Drawings for the Freilager Albisrieden project, Zürich, Office Winhou, 2015. From up, left clockwise: Model of apartment; model of part of facade; visualization of facade; section; plan drawing (original scale 1:750).
Fig. 3.35 Map-style plan drawing for *De Noodzaak van Tuinieren* [The necessity of gardening], H+N+S landschapsarchitecten /Ruut van Paridon, 2002.
The nature of a taxonomy is to hand over its system as an indisputable arrangement. However, it is very easy to disagree on the proposition of Fraser and Henmi. For architecture as well as for landscape architecture, I would argue that diagrams are a type, not an application, and add collage and model as drawing types. Some applications could also be criticized. This seems reason enough to dismiss Fraser and Henmi, but nevertheless they offer one of the most consistent systems. This starts by the clear distinction between ‘type’ and ‘application’. ‘Application’ comes close to the word ‘role’, and relates to ‘phase in design process’. This helps to exclude presentational drawings, working drawings and analytical drawings, to mention some, from the category of types, as can be seen by some of the competing systems, and address these as a role or application within a certain phase. That is to say that a plan drawing (as a mode of representation, and also an orthographic projection) can be a sketch in an early phase, a presentational drawing in a later phase and a working drawing in the final phase. But how would a system for landscape architecture drawings differ from a system for architecture drawings?

**Classification problems in landscape architecture**

For landscape architecture one of the classification problems is that of scale. One can draw a design on the regional scale—at least in a Dutch perspective—but can we speak of a plan, as we do in architecture, or should we use the word map, as in cartography? [Fig. 3.35] Van Haaften aims to solve this by making it dependent of scale, restricting ‘plan drawing’ [in Dutch plattegrond] for scales 1:50-1:200 and ‘view from above’ [bovenaanzicht] for scales 1:500-1:2,000, whereas ‘map’ [kaartbeeld] should be used for scales 1:10,000-1:50,000. [248] This does not solve, however, how to understand the designerly character of typical large-scale Dutch projects. Van Haaften enlarges the category of ‘application’ in terms of Fraser and Henmi, by speaking about surveying, interpretation, sketch, scenario and concept—indeed close to stages in a design process. [249] Models obviously have a different position in landscape architecture compared to architecture, as landscapes in general are much bigger, and challenge the relation between the second and the third dimension. Often, the difference between map and model in landscape architecture is not that big. Some offices however, like the Swiss Vogt office, seriously explore the options of models in landscape architecture. [250] Mertens in *Visualizing Landscape Architecture* uses the verb ‘visualize’ to embrace all landscape architectural drawing. Often the word ‘visualization’ has a more restricted meaning close to perspective drawing. I prefer this more limited use. Mertens offers a division in two-dimensional, three-dimensional and four-dimensional representations. She does not list the diagram at all; Fraser and Henmi categorize it as an application. [251] I consider the diagram a mode of representation, and a crucial one, as it is the drawing in which the functioning of a project, its organization or its set-up can be expressed. This is supported by the work of Allen, Garcia and Vidler, who published extensively on the diagram. [252] As Allen puts it, ‘the primary utility of the diagram is as an abstract means of thinking about organization’. [253] The collage too is not present at all in neither Mertens nor Fraser/Henmi. Collages became rather popular via architectural drawing, for example in the work of Archigram, and later in projects of OMA. [254] These days, the collage seems to be extinct, but recent publications show that collage in the visual arts it is as alive as ever. [255] The collage
"Edinburgh has but partly abdicated, and still wears, in parody, her metropolitan trappings. Half a capital and half a country town, the whole city leads a double existence; it has long trances of the one and flashes of the other; like the king of the Black Isles, it is half alive and half a monumental marble."

Robert Louis Stevenson

Fig. 3.36 Drawing for *Old Town New Town No Town?* project by GROSS. MAX., *Northern Cities Exhibition, Glasgow, 2006. Collage.*
in my opinion is an essential type, if it’s only to solve the tension between the words perspective drawing and visualization. [Fig. 3.36] The perspective drawing is complex as it is an ‘objective’ drawing, guided by the rules of geometry, and at the same time a ‘subjective’ drawing: We are forced to see the landscape from one particular viewpoint. Hewitt notes that ‘perspective drawings tend to be placed in the subjective/perceptual category’, whereas plan, section and axonometric are seen as ‘objective drawings [that] are measurable and generally serve to present the building more abstractly’. [256] Today, we can generate very precise, verifiable perspectives using the latest software in a way that ‘the model’ and ‘the perspective’ are almost the same. At the same time, software allows us to create high quality impressions of future landscapes. Such images are far away of ‘perspective drawings’. Their nature ranges from what I would call ‘simulations’ -if they aim to construct a future landscape very reliably in terms of space and time- to impressions, or even illusions, if these images are mainly seductive. As Houdart puts it, ‘the supposedly peculiar relationship with reality comes second; in order to compose a perspective rendering, to make a new world come to alive, it is first necessary to add and arrange previously homogenised objects, and then putting the composition to the test of reality, in order to make it believable’. [257] For such reasons ‘perspective drawing’ is no longer an adequate drawing type, and I propose to see the perspective as a subtype of visualizations.

Obviously, a landscape architect could use the exploded view as a drawing type, as was done more often around 1990, for example in the work of the Dutch offices B+B and West 8. If we focus however on those drawing types that seem essential for representa-

In terms of application, the most important distinction concerns the three functions: Testing ideas (Sketches and explorations); Communicating ideas (Design drawings and presentation drawings); Preparing for building: construction details and working drawings.

From the perspective of this study, the crucial step in a landscape taxonomy is however a distinction between two main groups of drawing types: spatial and temporal. This distinction was not made in the classifications as spoken about here, but it is essential for
the argument in a later stage of this study. Plan, section, visualization, collage and model can be grouped as spatial types. The group of temporal types will be explored in Chapter 4, but in an implicit way we see this group emerge in Mertens’ overview. She proposed a category of the fourth dimension. I argue that the counterpart of the spatial types is a group of temporal types. Diagram and map in that case are in-between types, depending on their function in the design and its argument.

The specificity of drawing in landscape architecture

As said, representation in landscape architecture has strong roots in the architectural system. Combined with the influence from cartography, engineering, landscape painting and gardening this has accumulated in what, at least potentially, is a coherent and autonomous tradition. For example the widespread use of the map distinguishes landscape architecture (and urbanism, for that matter) from architecture. Cartography has to face challenges that are also fitting for this study of drawing in landscape architecture. As said earlier, Cosgrove described maps as ‘troubling’, for their apparent stability dissolves when their provisionality is recognized. [258] Mapping as taught at the École Nationale des Ponts et Chaussées contributed substantially to a reliable and detailed map of France, but also to the representation of landscape, and to the evolution of the profession towards paysagisme. [259] As Picon remarks, ‘the importance of the engineers of the Ponts et Chaussées is directly linked to the birth of the modern concept of landscape’, and that can be said for landscape architecture as well. [260] De Jong argues that the engineers ‘attempted to systematize the mapping of a landscape’, and to develop a set of indications for typical landscape features, such as trees, previously depicted in more a personal, painterly manner. [261] But that presupposed an agreement on how landscape should be portrayed, ‘to ensure that the representation would be clearly read and understood’. De Jong states that ‘the combination of engineering know-how and landscape design and an attempt to systematize the representation of landscape, provided a foundation for the modern landscape architect and his design skill as a separate discipline.’ [262] Picon puts it in a different way. In its contrast between the regular and the irregular, between the natural and the artificial, ‘the land, having been crossed, conquered and tamed, could be compared to a garden, with the engineer as its foreman’ resulting in maps that resembled the way gardens were portrayed. [263]

Particularities of landscape

It is exactly the particularity of landscape that inspires specific drawing approaches. Humphry Repton is probably one of the first to make drawing an explicit part of the innovation in professional practice, by introducing slides. Repton mentions that he ‘invented the peculiar kind of slides’. [264] We have to understand such drawings as innovations that react on the nature of landscape, but also as an opinion on representation in landscape architecture, and how to discuss designs with clients. A gardener not skilled in painting ‘will seldom be able to form a just idea of effects before they are carried into execution’. [265] In fact, that refers implicitly to one of the basic roles of drawing, distinguished as: the facility to explore and test ideas. The landscape gardener needs ‘a correct eye, a ready conception, and a fertility of invention, to which the professor adds practical experience’ but also competent knowl-
edge of for example hydraulics, botany and general principles of architecture, to obtain ‘the faculty of prejudging effects’. Yet Repton had a clear idea about the limitations of drawings; then writing comes in: ‘To make my designs intelligible, I found that a mere map was insufficient; [...] To remedy this deficiency, I delivered my opinions in writing, that they might not be misconceived or misrepresented’. ‘My opinions in writing’ obviously refers to the famous Red Books, the unique manuscripts he delivered to his clients. The act of making a booklet for his clients is noteworthy, especially as he reflects on the role of such books in his own texts.

Also specific for landscape is an early nineteenth century drawing made for the surroundings of Potsdam by Peter Joseph Lenné. A printed map of the existing situation in black and white forms the base, and the interventions are drawn in colour, solving a typical landscape issue: There is always an existing situation, to which any new design must react - but how to depict this? This stepwise innovation goes on in our time. In 1976, Steinitz argued in an essay on overlays that this is a specific drawing ‘technique’ (as it is not a type) suited to landscape. Landscape confronts us with a huge complexity of data: ‘For purposes of clearer graphic presentation as well as analysis, the data had to be mapped as separately combinable components. Overlays may have been a natural result of this graphic dilemma’. The most known application of overlays is in Ian McHarg’s Design with Nature in which ‘transparent prints of light and dark values are superimposed over each other to construct the necessary composite analysis maps’. French landscape architect Jacques Simon contributed to an independent tradition of landscape representation with a number of Livres around 1980 which disseminated drawing techniques and drawing styles of a choice of designers. In Livre 6. L’Art de connaître et dessiner les arbres [The art of recognizing and drawing trees] he proposed how to draw trees. [Such Livres imply that there are particular ways to draw landscape. Dutch professor of landscape architecture Clemens Steenbergen engaged in very precise and analytical redrawing of Italian villa gardens. These drawings proved in an effective way that such garden designs, unless architectural in character, were always situated in a certain topography that highly influenced the design.

Corner’s landscape phenomena
Let us turn again to James Corner’s important essay ‘Representation and landscape’. Corner questions the abstractness of design drawings in relation to landscape phenomena. As landscape architects are not really engaged in the making of what they depict, a distance from landscape has to be acknowledged, ‘working instead with a completely different medium, an intermediary and translatory medium that we call drawing’. Drawings, however, are ‘radically dissimilar from the medium that constitutes the lived landscape’. Landscape is all-enveloping and surrounding us, but drawings by landscape architects are in general two-dimensional, and we see them, mostly, in front of us. This discussion connects the realm of representation and presentation. If we present images as ‘a flat frontality approached from a distance as an object’, drawings tend to be ‘autonomous, equally at home in a gallery or book’. Corner points out the specific materiality of landscape: ‘Materials in the landscape ra-
Fig. 3.37  Verschönerungs-Plan der Umgebung von Potsdam entworfen von Lenné, drawn by Gerhard Koebner after a design by Peter-Joseph Lenné, 1833. Intervention in pen and ink, green wash, on copper engraving of the town plan of Potsdam.
Fig. 3.38 Image taken from L'Art de connaître et de dessiner les Arbres by Jacques Simon, 1987.
mediate a host of sensory stimuli that are deeply registered by the sentient body: the aroma of material; the feeling of humidity and dampness; the intensity of light, dark, heat and cold. Even if this essay was written in 1992, before the impressive march of visualization software, Corner addresses this in relation to materiality: ‘Today’s fascination with the visual image, the pictorial, makes it all the more important to recall how the greater part of landscape experience belongs to the sensorium of the tactile, the poetries of material and touch.’ And in that respect, the drawing is limited, as drawings can hardly ‘reproduce or represent the actual qualitative experience of materials which constitute the landscape’. By that Corner points at the principal insufficiency of drawing in landscape architecture.

**Drawing time**

Corner’s argument is vital when it comes to the representation of time. Time is an essential aspect of landscape, and, for that matter, the design of landscape. Therefore, superficially seen, one would expect it to be present in representations by landscape architects. However, as also shown by Corner, both theory and practice are not as explicit on time as they are on spatial aspects, like composition. The question of how to depict time has not been answered systematically in the context of landscape architecture. How is time depicted and visualized in general, independent of the discipline? What attempts have been made to depict time within landscape architecture?

This is not a problem of landscape architecture drawing alone. Depicting time has been a challenge over the centuries. Lippincott’s *The Story of Time* includes a chapter on ‘seasons and moments’ in which John House states that art theory in the nineteenth century focussed on space and on single moments instead of the narration of stories through time. But in the arts the insufficiency with regard to the representation of time was recognized earlier. The many changes of the nineteenth century invited artists to pay more attention to time, and at least the temporal dimension of the depicted moment. House focusses on paintings of rural life that reveal a clear temporal framework. Time in such paintings is in generally cyclical, as in a never-ending repetition, but later paintings such as Monet’s *Railway bridge* come with explicit signs of progressive time. From such paintings we can deduce ingredients that mark time and conclude that these are similar to the ingredients of today’s visualizations in landscape architecture. As House puts it, ‘the foliage of the trees shows that it is summer and the play of sunlight and crisp shadows indicate a particular time of day’. Dawn Ades notes that at the turn of the twentieth century radical changes meant a greater importance was given to aspects of time. That resulted in no immediate solutions for depiction, as ‘the ways in which time has been implicated in art, and the ways in which it has been represented, however, is a complex matter, as painting, unlike music or poetry, does not have a natural temporal extension’, but such solutions were on their way. Futurist painting for example explored ways to represent time and movement, to depict time at work, or to catch the sensation of time. Time as a phenomenon has been personified as Father Time, but in fact the clock, or the calendar, are both measuring devices and representations of time. Clocks in earlier times were
often accompanied by sculptural arrangements that depicted time in an allegorical way. [283] A fascinating example is given by the so-called Long Now Foundation that tried to make deep time understandable in a diagrammatic drawing. [284] [Fig. 3.39]

An unexpected source on ‘drawing time’ is an article by Murphy on the organizational nature of drawing, and the role of speech and gestures in drawing. [285] Drawings are limited in the types of information they can display, due to their ‘static nature’. Drawings ‘show a building as if it is frozen in time, unmoving and unaffected by the actions taking place within it’. [286] Consequently, architects have ‘to supplement [drawings] with other sorts of resources available to them to flesh out the building beyond what is graphically represented’. [287] Murphy refers to a case in which the architects speak about sliding doors, a ‘characteristic difficult to represent on the plan’. Here, gestures come in: ‘In order to express specific ideas about how these components will eventually move, the architects use their hands and words to imagine what the doors will do and what they will look like’, and ‘to put the plan into action’. [288] Even if it is only about a sliding door, Murphy confirms the difficulty of showing aspects of time in drawings. Cartographies of Time by Rosenberg and Grafton presents interesting examples of chronicles, graphical arrangements of words that were early depictions of time, preceding the later timetables. [289] Envisioning Information by Tufte devotes a chapter to ‘Narratives of space and time’ and approaches the subject from the point of view of information design, considering the timetable an iconic representation of time. Transportation systems are a very valuable source: ‘A comprehensive narrative description of a transport system requires a record of both time and spatial experiences’. [290] An exciting ‘space-time grid’ depicting a life cycle of insects shows time and space at once. [Fig. 3.40] The reader skilled in architectural drawings thinks they see a section – but in terms of architectural types of representation it comes closest to a diagram. Tufte speaks about ‘the essential dilemma of narrative designs’: How to reduce ‘the magnificent four-dimensional reality of time and three-space into little marks on paper flatlands’? [291] ‘Narratives of space and time’ finishes with examples taken from dance notation, a link to Lawrence Halprin and his RSVP Cycles. [292] Halprin explored the representation of time by means of ‘scores’. A score is ‘a system of symbols which can convey, or guide, or control (as you wish), the interactions between elements

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[284] See http://longnow.org/
[286] Ibid.: 124.
[287] Ibid.: 122.
[288] Ibid.: 125.
Fig. 3.40  Space-time grid as published in *Men and Insects*, Hugh Newman, 1965.
such as space, time, rhythm, and sequences, people and their activities and the combinations which result from them.’ [293] Halprin understood the score both as a graphical device and as an organizational principle, for example in the so-called ‘Take Part’ workshops. [294] Using scores he tried to orchestrate ways to observe the city and gather a wide range of facts and opinions. Even if Halprin’s drawings are often very personal, and not always easy to understand in relation to today’s landscape architecture, they simply propose a way of doing. In defining scores as ‘symbolizations of processes which extend over time’ Halprin introduced a new type of representation into the domain of landscape architecture. [295] Adding scores to incorporate time in landscape architecture’s representation seems like an easy solution, but the example of Visualizing Landscape Architecture showed that it is not that simple. [296] The fourth dimension as distinguished by Mertens mainly addresses a statement on the need for drawing time. Mertens criticizes landscape architecture for not acknowledging differentiation in moments and in functions during the day or the year. [297] Mertens underlines the importance of movement: ‘Moving pictures, videos, films and the like, can take up and present all three aspects of duration in time that have been mentioned - the future development of the “finished” project, the way the project combines past, present and future, and also temporal aspects of the experience of a place.’ [298] She also proposes ‘views’ - a variation on visualizations in my eyes - to show how a design performs at different times. For this, series of plans are also proposed. This same representational ‘trick’, multiplication, is used to show how a series of aerial photographs can convey ‘the passage of time’. Representing Landscapes by Amoroso predominantly covers the production of landscape architectural drawings in Northern America and confirms that the issue of time and performance are high on the agenda. [299] However, captions with indications of type reveal a lack of clarity in vocabulary: Phasing plan, strategy, experience, performance scenario, evolution graphic, simulation, event calendar, scenario plan, and mapping diagrams are all present, without a connection to larger categories. Notably, Halprin’s proposal, the score, is missing.

As a conclusion, we have to face the fact that solutions have been found for representing time in general, but that representational theory gives no immediate answer for the specific case of the representation of time in landscape architectural drawings. In Chapter 4, examples of today’s practice will be explored. These practical solutions of designers precede the presence of an adequate theory - a theory which I attempt to develop in this research. For such a theory, we should acknowledge progress as made in the École Nationale des Ponts et Chaussées, by Humphry Repton, in cartography and in informational design, from the 18th century onwards. Together with later examples, such as given by Lawrence Halprin, we see glimpses of a solution for drawing time in landscape architecture. Obviously, this should be connected with the thinking about landscape and landscape architecture as explored in the earlier paragraphs. Reading a treatise like that of Hirschfeld or handbooks such as The Scots Gard’ner, or studying the written work of Olmsted, one can start to relate this to representation, and specific types of drawing. This certainly will extend the borders of traditional landscape architecture drawing - think only of the cladogram as mentioned by Zerabuvel, or the small multiples as mentioned by Tufte. It presupposes a clear idea of what a drawing is, essentially, in landscape architecture, and how this relates to

[297] Ibid.: 102-104.
[298] Ibid.: 104.
ideas on what landscape is or should be, as was illustrated perfectly by the ‘unfinished’ American pioneer landscape as shown by Helmreich and O’Malley. Again, the work of Corner provides a sound basis for thinking about a theory on drawing in landscape architecture. But how does this all relate, or not, to current practice? That is what is in question in the next section, introduced by an ethnographic perspective on the nature of practice.

3.4 Profession, practice, project

The outsider’s perspective: an ethnographic reading of architectural practice

Now that we have explored time and drawing, it is important to speak about the social, professional and economical context in which designs and drawings are made. Professional practice is a complex web in which individuals and groups of people operate, within a set of written rules and even more unwritten codes. An ethnographic perspective may be of help. In such a perspective it is of relevance that designs are most often produced in economical units. We could use words like firm or practice. In this case, I mainly use the word office. Other organizational entities – the institute, the department – exist and existed in landscape architecture, but the office became the common way of organizing professional work throughout the last few decades. [300] Here, the focus is on drawings as made in offices. They have to solve problems as given by a client, and in a broader sense, by society. Therefore they are not considered here as artistic products in their own right. Design tasks in landscape architecture are seldom solved by individuals,

[300] Here one public design facility participates: DLG. DLG is the product of several reorganizations, so that fragments of for example Dienst der Zuiderzeewerken and Staatsbosbeheer became to be part of it. A separate study could represent such environments and their turbulent development adequately.
but mainly in small groups, and the landscape architect almost never builds what he or she drew on paper. He has to instruct a building company on how to do so. Therefore we have to explore the office as an environment; as a getting together of people; as a meeting point of the latest digital equipment and traditional drawing media. [Fig. 3.41a-l]

Creativity studies shifted from ‘putatively creative individuals to a sophisticated understanding that novelty is often a product of formal and informal aspects of organizing’. [301] Ayn Rand’s much read The Fountainhead is the perfect example of the ‘putatively creative individual’. [302] In this 1943 novel young architect Howard Roark is unable to cope with the opportunism of the offices in which he works: he is the lonely genius. Rand’s book has been often cited. Saint in The Image of the Architect does so, and notes an ‘endless controversy’ on the question of architecture being ‘an art practiced by and for the sake of individuals, or a commercial enterprise geared to the needs of the market and the generation of profit, or a communal undertaking dedicated to the service of society’. [303] Despite the need to compromise, ‘the strain of artistic individualism’ has been heard loudly down through the centuries. [304] Saint locates this in the architect’s profession itself: ‘An individualized view of architecture attracts architects because it enables them to see themselves not only as top dogs in the construction process but also as creators and romantics, heirs to a tradition that offers them a chance of fame and remembrance from posterity’. [305] The Beaux-Arts system in particular had strong influence on the architecture profession and its self-image; ‘a Beaux-Arts architect was one who firmly believed that architecture was an Art’. [306] The way Beaux-Art institutes were organized still explains, to a large extent, the prominent position of words like atelier, studio and competition, indicating organizational entities, and environments to compete and excel. The difference between the actual reality of the profession and the image architects have in mind was also addressed by Brown et al. The title of their article, “Invisible walls” and “silent hierarchies”: A case study of power relations in an architecture firm’, is telling, as it again points towards a difference between actual and imagined reality. [307] It is in the context of that tension that we speak about the potential innovation of the landscape architectural drawing system - even if most ethnographic studies are regarding architecture, the conclusions to a large extent also apply to landscape architecture.

**Studying practice from within**

Interest for how creative processes take place in such conditions has developed within the fields of anthropology, ethnography and sociology, and partly in architecture itself. Architect and researcher Dana Cuff intended in Architecture: The Story of Practice ‘to look at the patterns of interpretation that members of a cultural group invoke as they go about their daily lives’. [308] She studied practice from within the office. That brought her to a crucial observation: ‘What architects want us to hear about design practice often tells us more about beliefs and ideals than about the principles that guide action, theories-in-use.’ [309] Cuff reports a telling remark by one partner of the firm: ‘Really, we should call this place a studio, not an office.’ [310] It ‘invokes the studio analogy from architecture’s heritage as a profession allied with the fine arts’. [311] It is about critically examining ‘the justification of belief while respect-
Fig. 3.41cd Inside the OKRA office, 2015.

Fig. 3.37ef 1:1-Design of the support for benches, Anouk Vogel, 2015.
ing its authenticity’ and to reveal in what cases such beliefs ‘no longer respond effectively to everyday circumstances’. [312] She concludes that clients are important in this as they must arrive at some agreement together. This is not new: ‘Art and business exist as a dialectic in architecture that has created a dilemma for the profession since its earliest days.’ [313]

Drawing has changed substantially over the last number of decades. How did organizational structures respond? From Groleau’s organizational science point of view, drawing is a collective issue more than it is an individual practice, as ‘the improvisational nature of working as an on-going process of innovation and change is situated and social rather than cognitive and individual’. [314] Her study reveals something that is a delicate topic in design practice; specific persons can have a decisive role, even if they are low in hierarchy. Kevin, the intern in Groleau’s case study on computer visuals, as she calls them, is a key figure in producing such visualizations - he is the one capable of making visualizations look ‘more realistic’. [315] Houdart notes that in visualizations ‘everything remains possible in the drawing, regardless of the conflict between banners and trees in reality’. [316] She quotes a designer, commenting on his own drawing: ‘So, you have to give the effect of the trees being smaller in order to keep the visual composition and make it work – to make the clients believe in it.’ [317] It illustrates the ambiguity involved in (perspective) drawings, but such is the nature of practice: ‘A perspective drawing is not supposed to be convincing in its precision and respect for detail; the challenge is, on the contrary, to be false or unfaithful and still to transport the client away from his world into a new one; it is subversive almost by definition.’ [318]

Architecture historian Robert Proctor studied how architects respond to interviews. The problem with ‘the nature of the practice, indeed the nature of nearly all architectural work [is]: that it is collaborative.’ [319] The biographical approach to architectural history, with its consequent emphasis on the role of the architect as an artist, lends itself to an ‘unquestioning acceptance of intention as expressed in the interview’. Practitioners in interviews construct their histories ‘through present desires, particularly the desire for esteem’. [320] That is not to suggest that interviewing architects makes no sense, but that a critical reading is definitely needed. As this study is partly based on interviews, as we will see in Chapter 4, Proctor delivers a very relevant argument. Keith Murphy as an anthropologist looks at drawings as part of a larger set of representational means that also includes text and gestures. This is important, as design processes mostly take place in groups. This opens up a view on design processes as ‘collaborative imagining’. For landscape architecture with its complex projects involving many participants this is even more applicable. Murphy speaks about ‘a social, jointly produced activity in which the objects of thought are actually manipulated in interaction rather than just reported’. [321] Participants in a design process are helped by ‘each other’s talk, gestures, and object manipulations to jointly imagine, and indeed create an imaginary thing’.

Can one understand Koolhaas’s work without considering the practice, and the drawings made in it? Albena Yaneva thinks not. Therefore, in Made by the Office for Metropolitan Architecture: An Ethnography of Design she follows designers at work, assuming that ‘there is much more logic in each piece of work executed by them, even in the apparently insignificant and unrelated design
Fig. 3.37g  Inside the Hosper office, 2015.

Fig. 3.41h  Inside the OKRA office, 2015.

Fig. 3.41ijk Inside the karres + brands office, 2015.
operations such as classifying models or reusing an old and forgotten piece of foam, than in the totality of their behaviour or design philosophy.” [322] She is specifically interested in models, as in OMA ‘models are the material tracks of design processes’: They represent the design process, or, as Yaneva puts it, they ‘document important moments in office life’. [323] She proposes speaking in terms of trajectories rather than projects: ‘If a project covers the process of step-by-step realization of an idea, a trajectory accounts for the explorations, the discoveries, the numerous detours and unpredictable surprises that might occur.’ [324] Models literally move from table to table, undergo changes and are re-used, contributing in this way to a broader concept of drawings and models as ‘backtalk’. Surprises are important: ‘The designer encounters a piece of foam or a mundane object, and this encounter often surprises her, that is, it triggers an event.’ [325]

Such studies of architects in practice point toward the role of drawings in design processes. Several authors, such as Goldschmidt, state that most design situations are ‘ill-structured’. The fact that ‘it is not clear at the outset where the process is leading to, and what the end result might be’ will not worry any experienced designer, as that is part of his job. [326] But how does he or she solve it? Both Schön and Goldschmidt propose that drawings ‘talk back’, when describing the metaphorical conversation between the designer and his or her design. [327] For Goldschmidt backtalk describes how sketches can assist in generating ideas and strengthening them. The act of drawing itself creates such backtalk, as the designer ‘sees’ new options while drawing, and the continuous presence of paper drawings and models provides an intuitive way to reorganize one’s thoughts. Schön in The Reflective Practitioner argues that designing is operating in messy situations, as it mostly begins with an ill-structured problem. One learns to master the messy character of design problems not through theory, but through action - by acquiring ‘tacit knowledge’. Designing means making moves and evaluating these moves in order to decide on the subsequent moves. It assumes a dialogue between the designer and the evolving idea - as Schön puts it, the ‘situation talks back’. [328] While Schön is interested in the design studio as a simulation of practice, Cuff focusses on practice itself. She tries to deduce what it means to work with clients, to have deadlines, to be paid for work and to have to organize work. Landscape architecture in that differs from architecture in that sense: more often the client is a large institutional body, represented by different persons and divisions, and that institution has to take into account the larger public that will use the design, or will be affected by it.

A landscape architecture interest
One of the rare ethnographic explorations of landscape architecture practice exclusively comes from the Dutch researcher Emilie Gomart. [329] She followed the office of H+N+S to study the political meaning of design, and more specifically the meaning of drawing in that context, having taken a project for the defence line of Amsterdam as an example. The background to this is a transformational process in landscape architecture and planning in the years after 1980, changing the role of images. Landscape architectural design, in drawing, substantially contributed to enabling political bodies to formulate new directions. The one-time event Nederland Nu als Ontwerp [The Netherlands Now as a Design] was an important testing ground for the development of
scenarios for the distant future. [330] NNAO, as was the abbreviation, promoted a designerly exploration of the planning of the Netherlands towards the year 2050. The design professions were back in charge, after two decades of absence. The event introduced ‘design and drawing techniques into the political opinion-forming and decision-making processes, the aim being to improve negotiations by linking various alternatives in unexpected ways’. [331] Gomart studied the production of maps, schemes and visions in relation to debates with clients and the public. Very often in landscape architecture, there is no clear assignment. The goal then is to contribute to an agreement on a future scenario, which requires a direct debate with the public. Contrary to Yaneva, who confined her observations to the role of models inside the office, Gomart was interested in maps and their use outside of the office. Maps and models are very different in their physical presence and their function, but her observations go in a similar direction. The office space is described as an arrangement of tables with stacks of maps and transparent overlays. Yaneva suggests that models ‘talk’ with each other and with the designers. According to Gomart maps do the same thing: ‘[…] maps differ, a fact which enables designers to cast doubt on existing points of view and to demonstrate that the latter are contestable’. [332] Observing landscape architect Yttype Feddes at work: ‘She is drawing a pattern but then stops, peels the overlay from the maps, studies her sketch and then resumes drawing. She remains bent over the map; she draws, stops, bends her head further and looks at the overlay from close up. What is she looking for?’ [333] Gomart concludes that the designer seemingly replicates existing patterns on maps by drawing them on overlays, but in reality she formulates her own design goals by doing so – a parallel process of creating content and intention.

The work of Gomart points towards the particularities of landscape architecture. In Humphry Repton’s time, the client was a wealthy individual. This constellation is similar to architecture, with its dominance of private clients. Post-war landscape architecture, in contrast, is strongly related to civil service and engagement in public projects. Although a major shift towards commercial offices can be noted after 1985, the nature of projects since then is still predominantly public, or semi-public. The client in such cases is not a small group of persons, but a complex entity, representing political power, technical responsibility, public communication and so on. The notion of the public per se is much more present in landscape architecture, as most designs have no strictly defined user. The most relevant characteristic, very different from architecture, is probably the scale of landscape, and the time that evolves in its making. Landscape therefore is somewhat resistant and changes slowly, given its history-it is already there- and its lengthy maturation. Awareness of the resistance of landscape certainly influences professional perceptions. It probably contributes to patience, a mediating attitude and a general tendency to put things into perspective. This is the context of the making of drawings in landscape architecture.

Dutch professional practice after 1985: a thrilling decade

From the making of drawings in landscape architecture in general we move to professional practice after 1985, and to the particular aspect of time. To shed light on the meaning of time and drawing I selected, as elucidated in Chapter 2, ten offices founded during the thrilling decade between 1985 and 1995. [334]
In 1990 leading Dutch architectural journals such as De Architect, Bouw and Archis devoted several articles to the young office of West 8, founded in 1987, and its foreman Adriaan Geuze. Three years before the foundation of West 8, landscape architect Alle Hosper and the office of B+B were commissioned to lead De Kern Gezond [The hearth healthy], an unprecedented renewal program for the public space of the inner city of The Hague, which was published in the 1988 volume of Archis. In 1985 Plan Ooievaar, the winning entry of the first Eo Wijers competition, was an instant success, and inspired the start of the office of H+N+S. The Eo Wijersstichting [Eo Wijers foundation], founded in 1985 and therefore of the same era, asked landscape architects to combine their research capacity with their ability to draw up visions for the future and concrete proposals for interventions in the landscape. There is a meaningful connection between these observations. Until then, if an architect’s journal had mentioned landscape architecture, it was a curiosity from another domain. West 8 was a different thing; with its provocative, colourful and innovative projects the office boldly entered the domain of architecture and urbanism. How was this jump made? De Kern Gezond as a project certainly involved trees and plants, but it was primarily a ‘stony’ project. More importantly, it was a strategic project, as it took into account the inner city as a whole. Why did a landscape architect lead such a project, if landscape architecture until then was primarily focussed on vegetal environments? What was the innovation Plan Ooievaar brought, and how could it self-confidently define this large-scale plan as a landscape architectural work? These questions arise from a highly dynamic transitional period in Dutch landscape architecture from 1985 onwards. Obviously, the formation of offices in itself, as a response to shrinking public planning departments, is relevant. And certainly the success of OMA and Rem Koolhaas, stimulated by their contribution to the Parc de La Villette competition was of influence - West 8 unmistakably expanded on that approach. But in the context of this study it is also the growing influence of ecological thinking, with its most clear manifestation in Plan Ooievaar, which must be noted. As previously discussed, the prevailing thinking surrounding nature in relation to landscape design changed dramatically. In the Netherlands, Westhoff, Sipkes and Landwehr are noteworthy for the post-war development of this thinking towards an appreciation of natural systems, and in designed landscapes. As Löbbeke analyzed, and also Dirk Sijmons, member of the Ooievaar team and later director of H+N+S confirms, there was a strong tension between ecological thinking, gaining growing influence, and landscape architects - was design threatened? In so far as landscape architects understood themselves as mediators between human beings and nature, it was ecology that claimed that role now. The Oostvaardersplassen, a leftover area in the IJsselmeerpolders caused a break through. Here, a planned industry area was not effectuated, and nature took over. The processes happening here made a group of ecologists and landscape architects aware of the new role of design: landscape architects could draw the conditions, in which natural processes could unfold. That discovery opened doors for a ‘cultural adaptation’, as Sijmons puts it, of these ecological insights. Plan Ooievaar showed that the design of nature was possible - not as an image, but as a stimulus for a dynamic process. This was one of the fundamental changes occurring in the years around 1985.
After little more than a decade a silent transformation was successfully accomplished. In the 1996 *Landschapsarchitectuur en Stedebouw in Nederland 93-95*, a yearbook displaying landscape architecture and urban design projects, was published as the first of a series of yearbooks. [341] Designers were invited to send in plans that were finalized in the years 1993-1995. About 30 plans were selected. The importance of this and consequent yearbooks is multifold. Through a system of peer review they show which plans are perceived to be the best over these years. Experts formulated criteria they wanted to apply for each yearbook. These continuously updated criteria, together with reflective essays in each book, provide an overview of the debate as it developed over the years. In the first edition Eric Luiten spoke about ‘the infrastructure by which the profession can develop’ as an important condition that made renewal possible. Examples of these are the Dutch Architecture Institute and the two funds that support initiatives in architecture and design. [342] In retrospect, the book series itself is an example of such infrastructure. The change in the design climate in the eighties resulted in an energetic production, new approaches and a vibrant debate. Yearbooks responded to that as a confirmation of the observed change, and as a first level of reflection on this dynamic period.

One of the criteria for the selection of an office was its presence ‘on stage’, which includes publications, prizes, and remarkable designs. A yearbook is such a stage, especially as plans are selected by peer review. West 8, H+N+S, Lubbers, Hosper, karres + brands, and Quadrat are all part of my selection, and are some of the most profiled offices in the yearbooks - they each had between five and fifteen projects published between 1993 and 2014. [343] These numbers confirm an exciting change. Offices, founded only a few years previously, were, by means of these yearbooks tagged as successful. Even *built* plans were recorded in the 1993-1995 edition. [344] Given the relative slowness of landscape architecture that is quite remarkable. It reveals the highly fertile conditions around 1990. Offices just starting from scratch acquired impressive projects such as the public space at the station of Enschede (OKRA) and Tilla Durieuxpark in Berlin (DS). [345]

If we take *Landschapsarchitectuur en Stedebouw in Nederland 93-95*, three projects can be highlighted as typical examples of a Dutch landscape architectural culture. The Zaaneland urban renewal project by Hosper, commissioned by the municipality of Zaanstad in 1992 as part of the redevelopment of the highly industrialized banks of the river Zaan, included 530 new houses. [346] [Fig. 3.42] As green areas played only a minor role, in disciplinary terms this project should have obviously been classified as urbanism, but remarkably it was undertaken by a landscape architecture office. The landscape architect pleaded for the *minimisation* of regular green open space, as the surrounding water with its banks and wide vistas was considered the best quality landscape that could be offered, an argument which, incidentally, could also be heard in the West 8 design for Borneo Sporenburg - published in the same yearbook. Due to that development, landscape architects could now be the natural leaders of the design team. The next project is the West 8 design for the site of the VSB head office in Utrecht. [347] [Fig. 3.43] In 1993 West 8 was asked to design the 2,5 hectare garden. Obviously a garden design can be placed in the context of a long tradition, and is in that sense not remarkable. In the Dutch
Fig. 3.42  Aerial view of Zaaneiland, Zaanstad, designed by Hosper landschapsarchitectuur en stedenbouw, 1992. Photographed by Peter van Bolhuis,

Fig. 3.43  Photograph of garden of VSB head office, Utrecht, designed by West 8 Urban Design & Landscape Architecture, 1993. Situation 2013.
Fig. 3.44ab  Detail of competition entry for Parc de La Villette, Bureau B+B stedebouw en landschapsarchitectuur, 1985, and exploded view of Schouwburgplein plan, Rotterdam, West 8 Urban Design & Landscape Architecture, 1991, realized 1996.
context however, it was exactly this garden tradition that seemed to struggle during this period. Yet it is mainly the approach of West 8 that makes it a characteristic design. In fact the garden is presented as a drawing, to be seen from above. A bridge -for which there is no immediate necessity- mocks Dutch austerity by being there at all, a fact compounded by its exuberant design. It is the colourful provocation in this project, and in general in the oeuvre of West 8, both in drawing and reality, that deeply changed Dutch landscape architecture. The third project is a 20-kilometre dike design by H+N+S situated along the river Waal, commissioned by the local water board. [348] Here the landscape architects had a leading position in a team with engineers. This is remarkable, as it confirms the rise of landscape architecture with respect to other disciplines in the planning process. It also represents a new reality in the profession: to take responsibility for the entire design of these ‘necessities’ of modern life. Furthermore, the design is remarkable, as it can only be understood at the level of the regional scale, which up to that point was not considered as a scale for design. These aspects were not radically new as such at that time, but should be seen as a harvesting of the preparatory work done in earlier decades. This harvest was now made possible.

Luiten stated in the first yearbook that Dutch landscape architecture ‘enjoys a prosperous period’. [349] There may be discussion as to when exactly this period started, and different interpretations of what ignited this change are possible, but the set of yearbooks without doubt document this prosperous period itself. Journalist Max van Rooy commented on this successful progression of landscape architecture: ‘Seeing that, over the last ten years or so, even urbanization has become a landscape architectural assignment, the omnipotence of the landscape architect is now complete.’ Prestigious awards confirm that landscape architecture has ‘achieved Messianic status’. [350] Although obviously being ironic, Van Rooy brings attention to the important fact that by receiving such prizes landscape architects were indeed given a position equal to that of architects.

Four major shifts shape this period. Landscape architects started to operate on the same level and in the same domain as architects and urbanists. The question of why this happened has to be researched elsewhere. As the beginning of an explanation, I assert that both the work of B+B and West 8 strongly contributed to this emancipatory jump by their language and drawing style, consciously levelling with the architect’s codes of working. [Fig. 3.44ab] Secondly, after a period in which design struggled to survive, design as a means to explore the future was back again. This was certainly strengthened by the Nederland Nu als Ontwerp happening, but it was also inspired by a set of national policy documents that radiated optimism and a forward looking spirit. Dutch landscape architecture for the first time was seen as a serious partner in this motion. [351] Thirdly, landscape architects just like architects did renew themselves with a fresh, colourful, brutal and slick graphical expression. Without doubt, the success of OMA and Rem Koolhaas was of influence, but the 1983 Parc de La Villette competition has also often been mentioned as a strong motivation for innovation in landscape architectural representation and a radically new approach towards leisure, transport and urban open space. Last but not least, the profession of landscape


[350] See Van Rooy in Landschapsarchitectuur en Stedenbouw 99-01: 16-23. Original text: ‘Nu sinds een jaar of tien zelfs de verstedelijking een landschapsarchitectonische opgave is geworden, is de al machtigheid van de landschapsarchitect compleet. De toekenning van de meest gezaghebbende architectuurprijs van Nederland, de Rotterdam Maaskantprijs in 2002 aan Dirk Sijmons, de bevlogen schrijvende roerganger van het Utrechtse bureau H+N+S Landschapsarchitecten, is een bevestiging van de Messiaanse status die de landschapsarchitect heeft verworven.’

[351] For example Notitie ruimtelijke perspectieven: op weg naar de 4e nota over de ruimtelijke ordening (1986).
architects reorganized itself in a dynamic world of offices and independent designers. It is this major transition that marks the period that I am interested in.

Back to Bijhouwer

In 1947 the first landscape architecture program in the Netherlands started. These years are thus a foundational period in Dutch landscape architecture, in connection with the name of Jan Bijhouwer, the first professor in Wageningen. ‘We need to have sufficient exposure to the way town planners think’, Bijhouwer said in his inaugural speech. [352] I refer back to this earlier statement as I assert that the first signs of the transition in the eighties can be found here, and it was not necessarily in the domain of garden architecture. Bijhouwer was convinced that a landscape architecture program had to be positioned close to urbanism. His biographer Andela underlines that this must be read as a strategic remark. [353] It was much debated whether the new program should be housed in Wageningen, close to agriculture, or the engineering atmosphere in Delft, including urbanism. It also reveals what landscape architecture should be. In 1940 the Dutch federation of garden architects BNT participated in an exhibition in the Stedelijk Museum in Amsterdam with works of its members. Bijhouwer took part in the organization. [354] Urbanist Van Eesteren gave a remarkable opening speech. The exposition was ‘mainly consisting of small and tastefully laid-out nooks, elegant ponds and rock gardens’. There can be no doubt about the rather critical view of Van Eesteren: He qualified the contributions as ‘modest’. [355] He urged the garden architects to wake up and participate in the vibrant debate about new landscapes, such as the Zuiderzee polders: In these ‘important cultural works, scenic beauty is of prime importance’. A garden architect should take initiative, have a role in these developments, and discover ‘large, empty wasteland areas. By this I don’t only mean that his area of work will extend to many new objects; I mean in particular that he will have to conquer them.’ [356] With these bold statements Van Eesteren was, in fact, presenting a manifesto for post-war landscape architecture. In the post-war decades the profession of landscape architecture responded step-by-step to the call of Van Eesteren, until the second half of the eighties, when ‘the wasteland areas’ had definitely been conquered.

Debate

Incidental early examples show a profession on the move, such as the urban plan for Kethel (1942), designed by Bijhouwer and urban planner A. Siebers. [357] Bijhouwer was strongly influenced by soil science. The area indicated for the extension of Schiedam caused difficulties, or, as Bijhouwer puts it: ‘There we found a large system of peaty, boggy grasslands which hardly protruded above the water in the ditches.’ [358] This actual condition to a high degree defined the design, and Bijhouwer was proud of that: ‘The appealing aspect of this plan as far as I was concerned was the logical and pleasant “garden village” and park layout achieved by following the natural features as closely as possible. This result would never have been obtained if the layout had borne the stamp of the designers’ own visions.’ [359]
Fig. 3.45 Photograph of exhibition *Stad en Land* in Stedelijk Museum, 1942.
Prior to the Second World War garden architects were mainly independent designers, different from urbanists who were generally part of public bodies. [360] Garden architects were strongly related to private clients and often close to the world of nurseries, or were nurserymen themselves. The earlier mentioned debate in *De Boomkwekerij*, started in 1946 by Doorenbos, is relevant also when it is the profession itself that is spoken about. Doorenbos had the bold opinion that a garden architect should have his own nursery. [361] Only this way could a knowledge of living material be acquired and kept up to date. Bijhouwer opposed him and stated that a garden architect should by no means have his own nursery, which was also the official viewpoint of the professional organisation BNT. [362] A garden architect with a commercial nursery could not be an independent advisor. In an editorial the discussion is commented on: ‘Something new is growing,… I would call it the “school” of Bijhouwer, a “school” that will attract more and more followers’. [363] In a next issue, landscape architect Wim Boer, declared himself part of that new school, and stated bluntly that these newcomers have an interest that is broader than the garden alone. In fact, the discussion was already out-dated: For Boer’s generation it was all about creating space, designing a balanced composition, and accommodating the program - an approach that mirrors the basic thinking of Modernism. [364] At the same time, the importance of this debate for the young profession was substantial, confirmed by the fact that the discussion is cited in several publications, and even got a name: the ‘met-of-zonder’ discussion - the with or without discussion. [365] This debate has strongly contributed to the definition of the emerging profession of landscape architecture, and it marks the definitive separation between the craftsman (the gardener) and the advisor (the landscape architect). Bijhouwer, invited by urbanists, initiated a new understanding of landscape architecture and, as a consequence, to leave its fortress of plants and trees and move towards the city. It certainly had an effect; a growing presence of landscape architects in public service can be noted in the period after the Second World War, for example in cities’ departments for green and public space, known for their knowledge on living material. But as Van Hoogstrate notes, leading designers in these departments, like Doorenbos in The Hague had a rather traditional approach, and they were urged by the new generation to renew the profession. An interest in flowers, shrubs and trees was seen as old-fashioned - the new era asked for a different approach. [366] It would be too easy to see this as an explanation for the later lack of engagement with issues of time, but it certainly reveals a contradictory set of changes. As Vroom notes in his memoirs, the installation of a chair of landscape architecture at the university made it difficult to give garden architecture and the knowledge of plants and trees an adequate position, and to some extent this has been an unsolved debate up to present day. [367] However, to restrict the engagement with time issues to the domain of gardening would be nonsense. The way in which landscape architecture after 1985 widened up its domain certainly caused an even bigger move away from garden architecture, but at the same time it introduced important new areas in which time, change and dynamics were central. So again the transformation must be seen as dialectical.

**Turning points**

The biography of Bijhouwer concludes with an essay by Adriaan Geuze. In a provocative argument he asserts that the generation...
of Bijhouwer was ‘betrayed’. [368] Geuze wants to understand Bijhouwer as heir of generations of ‘landscape architects’, even if that term was yet to be invented, who created the Dutch landscape and were never afraid of large landscape works. Geuze states that this tradition got lost. What makes the essay relevant is the significance Geuze gives to the definitive decision to not make the Markerwaard. This last polder of the Zuiderzeewerken started to be fiercely debated in the climate of the seventies. The general public opposed such large interventions. Geuze wants to read this as the final loss of a culture in which Bijhouwer operated, and to which he strongly contributed. Geuze’s reading makes sense, in so far as not making the Markerwaard does, indeed, have a very strong symbolic meaning. The event can certainly be understood as the end of a period that began in the post-war years with the involvement of Bijhouwer in the polders, and the instalment of the landscape architecture chair in Wageningen. In retrospect, both the Zuiderzeepolders and Staatsbosbeheer have, as an environment for landscape architectural production, contributed highly to the intellectual development of the discipline of landscape architecture, its participation in the main post-war investment programs that affected landscape, and the production of numerous important plans. [Fig. 3.46] Geuze speaks about the loss of a tradition, and seems to interpret this moment of not making the Markerwaard as the conclusion of a glorious era. In reality, this is true and untrue. The transformation in the eighties was highly dialectical. Indeed a series of state institutions with a strong tradition were dissolved. At the same time, this helped a group of new and private offices to become very successful, and ironically, Geuze’s West 8 is one of the best examples.

To the city
A biography of the Dutch landscape architect Alle Hosper (1945-1997) illustrates the development of the profession. [Fig. 3.47] Starting at the national forestry service Staatsbosbeheer in 1967, Hosper shifted to the Projectbureau Almere, part of the Rijksdienst voor de IJsselmeerpolders to work on the new city of Almere. Just as Staatsbosbeheer, this service (formerly called Dienst der Zuiderzeewerken) at that time housed substantial numbers of landscape architects. These environments were perceived as dynamic, and as much more attractive to work in than private offices at that time. [369] In fact these larger groups of landscape architects within public institutions were essential to the way in which Dutch landscape architecture developed, as they also functioned as a research facility, and as Jannemarie de Jonge observes, ‘the specific orga-
Fig. 3.47 Sketch drawing for so-called Eierenplan: drinking water basin in De Biesbosch, Staatsbeheer, 1967. Drawing Alle Hosper.
nizational structure of the landscape architects in the Landscape Development division of the National Forest Service, and the network they maintained, contributed to the increasing influence on the professional domain." [370] Many of the employees, following the dissolution of these institutions, started their own firms, and three of the offices participating in this research have their roots here. [371] At the Projectbureau, Hosper was tempted to cooperate in the design of the Markerwaard, but when it became clear that this polder would never be realized, he left this statal body and moved to the world of commercial offices, to Bakker en Bleeker, today B+B. He knew this office quite well. Although only founded in 1977 they had done several commissions for the Projectbureau Almere. Now the office set off on a new adventure: the project of De Kern Gezond in The Hague. The name refers to the inner city, or the core, and the desire to revive that core. Hosper got a leading role. That is of importance. Writing the biography of Alle Hosper a decade ago, I wondered at length how it could happen that at that time such a large, strategic and strongly design oriented project was possible, and why a landscape architect was appointed to a project that mainly concerned the stony surface of The Hague’s inner city. [372] The Hague alderman Adri Duivesteijn had a crucial role in this. More specifically his visit to English industry cities, such as Manchester in 1982 taught him that The Hague too had to face the risk of a degrading city centre. [373] He convinced the local government that a long-term project to invest in all public space was of high importance, and that a master plan should be made. This advice initiated one of the most continuous and consistent urban renewal projects the Netherlands has known in the last few decades. De Kern Gezond was published as early as 1988 and 1989 in De Architect and Archis - again a sign that this new spirit had been noted in broader circles. [374] Hosper’s role in De Kern Gezond marks the conquest of the entire city as a domain for landscape architecture, and not only its green space. However, as is often the case in these years, such transitions are dialectical. In an essay in Streetworks I argue that it was probably the vibrant debate in urbanism that paved the road. [375] Urbanism at that time played a stimulating role for landscape architecture. Urbanists like Rein Geurtsen, Frits Palmboom and Maurits de Hoog explored the notion of morphology. This interest in morphology, inspired by urbanistic experiments in France and Italy, had many aspects, but one of them was a new reading of the relations between the landscape, as a basis, and the urban pattern. In 1982 Geurtsen drew a set of noteworthy drawings in which the urban structure of The Hague was read as a consequence of its soil, an interchange of dunes and peaty depressions. Such a reading ‘explained’ the morphology of the urban pattern of The Hague. [376] Palmboom did the same for Rotterdam. These drawings were published in Rotterdam. Verstedelijk landschap. [Fig. 3.48] This publication from 1990 was an instant success, marking the interest for such a reading. [377] It certainly supported landscape architects in taking a leading role in the design of the city.

Challenging architecture
The office of Bakker en Bleeker (later: B+B) with its foundation in 1977 preluded the changes in Dutch landscape architecture after 1985. Consciously positioning itself at the same level as architecture and urbanism, indeed the ambition was ‘audacious’, as landscape historian Marinke Steenhuis suggests. [378] It is an emancipatory act, and going back to the changes after the Second
Fig. 3.48 Analytic drawing for *Rotterdam. Verstedelijkte Landschap* by Frits Palmboom, 1990.
World War probably the second major emancipatory act. Despite the years of crisis in which the practice started, it went quite well, and in 1982, celebrating its first five years of existence, the members allowed themselves to participate in the Parc de La Villette competition. Success came instantly; the office was one of the nine winners. The importance of this competition as a whole can hardly be overrated. But the entry of B+B was also remarkable for its excellent drawings. These drawings were not innovative in the way Tschumi and OMA shocked the design world, but the implicit statement on landscape architecture was nevertheless far-reaching. The posters were very unconventionally reproduced as serigraphs, due to the colour quality, and that mattered. The drawings were, to put it simply, more architectonic, and expressed a strong opinion on the nature of landscape architecture. Specific greens are bluish, to take distance from the traditional rich greens of landscape architects, and in the same way sharp, thin black lines gave the drawing an architectural look. Trees were perfect circles, again not the traditional ‘natural’ drawings made by landscape architects. The La Villette entry established a strong drawing history that continues today at the office of B+B. The practice strived for austere drawings, restrained in their use of colour, precise in the drawing of lines and aiming at a balanced composition. Many drawings were in black and white; others showed very skilled coloured pencil drawing. This also reveals the conscious move towards architecture and urbanism. It helped the office to accentuate their artistic autonomy to the client even more. This was, as Steenhuis observes, rather unusual for landscape architects. Their 1984 Prinsenland design is significant in that respect. In an article in Plan three of the team members protested against boring functionalist plans and promote a formal language that is more free and full of tension, in terms of composition. In this plan the collage is introduced as a representational tool, which at that time was little known in landscape architecture; some years later West 8 would give the use of collage another strong impulse.

Leafing through De Architect and comparable journals, one can trace evidence that it had been noticed. At once, landscape architecture was seen as operating within the domain of urbanists and...
architects. A major force came from the work of West 8, founded in 1987. Publicity around the work started to grow from 1990 onwards. Attention was also received from international architecture journals. His entry in the Prix de Rome competition positioned founder Adriaan Geuze as a newcomer with a vocabulary that superseded the general landscape architectural rhetoric. His final plan was judged to be ‘almost arrogant’ by Bart Lootsma. Shortly after the personal success of Geuze, the newly founded West 8 office was introduced to the broader architecture public with studies for urban open space in Rotterdam, characterized by Jos Roodbol as ‘unorthodox’, ‘unconventional’ and ‘intelligent’. The appreciation in architectural journals was certainly helped by the drawings and more particularly the collages and the layered diagrams, relating West 8 to OMA. But West 8 immediately claimed its own handwriting - for many a source of inspiration. Some of the drawings were disseminated worldwide and acquired a cult status, such as the diagram for the landscape design of the Oosterschelde dam. Goffi coined the term ‘twinned body’ to describe the relationship between drawing and building, pointing at the autonomous life a drawing can have, and this West 8 drawing certainly is a confirmation of that theory - the actual design is long since gone, but the drawing is alive. Both on the level of design invention and drawing the oeuvre of B+B and West 8 shaped and represented the transformation of landscape architecture.

Plan Ooievaar
A rather typical aspect of Dutch landscape architecture is the idea that nature can be made, if one knows the conditions in which

certain ecosystems flourish. It inspired a line of thinking in the Dutch landscape architectural community, which became very important in the transformation around 1985. The 1985 Eo Wijers competition Nederland Rivierenland [The Netherlands, a land of rivers] and its winner Plan Ooievaar played a key role in this. [386] The plan drawing is often the one shown, but the competition entry contained other drawings, such as explanatory sections. [Fig. 3.51]
The competition as a whole was important, as it expressed a statement on what was considered to be the future role of landscape architecture, which was to design the large scale, and the distant future in an explorative way. Design on the large scale and for the distant future was also claimed by the foundation, that staged Nederland Nu als Ontwerp, promoting a designerly exploration of the planning of the Netherlands towards the year 2050. [387] Initiatives as Eo Wijers and NNAO created an explorative space in which to work, ranging from competitions to exhibitions to workshops, which was fitting with the striking comeback of the competition as a phenomenon in these years. [388] It encouraged landscape designers not to wait for a client, but to actively put forward opinions on landscape. Crucial to this was showing ‘what we could want’, as Sijmons put it. [389] Plan Ooievaar presented an idea about the future of rivers, of nature and of agriculture that at once became leading. It is mainly recalled as a point of reference for the thinking on nature, but the plan put forward the development of nature and agricultural innovation as working together in a mutually beneficial relationship. I will come back to this specific Dutch approach. Plan Ooievaar jumps to the future, then asks how to get there and what forces have to be put to work. Verbal metaphors such as ‘locomotives’ and ‘judo’ were used to explain the design in operative terms, the latter arguing that landscape architects have to bend with the forces more than oppose them. [390]

The Eo Wijers Stichting started its work in 1985, aiming to strengthen large scale design via competitions. In 1985 the first competition Nederland Rivierenland was announced.

See http://zoeken.nai.nl/CIS/archive/317 on Nederland Nu als Ontwerp.

See Wiegersma, Ettema and Peppel 2012.


Fig. 3.51 Of Plan Ooievaar most often the plan drawing is depicted. This set of sections provides a different perspective. Plan Ooievaar, competition entry in Nederland Rivierenland, Eo Wijers Foundation, 1985.
consequences for landscape architecture, the thinking on nature in general and Dutch national planning. It was within this context that the office of H+N+S came into being. [391]

Contradictory developments
In relation to what has been said before in ‘Time, landscape and intervention’ and ‘Drawing, drawings and the design process’ contradictory developments can be seen. Landscape architecture throughout these years, in the context of Modernism, became much more oriented on architectonic materials and forms. If the landscape architect was ever a nurseryman, it was certainly not during this time. As a consequence, aspects of time as related to the world of plants and trees were less present. However, when Modernism drifted away, doors opened for other approaches. With relation to time, the work of Lawrence Halprin marks the changing times in an international perspective. For the Dutch situation Louis le Roy, his book *Natuur uitschakelen. Natuur inschakelen* and the Eco Cathedral project represent this change. Alongside that, pressure grew to realize projects quickly and efficiently, making it very relevant to think about time aspects, both in terms of planting schemes and phasing in urban planning. And as previously discussed, ecological thinking became more important. *Plan Ooievaar* is certainly not the only instance in which this became manifest: several offices and many plans are deeply influenced by this. For various reasons drawing also changed in these years. Much more attention was given to the drawing as an independent piece of art. West 8 in particular excelled at new ways of drawing. Again, this had contradictory consequences. A striking image became essential for success. This prompted the representation of plans concentrated on one specific moment, in which an optimal view could be given, and thus less attention was given to aspects of time. At the same time, the renewed attention given to diagrams enabled the representation and understanding of designs as a machines, and thus showed how such a machine functioned in time. The arrival of the computer and the rapid development of software contributed to digital solutions for representing time, although this took a long time, particularly in landscape architecture, to develop beyond initial attempts.

Meeting the offices
How do the offices participating in this research relate to the issues of time and representation, and the (recent) history of landscape architecture? In Chapter 2 the list of offices and the background motives for selecting these offices were presented. Chapter 3 enabled this to be put in a larger perspective, and in Chapter 4 we will examine the drawings of these offices in so far as they are relevant to this study. This larger perspective brought us from ‘Time, landscape and intervention’ with texts from throughout the history of landscape architecture and affiliated disciplines to ‘Drawing, drawings and the design process’, which is about the drawing as an object, and about the process of drawing. That enabled us to see to what extent drawing in landscape architecture is different. From that we moved to ‘Profession, practice and project’ in which the culture of the discipline was discussed from a social perspective, and a history of recent practice was presented. That is the context for the initial interest in the actual drawings of a group of offices, and furthermore experimental drawings made by students. This paragraph only serves to mention all the offices, and the way they...
are grouped. A detailed description of their history, background, and aims cannot be made here; this is the point of departure for Chapter 4 in which specific drawings and specific thoughts in relation to time, representation and landscape architecture are discussed.

The core group of ten offices started between 1985 and 1995, but within that group a broad spectrum can be found. Almost all offices are medium or large in size, and engage in several thematic fields. Some concentrate on assignments related to the urban area: urban open space, transformation areas and urban extensions. Even if such classifications fail to describe offices adequately, they help to describe the playing field in which they operate. West 8, Lubbers, Quadrat, OKRA and karres + brands fall under this umbrella. These offices are strongly involved in the building of projects. A large share of their work is rather stony, as in street profiling, but they all engage in designing gardens and parks too. West 8, substantially bigger than the others, works mostly in other countries, and employs many nationalities. Offices such as karres + brands and OKRA mix a typical Dutch portfolio with projects from abroad, whereas Quadrat focusses on Dutch assignments. Other offices, such as H+N+S, Bosch Slabbers, and Vista explore more rural or large-scale assignments, for example on infrastructure, or water. These offices typically combine more abstract studies with the making of projects, which sometimes can be extremely large. They engage in programs that are rather unusual for landscape architecture, such as wind energy plants and nature development. Their work is primarily Dutch, but recently they started to work in other countries too. The United States in particular with its climate-induced disasters became an important country. DS and Hosper have a somewhat more mixed character, operating both in the rural and urban area, at the smaller and at the larger scale, building projects and drawing visions. Some of the offices were founded by the generation that studied around 1980 (West 8, OKRA, DS, Lubbers); for the others their founders had a history before the office started, either in governmental or local service (Quadrat, H+N+S, Bosch Slabbers, Vista, Hosper) or in other offices, such as B+B (karres + brands). Almost all offices changed substantially. Founders left, and interests changed. Obviously, they all experienced the transition from drawing by hand to computer drawing, and they were part of the transformation of Dutch landscape architecture after 1985. Regarding the issue of time, some offices operate in thematic fields in which the aspect of time is dominant, such as peak water management, whereas for others there is no specific thematic connection to time.

Before and after

Going back to 1763, Copijn spans the entire transition from the gardener-nursery man to the landscape architectural advisor. [392] This office is the most orientated on plants and trees, the scale of a (large) garden and a craftsmanship approach, and closest to the making and maintaining of gardens. Buys & Van der Vliet (now MTD) is also much older than the others, and covers the post-war history of the profession. The office experienced the conquest of the urban realm, as they participated in the design for the city extension of Breda, Haagse Beemden. [393] MTD is known for a craftsmanship approach, a preference for the smaller scale, and an engagement in urban open space. DLG, a public institution stemming from Staatsbosbeheer (going under many
other names throughout the decades), very recently ceased to exist. While DLG is the only non-private participant, its work is not so different from some of the other offices. DLG worked in the rural area, often in connection to land consolidation, and had to accommodate other programs, such as leisure, in its plans. Work was closely connected to execution, without too much drawing in between. In recent years the organization shifted to the role of mediator between competing interests in the landscape, for which many drawings, mainly sketches, were involved. Hubert de Boer is addressed as an individual, due to his diverse roles, such as co-founder of B+B, member of the board of the urbanist office TKA (now Atelier Dutch), head of the landscape department of the Academy of Architecture Amsterdam and an independent advisor. De Boer represents the independent landscape architect type, who is from time to time part of larger networks.

The ‘young’ offices in this research started after 1995. Some of them, like Anouk Vogel and Lola, started directly after their studies, while others such as RAAAF (Ronald Rietveld) had a previous history in other offices, such as B+B, or, in the case of van Paridon de Groot, H+N+S. The work of Vogel and Rietveld is closer to art and architecture. Vogel shows a preference for gardens, interiors
and smaller urban open space, RAAAF focusses on conceptual work and installations, which could also be large scale. Lola and VPxDG operate more at a larger scale and in rural projects, although, as a general characteristic of these young offices, their curiosity brings them to a very varied set of assignments, and to cooperation with other disciplines. RAAAF refers to itself on its website as ‘architecture-art-affordances’, Anouk Vogel does not specifically categorize her office as a landscape architecture practice, apart from mentioning her landscape architecture education. Vogel is the only strictly one-person office. All four young offices have a strong drawing style that combines digital and manual techniques. For a different representation of an office Lola’s webpage is shown here, as it was in 2012, with a very explicit choice of colours. [Fig. 3.52]

Surrounding countries
The selected offices in the surrounding countries are of a very different nature, as they are few in number, and as they were selected for their interest in time. Some of these offices are part of rather strong national traditions, or escape from such traditions. Vogt for example must be positioned within a typical Swiss tradition of dealing with gardens and urban open space that goes back to Dieter Kienast, Gustav Amman, Willy Neukorn and Ernst Cramer. [394] Studio Vulkan on the other hand relates negatively to such an assumed Swiss tradition, working with process, change and uncertainty. For that reason they are rather close to Dutch offices like H+N+S and Vista. [395] Denmark and France also are known for a very strong national landscape architectural culture. Denmark can be understood both as part of Scandinavia, and as an autonomous area. In both cases a specific drawing tradition of precision in black and white is noteworthy. Both Germany and the UK have, for different reasons, less explicit landscape architectural traditions. German landscape architecture, in Leberecht Migge, has a strong and early example of a crossover between urbanism and landscape architecture. However this did not result in an uninterrupted tradition in the twentieth century. [396] A very specific practice is atelier le balto. The founders have French roots, but are located in Berlin. [397] Their specialty is the temporary garden, a preference that fits with the issues of time and drawing. The accent on hand drawing also is present on their website. [Fig. 3.53] In France, the Ecole Nationale Supérieure du Paysage in Versailles is a main point of departure, with a strong accent on drawing, and an artistic approach. The school is strongly connected to practice, where the late Michel Corajoud played a leading role. [398] French landscape architecture approaches Dutch landscape architecture with its designerly interest in large-scale programs such as forestry. Michel Desvigne descends from that tradition. [399] In the UK, landscape architecture is strongly associated with the historic gardening tradition, and in the twentieth century Geoffry Jellicoe is the obvious focus point. Post-war landscape architecture had to fight hard for its position, and for that reason cannot be understood as a very continuous tradition. At the same time the Edinburgh Art College, now part of the University, has been an important place in recent decades, also internationally. For years Dutch landscape architect Elco Hooftman was a leading figure in the Edinburgh Art College before starting GROSS. MAX, in 1995. Obviously, short typifications as given here do not do justice to the richness of landscape architectural cultures in Europe. Surprisingly enough, a convincing comparative description and

[395] Oerlikon Platz by Studio Vulkan, formerly known as Schweinguber Zulauf, was published in numerous journals. See also Weilacher 2006.
[397] See Pasquali 2008 on atelier le balto.
evaluation from such national or regional cultures of landscape architecture, and how they manifest themselves in recent practice still has to be made.

**Recent practice, time and its representation**

To what extent does the period of study starting 1985 and ending about 2014 reveal changing paradigms in landscape architecture, a different position of drawings and a new perspective on time? This chapter started with an overview of the engagement of landscape architectural theory and practice with the issue of time. The sometimes explicit but often implicit engagement revealed a complicated and dialectical relationship with the issue of time. Specific contributions of individual landscape architects and theoreticians were given, such as those of Repton, Halprin, and Lynch. But that did not result in a coherent theoretical framework in which to speak about landscape, representation and time. The Modernist era certainly made it difficult to focus on the dynamic character of landscape. In particular the debate between garden architects with their nurseries and the ‘new’ landscape architects, the independent advisors, symbolizes a detachment from aspects of time. When Modernism gave way, the growing influence of ecology in landscape architecture stimulated a new engagement with issues of time. And we should also note other aspects of time, not
necessarily connected to growth or ecology, such as in urban projects. There, the dimension of time is always close by, as phasing and long-term planning is required. In a broader view on ecology, environmental and climate issues asked landscape architects to be sensitive to the dynamics of water in particular—again an impetus to think about and also represent aspects of time. If control was essential in the Modern period, and therefore a preference for certain and fixed moments in time could be seen, today’s landscape architecture (and urbanism) have to cope with large uncertainties. That brings the issue of time to the forefront, and probably also its representation—the public needs to be informed. Recent practice, therefore, may be expected to have an opinion on the role of time in landscape, landscape architecture and the representation of landscape. Ironically, the decade in which the core group of offices started is innovative in many ways, but not particularly so when it comes to time aspects. A tentative explanation is the accent on an architectural approach, which was vital in the emancipation of landscape architecture, but left less room for change and dynamics. At the same time, the growing influence of ecology made it much easier to speak about uncertainty and dynamics. In terms of drawing, we see drawing being taken over by digital means. To some extent this supports the aspect of time, as it becomes more easy to replicate drawings in series, or to design algorithms that can produce the development of designs over time. Credits for integrating aspects of time into landscape architecture design and drawing should be given to the landscape urbanism movement, that entered the scene a few years later, supported by Corner’s 1992 essay ‘Representation and Landscape’. And yet in 2009 Torres detected a crisis in landscape representation, as ‘few responses to Corner’s call have been advanced within the landscape discourse’.

On a theoretical level, we could take Balmori’s 2014 *Drawing and Reinventing Landscape* as the most recent contribution to the debate, and more than that, as a rather complete statement that leaves no doubt about the importance of the issue. At the same time, particular events that transcend what appears superficially to be their topic, can express the transition towards a new approach. Such an event is the prestigious *Maaskant Award* that in December 2014 was given to garden architect Piet Oudolf. Hugh Maaskant as an architect funded this award in 1978, and architects dominate its list of laureates. But we find garden- and landscape architects in between. Landscape historian Erik de Jong—his 2008 *Landscapes of the Imagination* was cited often in this chapter—was asked to read the laudatio. De Jong argues that the choice of Oudolf is significant, and I share his observation.

The presence of landscape architects on a stage typically occupied by architects is meaningful in itself, as it (again) marks the emancipation of landscape architecture. Relevant here is the relation to plants. De Jong notices a connection with the earlier mentioned Doorenbos-Bijhouwer debate, as Oudolf is typically a nurseryman, and a designer of gardens and parks. His drawings represent this. As the nurseryman to some extent ‘lost’...
the debate of the independent advisor, Oudolf with his very explicit focus on plants and plant knowledge was seen as an outsider in current landscape architectural practice. De Jong sees this in the perspective of the Modernist period: Oudolf ‘is not an architectural designer who conceives design mainly in terms of space, line, function and mass, as was customary in the Modernist tradition in the second half of the 20th century’. [403] Therefore, this Maaskant Award makes us ‘rediscover a substantial tradition in garden and landscape architecture and art from the 20th century which we apparently had forgotten’. To some extent, the opposition as noted in relation to the Doorenbos-Bijhouwer debate ‘evaporates’ with this Maaskant Award.

It certainly is significant that both Dirk Sijmons and Adriaan Geuze were also given a Maaskant Award. Sijmons and Geuze both represent the strong transition in landscape architecture that was experienced after 1985. It is, in that context, interesting to put forward the name of Louis le Roy. Just like Oudolf he was an outsider in the generally accepted history of recent landscape architecture. This study elaborates on that at several points and suggests that the relevance of his work for the theory of landscape architecture asks for a repositioning of his work. Perhaps it is insightful to refer to the Zilveren Anjer award of the Prins Bernhard Fund Le Roy received in 1972. The jury considered that Le Roy, ‘next to being a teacher engaged in a free landscape architecture that adapted itself as a varied contra-world to cities. First experiments in his own garden and first projects in Heerenveen or elsewhere are both in their vision and their appearance more than refreshing. They seem to represent a breakthrough in ecology’. [404] Le Roy never felt comfortable with being seen as a professional, and may have

Fig. 3.54 Planting design for an exhibition at Palais de Tokyo, Paris, 2013 by Piet Oudolf.
been happy with the words ‘engaged in’ that did not qualify him as landscape architect, but it certainly is remarkable that the jury explicitly put him in that perspective.

Both the Maaskant Award for Sijmons, not to be seen apart from H+N+S, founded in 1990, and Plan Ooievaar that prompted its foundation, and Geuze, obviously connected to the rise of West 8, are strongly connected to what I indicate as the second emancipatory jump after 1985. For the issue of time and its representation this jump was highly dialectical. The success of landscape architecture during these years was certainly helped by its architectonic character and its new approach of representation, as can be seen so well in the work of West 8. The dialectic aspect is to be found in this: Due to the closeness to architecture and the dominance of inert materials, and due to the absence of plants and trees, the relation to time issues became shallow. At the same time, as is also manifest in the Parc de La Villette competition, the ‘empty field’ and the aspect of programming brought in new aspects of time, and in terms of representation this was often related to the diagram. The thematic fields in particular covered by H+N+S and other offices familiar with this approach, reveal a new interest in aspects of time. Their approach explores natural processes as guiding principles, and landscape architectural interventions that stimulate and invite change. Oudolf’s internationally acclaimed work based on plants also, though by other means, raises attention yet again to the issue of time.

This study assumes that time is an important feature of landscape and landscape architecture, and it also assumes that the presence of time in landscape architecture drawings would support the specific position of the discipline towards time. Chapter 4 will answer in detail if and how aspects of time are visible in current landscape architecture representation, but the argument in Chapter 3 learned that in terms of general thinking and writing the approach of time is dialectical. Perhaps we must conclude that the positive changes as mentioned in this paragraph do not express what is there, yet, but mainly present a challenge for today’s landscape architects, and in that respect it is apt to refer again to Mark Curry, and to state that a study on aspects of time in landscape architecture and its representation is ‘about time’. [405]