Drawing time

The representation of change and dynamics in Dutch landscape architectural practice after 1985

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4. On the representation of time in today’s practice and education

4.1 Drawing Time
As follows from the argument in Chapter 3, several qualities can lead us to denominate a drawing as a representation of time. Such a drawing should show the development of landscape over a span of time. A drawing that demands attention be given to the future landscape, at both specific and specified moments in time, also falls into this category. An important quality of landscape, due to its scale and changeability, is that it will be fully experienced only by moving around in time and space. Hence, ways of moving around in landscape can also count as representations of time. In fact, and this is the subject of the next section, one may also expect an association to the thinking about landscape: a representation of time also expresses a set of beliefs based on landscape as a time-based medium. Drawings as presented here are discussed in relation to the considerations behind these drawings. Interviews with designers, as reported in the next section, position this within a larger context.

This section presents about 37 drawings that explicitly depict time. [1] These drawings were selected from work done by offices participating in the interviews, and made in the period 1985-2015, with the exception of a small number made before 1985 deriving from earlier established offices. In some cases the reason for selection is obvious. In many other cases it is a matter of interpretation, as the depiction of time is not provided for in its own type of representation, and a drawing is seldom explicitly related to time in the way that it is given a title, described, and archived. Quite often such interpretation cannot only be determined via the drawing alone, but must take into account the narrative in which the drawing functions. However, to be selected a drawing must have one or more of the characteristics as described in Chapter 3. Some drawings seem to fulfill the criteria, but after close inspection are put aside, for reasons such as displaying only one situation, for example. This means that first and foremost we should read a drawing as a description of the cyclic or progressive movement of time. In terms of Lynch, we can furthermore speak about the length of time within which events as depicted by the drawing recur; the ‘chunks’ in which the time is divided; the degree of change that is suggested by the drawing, and the degree to which the cycles and changes are in phase. Zerubavel added another set of relevant ways of looking at it: is the drawing commenting on ‘straight or zigzag, staccato or legato’ understandings of the course of happenings? Very importantly in landscape and urban design is the question of whether the drawing allows for an understanding of landscape in ‘unilinear or multilinear’ terms – in planning and design we would use the word scenario. As mentioned, design drawings almost by definition speculate on progress, but in essence they could also depict decline. And, as a final point, the drawing can be read as a narrative - a plot with subplots. All these Lynchian and Zerubuvelian ways of speaking about time help to distinguish a drawing as a representation of time.

[1] Drawings were proposed by the selected offices as a response to my questions, or by me in preparing and processing interviews. Per office 10-15 images clearly related to issues in this research were chosen. The drawings presented here are selected from this collection of about 500 drawings.
Therefore, the selected drawings explored in this section are divided into two main themes: cyclic phenomena, for example the seasons; and progressive phenomena, such as growth. On a secondary level, drawings are grouped together because of their shared characteristics in terms of time scales -from days to centuries- and rhythm, in the case of recurring phenomena. As also covered by Lynch and Zerubavel, they range from very certain and recurring happenings to more uncertain happenings. \[2\] In parallel to such categorization with regard to aspects of time, drawings relate to certain thematic fields in landscape architecture, such as gardens and parks, or forestry, or urban open space. Drawings with a comparable thematic background are grouped together. In more concrete terms, this means that in the major category of drawings dealing with cyclic phenomena we move from the seasons towards the use of urban open space, which is less certain, towards water projects that deal with recurring events but have to face large uncertainties. In the category of progressive phenomena we move from stable growth, such as forestry, to a less certain evolution in nature development projects and in urbanism, ending in complex projects that are structured via if-then scenarios.

Chapter 3 also spoke about the drawing in these terms: an object with physical characteristics, meanings and other important qualities, such as the type by which it should be classified. A drawing generally has a title, as given by the author, relating it to a project, a year and describing what we see or should see. Insofar as offices gave drawings a title, I use this title. Sometimes drawings are categorized in types; often they are not. As such categorizations in types are not stable, I follow my own system here, as described in Chapter 3. Therefore, the type, being my addition, is given at the end of the caption. As a drawing is also a product of craftsmanship, one would like to be precise in giving information on the technique, the materials and the size of drawings. However, for several reasons this information is very often not accessible, or may be unreliable or irrelevant. Most of the drawings presented here are digitally made. This has consequences. As discussed in Chapter 3 it is difficult to speak about technique and material: Software programs? The paper it is printed on? Digital drawings have no specified size. They are made to be printed or screened at large size, but just as easily they may be presented in an A4 booklet. Here, all drawings are presented at A4 in a separate drawing section. Issues such as size, materiality, drawing techniques and drawing means are part of the discussion as it is relevant to the issue of time. Selected drawings here are discussed as individual pieces, and discussed in a more general reflection at the end of the drawing section. This again is placed within a larger frame of reference in the second section, which reports on interviews held with the offices that produced the drawings. Speaking, writing and drawing are thus connected.

### Cyclic phenomena

**Cyclic phenomena – the seasons**

The experience of the seasons is probably the most emblematic manifestation of time in landscape. A flowerage calendar by Anouk Vogel (2009) represents this experience. \[Fig. 4.1 / drawing 1\]. Seasonal change seems self-evident. Experts working with plants rely on their silent knowledge and do not necessarily need a drawing to test or verify a planting scheme. For laymen the phenomenon

of seasons is also rather obvious. At the same time, seasons are essentially a landscape phenomenon. Specialized knowledge on the seasons helps to distinguish one’s profession. Some landscape architects have silent knowledge on it, others, particularly those not working with plants, have not. In such cases, drawing helps to develop and test an idea. Visualizations are an obvious possibility as a means to display the seasons. Plans or sections raise more questions: Should a plant, shrub or tree be represented in a diagrammatic way, or in its natural quality with a texture and a form? If so, then it becomes a challenge to consider its appearance in April, August or November - the drawing must be precise on this. Although this drawing by Vogel has characteristics of a plan drawing, it is best to denominate it as a diagram. It is a typical example of what Tuft calls ‘small multiples’. [3] Often flowerage calendars are matrices in which a small photograph is related to the main flowerage period. On the contrary, the Vogel example is consciously very abstract. In an earlier version of the drawing colour was used, but Vogel later disposed of this. She considered it to be too much information. A comparable example by Vogt (2006) seems to combine elements of an elevation and a section. [Fig. 4.2 / drawing 2] Although the flowers are drawn in a rather natural way, this is in fact a highly abstract notation. We first have to understand the logic. It is not a section, but a ‘slice of time’, and by that we see the same arrangement of flowers in their seasonal development. This slight misunderstanding of what we are looking at is relevant; like other time representations one has to get used to the specific representational solution. Both the Anouk Vogel and the Vogt drawing are not exactly planting schemes: they must be seen as additional drawings, translating the technical planting scheme to our daily experience.

Both Vogel and Vogt divide their drawing in terms of months. Even if that may seem self-evident it is a rather abstract way of understanding a year in the garden. Generally, vegetation is understood through its seasonal rhythm instead of being classified by the month. atelier le balto (2006) translates the seasons in four images. [Fig. 4.3 / drawing 3] But again that is not as obvious as one might think. Many gardeners would want to distinguish between, for example, early spring and late spring, and the garden in early July is certainly different from the same garden in late August. In the work of atelier le balto seasonal appearance is taken seriously, especially as the office often designs gardens with a lifespan of just one year. Even if this drawing is drawn in a naturalistic way, and seems to have qualities of a visualization, I classify it as a diagram. It differs from the Anouk Vogel diagram in that it is coloured. The repeated presence of two human figures signifies that we have to understand the drawing on a more abstract level. The statement is that all seasons have equal value - an ‘emancipatory’ approach of the seasons that calls to mind the work of Laird. [4] The sequence of changes is that for which atelier le balto strives. In that sense, the idea of the seasons as four iconic moments is a simplification of what is in fact a film, or a narrative. The flowering calendar of Vogel could be read as 12 stills, whereas the sectional drawing from Vogt provides a more continuous set of stills.

A diagram made by Studio Vulkan (2009) refers to another cyclic phenomenon: that of harvest. [Fig. 4.4 / drawing 4] The project is about the agricultural cultivation of plants and shrubs for the production of energy. Some plants are harvested yearly; others take many years. Studio Vulkan uses the word ‘pulse’. This calls to mind the Zerubavel concept of density. [5] The drawing speculates

on a certain drama. In reality most pulses take a year or more. The
drawing in that sense functions as a compression of time and as a
rhetorical means. As discussed, drawings consciously steer the
response towards an understanding that fits the argument of the
designer - in this case to appreciate the different cultivations as
eventful.

With a drawing made by Lola (2010) a different subcategory of
cyclic time is put forward. [Fig. 4.5a-h / drawing 5] In a competi-
tion design for a square in Hannover the office mapped how
very different events over the year would fit in the space. A range
of options is shown. Lola uses the technique of a plan drawing,
but in an abstract way. One could look at it as a composite draw-
ing but it is best denominated as a diagram due to its reduced
level of information. Kristine Jensen, in a design for Stortorget,
Malmö (2009), concentrates on how the seasons differ in uses.
[Fig. 4.6a-d / drawing 6] Consequently, four drawings are needed
in which visualizations and diagrammatic plans are connected.
If we compare the Jensen and Lola drawings, two different things
are being put forward. Jensen shows what is expected to happen
in different seasons. This may even refer to what was given in
the program – there is some certainty in the drawings. Lola does
not show what is expected to happen, but what could happen.
In the same competition entry Lola added another drawing: A
diagram that provides vital information on the climate in Han-
soever throughout the year. [see Fig. 4.5h] To some extent this extra
drawing verifies the other, or gives it credibility. The optionality in
this Lola drawing is a clear example of a multilinear understand-
ing of time, and it is also a rhetoric drawing. The design does not
produce an ice skating facility, but it leaves the possibility open.
The drawing speculates on the desire to add this facility at some
future point in time.

Okra, in several projects, used a calendar of activities. This sup-
ports the idea that the design invites and allows for a very wide
range of activities. Since the early West 8 public space designs and
the 1983 design competition for Parc de la Villette, empty space
that could host all urban life has been popular. Consequently, one
can hardly consider the design for such a space without having
specific activities in mind. This gave rise to drawings that show
what can happen, as a way of promoting the design. In its Breidsc-
heid competition entry Okra (1999) developed a narrative about
urban space that could inspire a wide range of things to happen
– the choice of exactly which things is left open. [Fig. 4.7 / draw-
ing 7] The still shows a pavement that could act like a screen on
which, for example, the passing underground train could leave
a temporary trace. RAAAF (2014) represents a public space in a
very different way. [Fig. 4.8 / drawing 8] Here it is about a beach
in the harbour of Rotterdam. People are allowed to drive around
in their cars. The drawing registers a possible pattern of traces
made by the tyres. To draw it, two pencils were glued together
and moved by hand around the huge sheet of paper. The act of
drawing represents the driving around. In reality, car tracks are
wiped out in time and replaced by new ones, whereas the drawn
traces accumulate and inevitably result in a black sheet of paper.
Nevertheless, it is an interesting drawing experience. Intellectu-
ally, this is a very different drawing compared to the others in
this chapter. Although the act of drawing represents the driving
around, the drawing does not aim to represent a future reality. It
is all about the idea, and even if the project were never to exist in
reality, the drawing still allows the idea to be communicated, an approach that differs from other drawings that stick to a verifiable or seductive future reality.

Cyclic phenomena – certainty and uncertainty
H+N+S (2002) studied catchment areas for water peaks in the river Emscher. [Fig. 4.9 / drawing 9] The diagram relates regular water peaks to rare high water peaks and identifies the availability of empty space to store both. Water peaks as cyclic phenomena vary from a rather certain repetition to infrequent and irregular extreme ones, the latter often being dangerous. For Dutch offices such as H+N+S, this theme has been present in their portfolios for a long time. From an international perspective however, it is a fairly recent challenge for landscape architecture, and even more so as it is not only a safety issue but also a starting point for the design. In this case the designer draws spaces that can have a wide range of appearances and uses, but which at some point may be filled with water. Here the capacity of the designer to represent time is quite essential. The drawing functions as a space to experiment, to test and to verify. To claim silent knowledge on water issues would be unconvincing. The designer integrates expert knowledge and verification. Today this would probably be done on the basis of very reliable GIS data and computer aided simulations. To get to grips with the system at work and to understand such systems, it is necessary to embed the design in the real topography. Hence, maps are important. To explore these issues, one has to calculate using a specific set of local data for relevant periods. With regard to engineering works, the design has to prove that it guarantees safety and accessibility. In many cases the interventions are debated heavily and within a team of technicians; it is possibly then up to the landscape designer to show that the designed landscape is also attractive. The catchment area may provide new space for specific biotopes that survive high water or that can flourish because no other regular use is permitted. Recently the theme of rainwater catchment in private gardens has received more attention, as in an example drawn by VPxDG (2009). [Fig. 4.10ab / drawing 10] Smaller and larger rain peaks will occur, as will heavy periods of drought. But their interval, length and intensity are uncertain. As part of garden design, such phenomena are a challenge. First of all the designer has to explore what will happen, given, for example, the surface of the roof. He will need expert information - at the least the local rainfall statistics. Yet equally important is the understanding of the owner of the garden. Not only does he have to understand the design as a good proposition, but he also has to be equally aware of his responsibility to keep the system working over time.

Vista (2004) uses aerial photographs to show extreme, and regular, river behaviour around the city of Zutphen [Fig. 4.11ab / drawing 11] Aerial photography reworked in Photoshop allows the future reality to be shown in a manner that comes close to visualizations. Again this is not depicting a regular cyclic happening, as extreme water peaks may not occur for years, but they certainly will occur at some point. The drawing provides for these probable situations. In terms of communication, this is a difficult task, as the public may not experience the visualized situation for years, and therefore may question the intervention in the landscape. An animated film made for a project of H+N+S (2008) also aims to show what happens if a high water peak occurs, and how this influences an area south of the city of Kampen. [Fig. 4.12a-d /
Part of the intervention is a so-called ‘green river’, which in normal situations is dry and only in case of very high peaks helps to discharge the river. Today, such an animated film could be more elaborate, and might more smoothly visualize the narrative. In this case it is probably better to speak of an animated drawing. [6] A difficulty of animated film is the nature of the medium, which is not particularly suited for use in a book or on paper, and landscape architectural projects today are often shown on paper. However, animated films can be considered to be a short series of stills. VPxDG (2005) produced six slides to show how, in a landscape with heritage quality, changes in seasonal water levels would influence the experience. [Fig. 4.13af / drawing 13] On the website, these stills are presented as animated drawings, or as a rudimentary animation. In fact, it does not lose its informational value when seen as separate slides rather than a film.

Progressive phenomena

Progressive phenomena – stable growth
The growth of a tree is a fact of life. Still, we often forget that a tree will grow. The Haagse Beemden project started at the end of the seventies. [7] It marks a transition in landscape architecture because of its close cooperation with architecture. Architecture was no longer leading. It was a collaborative project of designers that were more or less equal in rank. In such collaborations the architects apparently had something to learn about trees in order to understand proper distances between houses and the growing matter. This drawing by Buys & Van der Vliet (1979), an early example in relation to the period of study here, and for its time aspect perhaps one of the very few in this period, instructs the architect by showing the growth of a tree over time. [Fig. 4.14 / drawing 14] Oerlikon Platz in Zürich was one of the early designs in which Studio Vulkan (2001) tried to escape the strong tendency in Swiss landscape architecture for a finalized, neat landscape, and to strive for continuously changing designs. [Fig. 4.15 / drawing 15] Nevertheless, today the office evaluates the design as rather static. It did not provide many surprises, so recent designs take other paths. As a drawing, this one was published numerous times and is a typical example of what Goffi indicated as a ‘twinned body’: both connected with and existing independently of the project. [8] The Desvigne design for Greenwich (2000) also takes a forestry approach [Fig. 4.16 / drawing 16]. Starting with a large number of small trees, plantations are developed and thinned out over the years. Such drawings could, from an ecological perspective, be seen as displaying succession, but in the case of the Desvigne and Studio Vulkan project the development is entirely guided by management. Just as atelier le balto did with regard to the seasons, the Desvigne set of drawings portrays the message that there is not one final situation. There are stages, and these stages are equally important. It is interesting to compare this drawing with the earlier ‘animated drawings’. These were based on four to six stills that should be seen sequentially. Here, four drawings create a composite drawing in which we see all phases at once.

The dot and circle in this DLG drawing (1973, formally ascribed to Dienst der Zuiderzeewerken), also a very early drawing, is ambiguous. It could be understood as the projection of a span of time, in which the dot displays the tree at T=1, and the circle the size of the tree as reached in a particular year [Fig. 4.17 / drawing 17].
fact, it is irrelevant if, given the intention of its makers, the drawing should indeed be understood in this way. DLG, typically, is an organisation in which the way to read such a drawing is considered obvious, being implicit knowledge. Such implicit knowledge was also available on the side of the decision makers and the contractors, so that in this specific context no representation of time was needed, and apparently also not sought. One may ask how often this circle is understood as a means to read the passage of time in a drawing. The drawing lacks information on the year in which the intended size would be reached, and in that sense it is a debatable representation of time. My informant at DLG claimed that it should be read as a time scale of sixty years, and thus the time scale is implicitly available. VPxDG (2014) in this double section shows two relevant stages in a tree’s life: the young adult, and the aged, respected tree [Fig. 4.18ab / drawing 18]. In fact, the drawing addresses a secondary element. The iron structure protects the tree from grazing cows. For the young adult the iron cage is obviously oversized whereas the aged tree fits perfectly. This element becomes a means to read the growth, and a designerly solution to work with the issue of time. It calls to mind the granite blocks in the 7000 Eichen project of Joseph Beuys. [9] A drawing by Bosch Slabbers (1986) describes the evolution of a newly planted forest over time [Fig. 4.19 / Drawing 19]. To do so it needs to account for one hundred years, and is by far the most ‘time-consuming’ drawing. The forest is shown at 10 years, 35 years and then 100 years. The drawing belongs to an entry in the Bos na 2000 competition which was held in 1988. [10] Landscape architects were invited to think about forests in a new way, and include tree species, growth cycles and mixtures. This certainly was not commonplace at that time. In such cases drawings may be part of the overall communication, but primarily serve to gain knowledge within the design process. In terms of our current understanding, this drawing is rather technical and not very attractive. This marks changes in how drawings are perceived; it also identifies specific environments in which such drawings operated.

**Progressive phenomena – creating conditions**

Dutch landscape architecture has a very particular drawing category that I consider to be essential for its approach. This drawing by Lubbers (1998) is a composite drawing that contains four steps in one drawing - in this case represented in sections. [Fig. 4.20 / drawing 20] Step 1 is the situation as found, drawn as a diagrammatic reduction of the existing topography. Step 2 displays the necessary intervention: Small dikes are built. Step 3 shows what the intervention in the landscape produces. Rain is caught in between, and wetland nature development is stimulated, as shown in Step 4. The Lubbers drawing in Dutch is called *Aanlegprincipe* which could be translated as ‘constructional principle’. It is a deceivingly simple drawing. It is in fact a temporary situation, created as part of the building process, on the road to a final situation. It indicates the stable phase, as described by Roncken et al, mentioned in Chapter 3. [11] Time indications are not given, but there is an assumption that it should be read in terms of the way it would evolve in the year after building. The office of H+N+S has created comparable drawings in comparable projects. These drawings are remarkable in the sense that they display progressive growth, often associated with a long time span, but at the same time speak of a very short period, for example one or two years. It is mainly the initial development that is portrayed here. These drawings

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represent a strong conviction in Dutch landscape architecture: Landscape can be made over time, by applying the right initial modifications, and by waiting for the evident things to happen. So these drawings do not only depict time, they also represent an essentially time-based approach to creating landscape.

In the Hondsrug project H+N+S (2009) shows how interventions in the water system would produce, in a series of steps, a different landscape [Fig. 4.21a-c / drawing 21]. What is interesting in this drawing is the choice of using a block diagram. For this type of landscape architecture not only is the visual aspect of landscape important, but also what happens ‘underneath’. In that sense, the drawing clearly tries to be useful in communication with all participants in the design process, and to be explanatory about the landscape. Landscape, here, is a machine-like system which must be understood. Only then can we decide what interventions will cause the desired effects, or show what the consequence of a suggested intervention might be. The machine metaphor in a diagram is known in architecture but here the background ideology is different and more pragmatic. [12] The drawing relates to the systems that are actually at work in the landscape, with or without the design.

Progressive phenomena – transformations and speculations
Thinking in time and drawing in time are parts of a rather strong tradition in urbanism. A karres + brands drawing (2010) displays stages in an urban transformation project [Fig. 4.22a-e / drawing 22]. The composite drawing is rather technical. It serves as a way to prove to the designers and the client that the program fits, and can be organized in space and time. Adjacent to such technical drawings visualizations are made to show what intermediate use of space this could result in. [Fig. 4.23] There is a relationship between interventions in natural systems and operations like a city extension, a major renovation or a transformation project. Urban operations generally take into account long time frames, ranging from 10 to 30 years. These time frames always need a division in phases to be able to organize the preparation, building and first occupation in an effective way. Often the drawings for such projects are also organized in steps of five or ten years. In such cases drawing is a way to find a mutual understanding within teams for the most effective organization of phases, and to communicate what can be expected. A drawing from Lubbers (1998) shows different possibilities within the same main idea [Fig. 4.24ad / drawing 23]. In a composite drawing by Kristine Jensen (2007) we see steps in time in three types of representation [Fig. 4.25 / drawing 24]. In this case, the direction of the development is clear, and in Zerubavel’s words unilinear. It is debatable whether this should be seen as one drawing, but since the designer presents it in that way, it must be understood to be a part of the rhetorical strategy.

Fig. 4.23  karres + brands landschapsarchitecten (NL), Lammenschans, study, 2011-2015. Visualization.
An interesting drawing series was made by Quadrat (1992). [Fig. 4.26a-c / drawing 25]. In these black and white drawings Quadrat positions a relatively small urban operation in a very wide context. It is a speculation on how a tiny intervention might provoke subsequent steps, or fit in the future development of its surroundings. What these will actually be is not known at the moment of drawing, but it is part of the intelligence of the designers to suggest some realistic and smart next steps. The drawing shows future potential, pleads for next steps and proposes that the designers have a say in such next steps. Here, drawing in time is an attempt to ascertain that the specific approach of a designer does not necessarily stop at this one project. Evidently, such a message also serves the office in economic terms. As previously mentioned, for some time Quadrat had had the practice of ‘inscribing’ their projects into the existing map (2006). [Fig. 4.27ab / drawing 26] By translating the project in the graphical vocabulary of such maps it is as if the project is already there, and also allows for further speculation on future steps.

In a drawing by Vista (1993) five stages show how the new industrial area of the Maasvlakte could develop. [Fig. 4.28a-f / drawing 27] The message of this series is that nature processes are invited to take part. The power of the sea is welcomed to create a creek in the new land, and this creek is transformed into an industrial harbour. Vista used a technique we have already seen in another example from the same office, which is aerial photography, and simulations based on that. At the time that these drawings were made, Photoshop was a very new technique and not widely utilized. Probably for that reason the designers observed that the drawings were sometimes understood as if the project had already been built, a phenomenon happening more often today because of high quality of visualizations. Desvigne in Bordeaux (2004) and New York (Governors Island, 2007) was engaged with large transformational processes. [Fig. 29a-d,30a-c / Drawings 28 and 29] Bordeaux is also an interesting case in terms of drawing. A long-term vision for a large area frames actual steps. But these actual steps are totally dependent on parcels becoming available. Realized parts of the design do have to be meaningful and functional as such, but they also have to support the bigger transformational process. On Governors Island a vast area was to be transformed into meaningful public space. Desvigne relies on agricultural processes of cultivating land as a means of preparing the ground for future use and a step-by-step creation of the new public space. The drawing depicts this process and shows the aim that the final outcome embodies all former steps.

Progressive phenomena – if-then scenarios
A Hosper design for an urban extension of the city of Almelo (2011) was made before the economic decline became manifest [Fig. 4.31a-e / drawing 30]. Yet even then, some issues had to be tackled, such as how to take public interest into account. Here, it is suggested that public interest is taken care of by means of a framework created with water and forest. If these structures are made rather early, they give a sense of place for the first inhabitants. The developer will focus on the revenues of the plan coming in when first houses are sold. It is the intelligence of the designer that provides a smart phasing strategy to serve both perspectives. The building process should not be delayed, and the general arrangement of functions should be stable. The first inhabitants
bring a new social dynamic. It has often happened that, although a certain public investment was foreseen in the early planning stages, it was blocked when the application came to fruition. [13] Drawings, in that case, have a role to play in making people aware of the intentions of the plan, what is reality at a certain moment and what is yet to come. Studio Vulkan (2011) proposed that the area of a future urban development be structured with planted zones. [Fig. 4.32a-d / drawing 31] These zones would give some sort of shelter to the new inhabitants and, as a pre-investment, make the area more attractive in the eyes of developers searching for a plot. [Fig. 4.41a-d / Drawing 31] Such green structures, however, should never obstruct the future development of the area. These drawings must strike a balance between attractiveness on the one hand, and unrestricted development on the other. Both Studio Vulkan and Hosper use the technique of a series of drawings to show development in time.

GROSS. MAX in 2010 won the Berlin Tempelhof competition. As the area was immense, not all parts were available for development and as money was sparse, phasing was considered necessary. GROSS. MAX created a drawing (2010) that can generally be read as a diagram. [Fig. 4.33 / drawing 32] From the viewpoint of choreography, it might be seen as a score. The drawing shows what is happening where and when, and who has to do something to achieve it. It is a complex drawing; it comprises several strands of information, and to read both the details and have an overview, it is best seen as a very large drawing. Complexity creates a serious problem for easy communication. Drawings that are too complex to be understood miss the point. But as Tufte argued, ‘clutter and confusion are failures of design, not attributes of information’. If high-density information is provided for, ‘control is given to viewers, not to editors’. [14] For the same project GROSS. MAX also made another drawing: a small animation of which a still is shown here. [Fig. 4.34 / drawing 33] The assignment requested that it be shown how the evolution of the green area could take place. GROSS. MAX proposed giving the area a boost with seed bombs, as this slide suggests. The narrative, referring to wartime bombing, was considered inappropriate, but as a representation it helps to illustrate the evolution of the area in ecological terms.

A drawing of Lubbers for the Strijp S project (2009) is an example of a very recent approach to developments in the urban context, in which grand uncertainty about future developments is met with temporary uses. [Fig. 4.35 / drawing 34] Here, an industrial area in which Philips was housed had been undergoing transformation for many years. During this process, economic perspectives were worsening. Apartments and office space were sold more slowly, and parts of the project were delayed or cancelled. Drawing in this case was employed by Lubbers as a means of organizing creativity: What can we do in such empty spaces? It is also a way of structuring the debate on promising strategies with the client. What is interesting here is the use of a catalyst. A temporary project that fills a gap has its own significance, but the best temporary project is one that triggers others to come and invest. Drawings in that context are often expected to have a seductive quality. Any drawing that proposes an attractive future development is part of the reality in which such a future will happen, or not. As Lubbers admits, this drawing is far from seductive, but it was the one that was created in order to fully understand all of the processes at work.

[13] The 22nd of October 2014 issue of the local paper Almere Dichtbij reported on fierce protests by inhabitants against the thinning of a strip of forest. According to the local authorities it concerned an inevitable maintenance intervention in this young forest, as intended in the design. Inhabitants succeeded in temporarily stopping the thinning.

In the late nineties, Vista produced a poster (1996) as a result of the exercise *Uit de klei getrokken*, a Dutch expression referring to clay soil. [Fig. 4.36 / drawing 35]. The office set up a matrix in which different starting positions in terms of water and soil are defined. As such, the drawing has a graphic quality, but is also instructive. The composite drawing is full of information related to what the office wanted to solve: Suppose we manipulate a series of parcels with different water conditions, and define different management approaches, what would come out? This is in fact a typical example of Zerubavel’s multilinear understanding of time. Water systems were discussed earlier in this chapter as cyclic phenomena, but sedimentation and erosion and the long-term rise of sea water levels are part of the progressive phenomena. The exploratory function for the designer itself is important, but an obvious goal is to put forward seductive ideas on how it would look and how it could be used. In this case visualizations are very fitting. We see this in a series made by RAAAF for Terschelling (2009). [Fig. 4.37af / drawing 36] They point out an important feature in time-based drawing. If we deal with natural systems, we more or less know the forces at work. At the same time reality can take many different courses. If, for years and years, no storm flood occurs, sedimentation starts to effectively defend itself against future floods. If, however, a large flood takes place, young dunes are swept away. Coincidence has a say, and there is a game-like optional element. Designers can outline the range of options but never know beforehand exactly what will happen. However, an essential part of landscape design is the assumption that this palette of forces can be influenced. The poles in the RAAAF drawing will inevitably influence sedimentation. These drawings promote the dialogue between human intervention and the natural surroundings. Another goal of drawings is to hand over knowledge, in order to gain support for design decisions. In that case, plans, sections and diagrams are needed. A set of drawings made by H+N+S (2010) played a decisive role in the planning process for the Afsluitdijk. [Fig. 4.38ab / drawing 37] Such large projects have to be cared for by teams in which several disciplines are working. The landscape architect in such a team could have a powerful position simply by making drawings. That may vary from showing the consequences of what has been discussed, to revealing new options and finding an agreement: ‘Is this what we want’? In such situations the act of drawing itself is important - it draws attention. Drawing materials that enable live drawing and quick work are essential for success in multidisciplinary teams.
Fig. 4.1 Anouk Vogel (NL), *Lace Garden*, Amsterdam, realized, 2009.

Diagram.
Fig. 4.2 Vogt Landschaftsarchitekten (CH), Home of FIFA - The Game of Continents, Zürich, realized, 2005.

Diagram.

**Africa: Savannah**
The landscape is distinguished by wide-open spaces and low-growing vegetation. Large solitary trees and small groups of trees with broad, umbrella-like overhanging crowns create islands of shade. Brightly coloured perennials with varying leaf forms along the periphery display the rich variety of African vegetation.

**Asia: Flowering Grove**
Sparse, terraced groves create a diverse landscape with alternating clearings and shady areas. An umbrella of large trees with delicate, light-coloured leaves spans loosely arranged groups of small trees with white, pink and violet blossoms. Large-leaved perennials with delicate blossoms pick up on the soft tones of the flowering trees. In autumn, the intense red of the Japanese oak trees provides a colourful accent.
Fig. 4.3  atelier le balto (DE), Ambassade de France, temporary garden, Berlin, realized, 2006. Diagram. Drawing by Marc Pouzol.
Fig. 4.4 Studio Vulkan (CH), *Energieberg* Hamburg Georgswerder, competition entry, 2009. Diagram.
Fig. 4.5a-f  Lola landscape architects (NL), Marstallplatz Hannover, competition entry, 2010. Overview of development options. Diagram.
Fig. 4.6 Arkitekt Kristine Jensens Tegnestue (DK), Stortorget Malmö, competition entry, 2009. Composite diagram.
Fig. 4.7  OKRA landschapsarchitecten (NL), Breidscheitplatz, Berlin, competition entry, 1999. Still from animated film.
Fig. 4.8  RAAAF (NL), Free Zone, Celebrate Mobility, Maasvlakte Port of Rotterdam, realized, 2014. Drawing by Kasper Jacobs. Simulation of tyre pattern.
Fig. 4.9 H+N+S landschapsarchitecten (NL), Water catchment in the valley of the river Emscher, study, 2002. Composite diagram.
Fig. 4.10ab van Paridon x de Groot (NL), Rainwater catchment in private garden, dry situation with pond and peak situation, study, 2006.
Sectional perspective.
Fig. 4.11ab Vista landschapsarchitectuur en stedenbouw (NL), Bypasslandschap Stedendriehoek, regular situation and peak situation, study, 2004. Simulation in aerial photograph.
Drawing 12

Fig. 4.12a-d  H+N+S landschap-sarchitecten (NL), Bypass Kampen, Kampen, study, 2008. Stills from animated film.
Fig. 4.13a-f  van Paridon x de Groot (NL), Water Storage in Nieuw Wullen - Laag Raven, *Nieuwe Hollandse Waterlinie*, study, 2005. Stills from animated film.
Fig. 4.14 Buys & Van der Vliet (NL), Vergelijkingsschets Haagse Beemden, Breda, plan 1979, realized. Explanatory sectional drawing.
Diagrammatic plan drawing showing four points in time.
Fig. 4.16 Michel Desvigne paysagiste (FR), Greenwich Millennium Park, London, realized, 2000. Plan drawing showing 4 four points in time.
Fig. 4.17 Dienst der Zuiderzee-werken, Planting scheme Breezand-dijk, realized, 1973. Plan drawing (detail, photographed from col-
Fig. 4.18ab  van Paridon x de Groot (NL), Natuurderij Keizersrande, section of path and protection for young tree, realized, 2011. Section, diagrammatic section.
Fig. 4.19 Bosch Slabbers (NL), Bo na 2000, competition entry, 1986. Composite drawing with diagrams showing 9 points in time.
Fig. 4.20 Buro Lubbers (NL), Plan-nen zonder eindbeeld, Barendrecht, study, 1998. Sectional diagram showing 4 points in time.
Fig. 4.21a–c H+N+S landschapsarchitecten (NL), Landschapsontwikkelingsplan Tynaarlo, study, 2009. Sectional block diagrams showing 3 moments in time.
Fig. 4.22a-e karres + brands landschapsarchitecten (NL), Lammenschans, study, 2011-2015. Plan diagrams showing points in time (selection).
Fig. 4.24a-d  Buro Lubbers (NL), *Plannen zonder eindbeeld*, Barendrecht, study, 1998. Diagrammatic plan drawings showing 4 points in time.
Fig. 4.25  Arkitekt Kristine Jensens Tegnestue and SLETH Architects (DK), Hornshøj, study, 2007. Composite showing 4 points in time.
Fig. 4.26a-c  Atelier Quadrat (NL), Masterplan Piet Smittenbein, Rotterdam, study, 1992. Diagrammatic plan drawings showing potential development over time.
Fig. 4.27ab Atelier Quadrat (NL), Herstructurering stadshart Amstelveen, realized, 2006. Insertion of designed intervention in standard map.
Fig. 4.28a-f Vista landschapsarchitectuur en stedenbouw (NL), Development of Maasvlakte, Rotterdam, study, 1993. Plan drawing inserted in aerial photograph, 5 points in time.
Fig. 4.29a-d  Michel Desvigne paysagiste (NL), Bordeaux Rive Droite, Bordeaux, design 2004, in realization. Diagrammatic plan drawings showing 3 points in time compared
Fig. 4.30a-c  Michel Desvigne paysagiste (FR), Governors Island, New York, competition entry, 2007. Plan drawing, 3 points in time.
Fig. 4.31a-e  Hosper landschap-sarchitectuur en stedenbouw (NL), Waterrijk, Almelo, study, 2011. Plan drawing showing 5 points in time.
Fig. 4.32a-d  Studio Vulkan (CH), Sphinxmatte, Solothurn, realized, 2011. Diagrammatic plan drawings showing 4 points in time.
Fig. 4.33 GROSS. MAX. (UK), Park-landschaft Tempelhof, competition entry, 2011. Timeline or score.
Fig. 4.34 GROSS. MAX. (UK), "Park-landschaft Tempelhof, competition entry, 2011. Still from animated film."
### Realization

**Timeline.**

**Fig. 4.35** Buro Lubbers (NL), *Strijp R*, Eindhoven, study, 2009, parts in realization.
Fig. 4.36  Vista landschapsarchitectuur en stedenbouw (NL). *Uit de klei getrokken*, Haarlemmermeer, study, 1996. Timeline or score.
Fig. 4.37a-f Visualizations of possible scenarios in Terschelling study, RAAAF, 2009.
Fig. 4.38  H+N+S landschapsarchitecten (NL), Natuurlijk Afsluitdijk, The Netherlands, study, 2010. Two scenarios, plan drawings.
Reflection
The issue of time is explored in each thematic field in which landscape architecture operates, from gardens to nature development areas, from parks to urban extensions. In relation to gardens, representation of time is mainly associated with the need for the owner or the public to be informed, especially as designers observe that expertise on the role of time (flowering, growth of plants) on the side of the client is not as obvious as it was in former times. Forestry, water-related designs, and in some cases urban transformation involve expert knowledge. In these fields designers are forced to think about and draw time during design processes, and discuss that with their partners. Especially where there is potential for uncertainty, the role of the drawing broadens. Not only is a narrative presented, but it also serves as a laboratory for the designers, and as a means of verification. In relation to urban open space, drawings mainly show what could happen, over the day, the week and the season. In terms of Zerubavel we have to deal with ‘multilinear narratives’; depending on the conditions, very different happenings are possible, both at the same time and over time. Hooft and Vandoren, as discussed in Chapter 3, speak about a time range from $10^{-44}$ to $10^{26}$. [15] In this collection, a month is the shortest span of time and a century the longest. The first can be found in gardening, related to flowerage, and in temporary use of public space. The latter shows up in forestry and occasionally in designs for disaster prevention, such as coastal defence or peak storage.

Most of the known types of representation as given in Chapter 3 are present in the collection. But as stated before, plan, section and model are not in themselves meant to represent time. They have to be used in series to do so. Tufte coined this as the small multiple technique. [16] In some cases this small multiple technique is used to show the progression of time in its relevant steps. In other cases it helps to present a multilinear narrative. The Lola drawing for Hanover [Fig. 4.5af / drawing 5] displays several options for how the urban space can be used over time. This is certainly not neutral. Are these all options? What is it that they need to be realised? The drawing mainly serves to support a rhetorical argument, and as seductive information for the client and the wider public: See how welcoming this space is! The types of representation presented here are rather conventional; only in some cases are the borders of the system of types of representation challenged. I mention the Vogt ‘time slice’ [Fig. 4.2 / drawing 2]; the ‘slides’ from a (suggested) film as in the Okra, VPxDG and H+N+S examples [Fig. 4.7; 4.12; 4.13 / drawing 7,12 and 13]; the H+N+S sectional block diagram [Fig. 4.21 / drawing 21]; and the two Tempelhof ‘drawings’ (one is a still from an animation film) by GROSS. MAX [Fig. 4.33; 4.34 / drawing 32 and 33]. Some examples raise discussion on the boundaries of landscape architectural representation in a productive way. The two-pencil drawing by RAAAF is an example, and an important experiment in an attempt at coherence between the drawing technique and represented process [Fig. 4.8 / drawing 8]. As the drawing represents a very particular and rare situation, its applicability is not immediately clear, but as a lesson in correspondence between a drawing and what happens outside, it is telling. The Quadrat drawing for Amstelveen [Fig. 4.27ab / drawing 26] is not so much innovative, but relevant in a more theoretical perspective. Design drawings in general explore one’s own handwriting, in order to claim authorship. Here, consciously, the vocabulary of the existing map is used, to create an understanding of what the plan provokes in the ex-

isting reality. As such, that poses a question about drawings and their role in communication. The Lubbers drawing concerning Strijp [Fig. 4.35 / drawing 34] is the best example of the urgent need for innovation. It addresses a very relevant problem, and as an approach it is innovative, but as a drawing it does not help a professional or public debate, as also signalled by the designers themselves. A striking example of a total lack of innovation, but a renewed understanding of a drawing is given by DLG [Fig. 4.17 / drawing 17]. To understand a drawing of trees as representing a span of time by the dot and circle -as long as it is clear what year the circle represents- is both obvious and provocative. It questions the precision with which landscape architecture draws and reads its own representations.

These 37 drawings show a cross-section of how thinking about time and drawing time is present in the work of 26 offices as observed in 2012. The number of offices that cover the era before 1985 allow for preliminary conclusions. It seems safe to say that offices that started in the studied time frame 1985 - 1995 introduced drawings depicting time – albeit in a modest way, if compared with the sum total of drawings. Drawings made by these offices since their start do suggest a growing popularity, although the decision to include aspects of time in drawings is today still not a self-evident one, it remains a conscious choice for certain situations. However, the expanding technical possibilities help to stimulate the making of animations and series of images, and it seems that addressing several moments in time has become quite common. It is tempting to ask if this collection provides a complete overview. Have we seen everything? Do we have a reasonable insight now into the different ways in which practice up to 2012 represented time? The answer is yes we have, but answering this question is a matter of interpretation. Only a minor portion of the drawings shown here are explicitly linked to time by their title or other objective information. In some cases the office proposed that the drawing be understood as a representation of time, while just as often, it was I who proposed to the office that it could be looked at in that way. Interestingly enough, this was seldom a matter for discussion – the simple point was that the office had not looked at it from the perspective of representing time. Obviously, such interpretations operate in a grey zone. With a slightly different set of criteria, or a different application, perhaps some other drawings might have come into the spotlight. This is even more so the case as a tentative definition of a representation of time was developed during the research: Such a drawing should show the development of landscape over a span of time; demand attention to be given to the future landscape, at both specific and specified moments in time; or convey the experience of moving around in time and space. This emerging definition helped to omit drawings from the collection for reasons of not matching the criteria well enough. An outspoken condition of the weather suggests a specific moment, but without comparable representations (for example in winter, or in rain) it does indeed not match the criteria well enough. [Fig. 4.39]

The conclusion must be that there is no established system of drawing time. In Chapter 2, I mentioned that this selection of drawings can be related to about half a million drawings these offices made during the period of study, confirming that the representation of time in drawings is, in quantitative terms, marginal. Another conclusion is that landscape architecture does not em-
Fig. 4.39 Visualization for Oostervaardersplassen, new entry building. RRog stedenbouw en landschap with ZECC architecten, competition entry, 2010.
ploy a shared vocabulary on time aspects. However, thinking of Zerubavel and Lynch we can see glimpses of such a vocabulary. Several terms as used by Zerubavel can be traced in landscape architecture drawings. For example the harvest drawing of Studio Vulkan [Fig. 4.4 / drawing 4] plays with the ‘staccato/legato’ couple. This drawing underlines the fact that a drawing can suggest a certain density of event and create dramatic expectation - even if that may be a bit exaggerated. The drawing is very implicit of its own ‘constructed narrative’, and its ‘plot’ (who exactly is doing what, and at what moment), but most of the drawings can be discussed in that context. In some cases, like the visualizations of RAAAF for Terschelling [Fig. 36a-e / drawing 35], the images express a multilinear narrative, though in itself the reader would need more information on why, how often and how long certain ‘paths’ in the narrative would happen. In other cases, for example Quadrat’s drawing for Rotterdam [Fig. 4.26a-c / drawing 25], the narrative is consciously of a speculative nature. The drawings explore the possible next steps, provoked by a landscape intervention. It is telling that the word ‘decline’ can hardly be found. Even if worries about the state of landscape are to be easily found in landscape architecture debates, in design drawings landscape architects do not engage in decline, and concentrate only on progress. But as Zerubavel claims, often ‘historical plotlines are extrapolated to imply anticipated trajectories’. [17] To put it in other words, landscape architectural plans react to, or are rooted in, real or expected decline. Urbanistic drawings often fit within multilinear narratives. They belong to designs that operate in contexts that are not stable. Landscape architectural plans are often structured as scenarios, or as options. In narratives one would expect certain clarity about who or what is causing either one or another road to be taken. The drawings as shown here are not clear on these issues. They merely suggest the existence of several options or scenarios. Accompanying text can help to clarify the mechanisms at work, stressing again that a drawing is both an individual object and a necessary part of a larger argument.

For several of the presented drawings, the means of presentation is important. Some drawings, in their original form rather large, hardly hold their quality if reproduced at A4 [Fig. 4.8; 4.33; 4.36 / drawings 8, 32, and 35]. Obviously, all drawings that are simultaneously, or primarily, seen as animation [Fig. 4.7; 4.12; 4.13; 4.33 / drawings 7, 12, 13, and 32] function differently on paper and on screen, although organizing them as different pages in a book allows for a certain control over what the reader sees at any one time. We could also relate this to the technique of a flip book, in which animation and book formats merge. Some drawings only hold their quality if seen at a very large scale [Fig. 4.8; 4.33; 4.36 / drawings 8, 32, and 35]. In cases in which a drawing comprises small multiples, it is of relevance whether the designer wants to control the entire composition. Some drawings are examples of small multiples [Fig. 4.1; 4.3; 4.16; 4.20 / drawings 1, 3, 16, and 20] that are grouped in a composition, or a composite drawing. In other cases the individual drawings are to be rearranged in new situations [Fig. 4.5af; 4.28ae; 4.31ae; 4.37ae / drawings 5, 27, 30, and 36]. This confirms that an interest in the representation of time in landscape architecture drawings also introduces a debate on the nature of presentation in landscape architecture.

4.2 Thinking about time

The drawings as presented in 4.1 can be seen as objects which might be studied in their own right, but in many cases information on their background would be very insightful. This certainly applies to the issue of time, as that is generally an implicit part of the drawings. In general, drawings are part of an argument that is structured by text. This text could include information on time aspects, but more often that would be information for the client or for the public, and would not cover the considerations the designers had in making their drawings. In this study, interviewing is chosen as a tactic to collect opinions, explanations and considerations. [18] Chapter 2 elaborated on the background to the methods involved. The result of the interview section of the project is a book with reports of conversations, and an analysis of these conversations. Here, a condensed report is given.

Interviews enable the exploration of the world behind drawings. What were the considerations of the designer while making the drawings, and more specifically, with regard to aspects of time? Decisions in designing and drawing are always made within a particular context. This context is an amalgam of professional convictions, social beliefs, ideas on organization, and also coincidences. In debates, lectures or written works designers may give insight into the thinking that created the conditions for drawing and designing, but in general this information is not available to us. Interviews as done here aim to map such thinking.

If time is essential in landscape, what then is the role of time in landscape architectural practice, and how does that influence drawing? This larger question has been refined into a series of detailed questions and handed over to the interviewees in a questionnaire. [19] If time plays a role in projects, would that be reflected in drawings? Would that be in sketches during the process and/or in presentation drawings? Which representational techniques are preferred? The asking of such questions starts with a broader inquiry: What are your general associations with time in landscape? This is framed by questions on landscape architecture as a discipline, on drawing as a designerly activity, and on the office as an entity. Three hours of conversation, as was the average length, was sufficient for meandering through these topics to discover the important issues for each office. The result is a comprehensive report. [20] Chapter 2 previously described how these interviews are processed to look for, as Rubin and Rubin put it, ‘the individual concepts, themes, events and topical markers that speak to your research question’. [21] By that, we ‘read’ the larger narratives underneath the thousands of statements. In fact, the rich material produced in this research could nurture quite a number of such narratives. Here five narratives are presented. From a first narrative about the general role of time we move to a second narrative built upon opinions on the representation of time, thus revealing the importance of drawing, representation, and designing. Should landscape architects draw time, and if so, how and when? A third narrative is then on the operational side, presenting the client as a central character, and the project as a crucial organizational entity. This is followed by a narrative that tries to detect, insofar as the issue of time relates to certain assignments, certain periods or certain opinions on landscape architecture. The last narrative maps the starting phase of the offices of the main group around 1985. [22] As argued earlier, statements in these interviews are connected to offices rather than individuals, and in general they are paraphrased. In case of

[18] A list of interviews is added in Appendix [1].
[19] An example of a questionnaire used in this research is added in Appendix [2].
[20] This report is available as hardcopy in the archive of the author.
[22] In case of quotation, the original Dutch text is given in a note.
quotes, a reference refers to the specific interview. The entire list of 26 Dutch and Northwest European offices and informants is to be found in Appendix 1. Note that names of offices in this chapter are shortened for practical reasons, but follow the spelling and formatting as used by the offices themselves, hence atelier le balto and GROSS. MAX.

No landscape without time
French landscape architect Desvigne, one of the Northwest European offices participating, puts it very plainly: ‘As soon as you plant a tree you deal with time.’ [23] Time is an implicit aspect of landscape, but very present. As Lola observes, once one starts listing in which assignments time plays a role, one can hardly exclude any project. atelier le balto states that all projects in the office are about time – the topic does not discriminate. Working with vegetation, as atelier le balto always does, simply implies working with time. Yet even if the issue of time does not seem to be so distinct, once architecture comes into the discussion, it is. As Lubbers argues, it is the issue of time that marks a vital difference between architecture and landscape architecture. Plans of landscape architects only prove themselves in the future, as they first have to grow. During their growth period they are fragile, vulnerable to sicknesses, droughts, bad maintenance and vandalism. Such awareness influences the design. One starts to leave out things that are too fragile. However, according to Lubbers, it is not only landscape architecture that has a strong tie to time: Urbanism shares that connection, especially today. Hubert de Boer has the same thought, albeit put into different words. Just as architects, De Boer states, you design something by drawing, but unlike architects you only know how it will look in due time. Bosch Slabbers is convinced that landscape architecture only reveals its richness in the future whilst architecture often loses quality over time. Nevertheless, aspects of time are shared with architecture, as noted by Anouk Vogel and Lola. Weathering is the most obvious shared feature of the passage of time. But as Vogt adds, the idea of weathering in landscape is not easy to show - visualizations can tell a lot, but weathering is difficult to communicate. Desvigne observes that landscape architects have mixed feelings on the process of growing. Many see it as a nuisance. In his own perception it is a challenging aspect. Even if Desvigne confesses ‘to hate young parks for the anachronism between the ready-made furniture and the young trees’ he values the growing landscape. [24] Vista states that in forestry plans the juvenile phase often is neglected. But it is precisely that phase that is of great interest in terms of its dynamic power. Quadrat proposes seeing a newly planted avenue as promising the joy of future maturity - it expresses time in itself. Vogt, in some of its projects, densely planted some very small trees. As a consequence, many small trees will die - a natural process of thinning out. Although Oerlikon Park [Fig. 4.15 / drawing 15] became famous, Studio Vulkan confesses not to like the park so much today, as it lacks surprise. The firm’s Solothurn project [Fig. 4.32a-d / drawing 31] is a reaction to that: Extremely small trees are planted very densely. This takes advantage of a forestry tradition. Planting is rather cheap, the process is self-maintaining and it provides more surprises. Lubbers has experienced that when working with robust plans, with masses of young trees, they are also beautiful in the first year. Desvigne notes that it is both tree growth and strategic design that causes

[23] Interview with Desvigne, June 2011.
[24] Ibid.
landscape to take a long time. Desvigne’s Bordeaux project [Fig. 4.29ad / drawing 28] is taking decades to grow as it is a development area; in some parts trees have already been planted, but the industry has yet to vacate other parts. In such cases a long-term commitment from the client is essential.

It is not only about trees. As Studio Vulkan argues, there are many other areas in which time is essential. From an archaeological or historical perspective layers of time are present in almost any site the office works on. Can information about former times be made visible? Can history be experienced? It is not only Studio Vulkan that considers this important. It is also very relevant for GROSS. MAX to work with layers of time; the office is inspired by French landscape architecture. Informant Bernadette Blanchon confirms that French designers, such as Alexandre Chemetov and Georges Descombes, have always been fascinated by ‘what was before and what comes after’. [25] What time scales are taken into consideration? If offices consider time in landscape, they implicitly think of a time span of 15-30 years, that being a time frame in which trees more or less mature. Public space is often redesigned within that time frame, and many buildings reach the end of their effective economical life in 30 years. This is nothing new, but it is interesting to note the decisions that designers make on that basis. Studio Vulkan is of the opinion that, given these rather short time spans, it is better to make something that is attractive in the first 15 years. Kristine Jensen sets the limits of the time scales: On the one hand, landscape deals with the long term scale of geology, while on the other it occupies itself with trends in the way that public space is used, and in doing so it follows fashion. The time scale of geology is very abstract, and therefore one of the tasks of landscape architecture is, according to Jensen, to make geological time visible in a way that people can relate to it. Geological time is also mentioned by GROSS. MAX, referring to the geologist James Hutton who established the idea of geological time in the 18th century. [26] GROSS. MAX sees a relationship between the Hutton idea of erosion and sedimentation with Fernand Braudel’s concept of the longue duree. The very long and slow cycles are both essential for an understanding of landscape. It is such an understanding that distinguishes landscape architects from architects. Informant Thilo Folkerts sees a strong sense for durability in German landscape architecture, which may be linked to the notion of the forest. The characteristic opinion in German landscape architecture is that things should last for a long time. To confirm the breadth of the subject, Vogt adds that time is a matter of perception and movement. As movement is an important aspect of time in landscape, the perspective of the walker is of great interest. In the tradition of landscape architecture and in land art the perspective of the walker is essential, but in fact movement using any means of transport should be included – as also becomes clear from a drawing by landscape architect Ken Smith [Fig. 4.40]. The exploration of most landscapes requires the viewer to move around, a way in which time in landscape may also be experienced. For that reason models, in Vogt’s view, are a very relevant representational technique for landscape - one can ‘walk’ around them and, with a tiny camera, simulate the movement through landscape. [Fig. 4.41]

It was remarked upon in some conversations, for example the one with DLG, that any design process in itself is an issue of time, and in landscape architecture many design processes last for several


[26] Geological time, also addressed as deep time, is developed as a concept by the Scottish geologist James Hutton (1726–1797). See also https://en.wikipedia.org/wiki/Deep_time.
Fig. 4.40 One out of six visualizations for Orange Council Greater Park competition entry, Ken Smith Workshop 2005. Each visualization refers to certain moments. Caption by the author: ‘Most anytime: A driver enjoys the park’s orchards and big orange hot-air balloons on the way to work’.
years or even decades – an awareness that was also visible in the work of Repton and Pückler Muskau. DLG refers to land consolidation projects, which take so many years that the agriculture system changes in the meantime, resulting in a realized situation that is immediately redundant. Many projects are therefore typically of their time, which is sometimes positive and sometimes negative – if times have changed and the project is no longer suitable. The fact that landscape takes so much time to develop, and is very much related to political discussion, restricts the artistic dimension. DLG is of the opinion that, for that reason, authorship has less significance in landscape architecture in comparison to architecture. As MTD observes, plan processes easily take time. MTD is already 20 years engaged in the Zuiderpark, Den Bosch. Interestingly, it is still the drawing of 20 years ago that guides the transformation today. [Fig. 4.42] Time in landscape also fundamentally relates to landscape ideology. VPxDG take an interesting stand, asserting that landscape is a product of power, and a landscape design should allow these powers to do their work. Processes of erosion, succession, appropriation and weathering should be welcomed and even consciously solicited. VPxDG not only addresses physical powers like erosion, but also the actions of inhabitants. In landscape, many people are in charge. What you leave behind as designer is the starting point for others. But this notion is full of tension: As a designer, one wants to have a say in the long term process and at the same time it is necessary to draw back and leave it to others.

Opinions or considerations, as reported here, in relation to most of the offices, are not laid down in texts. A rich world of thinking unfolds itself, but, as many of the interviewed designers men-

Fig. 4.41 Model-making as the core of the project atelier in the Vogt office, Zürich.

tioned, it is not a topic that is explicitly discussed very often. Only in incidental cases did sources such as those mentioned in Chapter 3 enter the conversation - Repton, Olmsted, Halprin, Corner or Balmori apparently do not structure the thinking of practitioners. Even if none of these interviewees is, referring to the Bijhouwer-Doorenbos debate, a nurseryman, knowledge of the growth of plants and trees and the change of landscape is considered self-evident. At the same time, however, the issue is considered to be essential in defining landscape architecture. That the inherent character of change and the need to grow is both a nuisance and a source of inspiration is telling: processuality, as Raxworthy put it, may be part of landscape, but how landscape architects deal with it is a matter of opinion.
Time and representation

‘Aspects of time can be displayed with any representational type’, states RAAAF, ‘the choice mainly depends on what public you want to reach.’ [27] Given that for many designers time is an obvious dimension of landscape, do designers think that aspects of time should be represented? If so, should it always be done, or only in some categories of assignments, or in some phases of a project? In general, the answers are ambiguous. Often, the necessity of drawing time is questioned. It does not always need to be done, but should be related to the type of assignment. Projects of H+N+S for example, often involve expert knowledge on ecological systems. Making a drawing is a way of exploring such systems. The practice uses drawings to test out how certain interventions would affect the landscape over time. However, Vista turns this argument around and states that a drawing is not needed for the designers themselves. The knowledge is already there, by observing and photographing what happens in time in areas of nature. So if a drawing depicting time is made, it is because the client or the public asks for it. Vista thinks landscape architects have enough knowledge to predict what will happen, given a certain starting point. Though, as Vista adds ironically, the final result will, without doubt, be different from your expectations, but even that is part of the knowledge one has. Studio Vulkan fears that visualizations of moments in time become too precise too easily. Such precision denies the fact that one cannot be particularly sure of the outcome of processes in which nature takes part. One could even question whether the designer should want to know at all, as there is also an element of surprise. However, in order for plans to succeed, the public must obviously be informed of its key features. This implies that there is a difference between an implicit body of knowledge and its presence in drawings that communicate with the public. RAAAF alludes to this communicative aspect: ‘If the message is centred about some sort of time mechanism, time should be represented. If not, there is no necessity to do so.’ [28] Hosper argues in the same way: A reason to show aspects of time would be the complexity of a project, as in their Wieringerrandmeer-design. In this plan a new lake is proposed, in combination with new housing. This huge project has to be phased in several steps, and every step must be able to function independently. In such cases, it is necessary to prove that each stage works smoothly. In fact both RAAAF and Hosper suggest here that drawings are instrumental. They serve to reach specific goals. There is no objective need to deliver representations of time. With regard to a park design that started almost 20 years ago, DS contemplates that the various changes over

Fig. 4.42 Masterplan for Zuiderpark, Den Bosch. by MTD landschapsarchitecten, 1996?. The drawing guides the transformation process upon today.

[27] Interview with RAAAF, March 2011.
[28] Ibid.
time the office had expected were not drawn. The drawing only gave an idea of the final stage. But as DS reflects, that was normal then; today one would probably approach it differently.

On the question of whether or not time should be represented, the answer often starts with ‘we would like to draw time, but...’. This often refers to the client or the public, and on the difficulty of representing time. Although the technical means are available -Chapter 3 has already shown this- such means come with specific problems. For example, the medium of film is spoken about as an interesting representational possibility. It is, however, seldom applied. Explanations range from ‘too costly’ to ‘lack of experience’. Okra in the early nineties had many technical difficulties with a film for their Breidscheidplatz competition entry [Fig. 4.7 / drawing 7], and in the end only used some stills. But this is changing. Production processes are lighter today, and Vogt observes that in recent years films are, quite simply, a requirement in many competitions. In its Tempelhof competition entry [Fig. 4.34 / drawing 33] GROSS. MAX used the medium of film to explain the development over time, and also to create a narrative on how this development could take place. In such cases, however, presentation is questioned. Film does not fit within the tradition of presenting drawings, nor in a book, so offices that are experimenting with film also experiment with ways of presenting ideas.

Relating the discussion to the design process, some designers speak about the time it takes to make a drawing. Whereas many designers see speed as the first advantage of computer drawing, Anouk Vogel chooses hand drawing because of having little time. In her opinion an A4 sketch with a black fineliner is much quicker than a computer drawing, and for most stages just as effective. [Fig. 4.43] For a project in Aachen, atelier le balto returned to its project site every year for five years. Only a rough drawing was made to start the project. Each year the necessary interventions were defined and inserted into the drawing. This questions the seemingly obvious idea that a drawing is a static object that, once finished, will not change again - drawings in that sense are instruments in a larger process.

Are some types of representations better suited to the job of depicting time? Visualizations may be the most effective in this respect as they are able to show the outcome of a design at a certain moment. At the same time, visualizations are spoken about with great reservation as they often suffer from superficiality. If such drawings must describe something about a specific moment, it should be done in a critical, precise and coherent way, and that is often not the case. Lola, Okra and Kristine Jensen discuss urban open space projects and the problem that visualizations in such cases mainly show options instead of concrete information on what exactly will happen at a certain moment. For that reason, visualizations are often combined with diagrams. Most offices give no indication of the year for which a drawing is made. In general, offices understand visualizations as describing scenarios that will exist after 15 years. Why is an image almost never given of the outcome after two or three years? The pragmatic answer of Hosper is that such an image would disappoint the client and the public. [Fig. 4.44ab] Are these images then anachronisms, given that image ingredients not belonging to the immediate design (like cars, other buildings or activities) are generally from the year the drawing was produced? That may be the case, but Hosper argues that if
one were to try to predict how we will play, move and live in 2030 -to reach an internal coherency within the image- this prediction would raise too much discussion in itself.

To show time is not the main goal of a plan drawing as a type of representation. In particular cases however, one can read a single plan drawing as pertaining to time. DLG underlines that a plan drawing of tree plantations [Fig. 4.17 / drawing 17] although mostly not read in that way, in fact embodies very specific information on time. The dot in the middle indicates the very young tree, and the circle the mature size - a typical example of implicit knowledge, thus demonstrating the awareness of the designer. Plan drawings have an immediate meaning in time when they are used as a series showing successive steps, a technique used by most of the offices. Quadrat, for example, sees it as an obvious technique in the context of urban transformation. This seems to contradict the previously mentioned statements that the representation of time is difficult. Apparently, such series are not recognized as representations of time. Coming back to the circle and dot, as discussed by DLG, the drawing does not make explicit which year the circle represents. DLG would take into account a time frame of 60 years. Compared to other suggested time frames in drawing, this is by far the longest one. But even the average answers, as mentioned, range substantially, from 15 up to 30 years. The role of the diagram as a type of representation seems to be growing, and certainly when related to the issue of time. GROSS. MAX refers to diagrams in the Tempelhof competition [Fig. 4.33 / drawing 32], but the practice did the same in other competitions. Schematic drawings that in the eyes of GROSS. MAX ‘could be called a diagram’ show what would happen over time and who would be responsible for that.

Fig. 4.43 Hand sketch in early stage of Cacticity project by Anouk Vogel, 2009. Black fineliner on standard A4 paper.
GROSS. MAX admits that such diagrams are very complex, but this is the likely reality of this type of plan.

As we have seen in Chapter 3, the theory of representation suggests that a certain set of drawings is essential to represent a plan, and a taxonomy of types of drawings helps to structure this. These interviews reveal that the aspect of time has an ambiguous position. In terms of roles of drawings, or phases in a design process, a distinction is made between the designer and the client: who needs a drawing of aspects of time, and when? At the same time, the inadequacy of theory is addressed. There is no clear framework in which to do it. Film may be promising but comes with difficulties, and there is also a problem to solve in relation to the issue of too much precision. It is telling that the score, introduced by Halprin as a necessary addition in 1969 specifically to address the aspect of time, plays no role in these interviews, although some designers, when asked, recognize some of their drawings as a potential example of a score.

The operational side

Both the client and the project are crucial when considering the issue of time; according to Studio Vulkan: ‘There are reasons not to be too outspoken on the theme of growth and dynamics towards clients as they prefer certainty above all.’ [30] A gross simplification of statements in the interviews would run like this:

[X]: Do you often make drawings representing time?
[Y]: No.
[X]: Why not?
[Y]: Because the client doesn’t pay for it.

Fig. 4.44ab Study for visualization by Hosper landschapsarchitectuur en stedenbouw. Estimated situation in 15 years’ time and estimated situation after only 2 years. The second drawing was made by Hosper for this research in 2011.
Even if this is a simplification, it is relevant as the figure of the client turns up surprisingly often in the interviews, and in most cases in a restrictive manner. Clients have, in the perception of designers, specific issues with which they are occupied - and these issues may differ from the designers’ priorities. The introductory quote reveals an interesting tension. Designers think in a strategic way; dealing with the client is a complex balance between delivering information and not delivering information. One could even conclude that designers think about dealing with the client in a manipulative way. Obviously, from the client’s perspective, another story may be revealed, but that is not under examination here. Dana Cuff comes to mind, as she located the client in ‘the centre of the dilemma’, when speaking about the dialectics between art and business. [31] The issue of the client is generally spoken about with certain awkwardness. A recurring complaint is that drawings related to time are not paid for. As Copijn states, ‘clients don’t ask for it, it takes time and time is money’. [32] As Lola and Copijn experience, clients are not very willing to accept such ‘extra’ ingredients in the offer. Vista is rather sharp: ‘Clients are opportunistic; they want it all - but when it comes to paying for it, it is not that essential anymore’. [33] All interviews took place in a time when the economic crisis was not directly affecting landscape architecture, but even then it was said that not being paid meant that it would not be undertaken. This in itself is a revealing argument. It is a general habit of designers not to please their clients exactly in the way they would expect. Most designers would not withhold a nice composition, even if the client is not paying for it. The client has to be seduced! But apparently, designers don’t trust the fact that clients would be easily seduced by the issue of time. As was explained already, the figure of the client transformed over the decades, from an individual to a company or an organization, and from private to (semi)-public. Several designers note that this caused a decrease in awareness of time issues on the part of the client. As Desvigne states, working with time is laborious, and the client first has to be convinced that this should be strived for.

Studio Vulkan learned to look for arguments that suit the client. Arguing that something reduces costs, supports ecology, or creates identity, works well. The office does not deny the opportunism in this: One needs such rhetorical tricks. In the best scenario, the trick is to combine this with the delivery of a nice design, as shown in a proposal in which Studio Vulkan introduced wooden boxes filled with earth and seeds. In due time the boxes fall apart resulting in soft ‘hills’ of earth and herbal vegetation - ‘Here, the much-cited processuality of landscape architecture has been reversed: the process begins at the apparent end – with decay’. [34] [Fig. 4.45] The cheap and immediate result for the short term convinced the client, and it helped the designers to get what they wanted to have in the long run. This reflects a paradox in the designer’s position: On the one hand the designer tries to meet the client’s wishes, and on the other hand he pushes the client towards what the client should wish for, in the eyes of the designer.

Some offices mentioned that the maintenance plan is a document that invites one to think about time. However, as it is stressed for example by Grant, it is not easy to be commissioned for this: ‘One should be happy when allowed to make the maintenance plan’. [35] Copijn confirms that often clients do not want designers to make the maintenance plan as it might extend the designer’s

[32] Interview with Copijn, April 2011.
[33] Interview with Vista, June 2011.
[35] Interview with Grant, February 2012.
influence too much. In Bordeaux, Desvigne had the chance to be involved in the maintenance of the area for many years, but this doesn’t happen very often. It mostly occurs in commissions in the public domain, as such institutions are used to considering longer time frames. atelier le balto is one of the only offices involved with the maintenance as well as the design, and this office indeed sees maintenance as an option to design with time. How maintenance relates to design, and how designers are involved in maintenance, is a larger theme that seems to be rather undressed. Vogt instructs the client on maintenance, as often time is not ‘allowed’ to express itself, referring to a project in which dying young trees and falling leaves were part of the narrative, and heavily discussed.

As several interviewees mention, the client today is a complex team representing many interests. There is often a grey zone between the client as the institution that pays for the job and a bigger group of stakeholders. The level of understanding of design problems will vary, and therefore so does the strategic approach the designer must take. For that reason the designer himself, in many cases, doubts if drawings about time should be on the table for discussion. Will showing time aspects clarify or confuse discussions on the design? Some designers fear the latter. Studio Vulkan has a special stance on this; the office boldly states that it doubts if even the designer himself knows enough about the development over time. If this is the case, it is best to avoid speculation. Another viewpoint is that of Quadrat. This office observes that drawings that are too explicit on the development over time take away room to manoeuvre, and such flexibility is essential for a good relationship with the client and the public. For that reason, Quadrat oc-

Fig. 45ab  Studio Vulkan, Toni Areal, Zürich, 2014. Two photographs displaying the development over time. Photographs Daniela Valentini.
casionally uses water colour; the atmosphere of such drawings is open and not decisive. As VPxDG experienced, in more complex projects the client and the public often do not have an overview of all steps in time, and can only be engaged if convinced by the immediate result of the first steps. Plan elements that take a long time to develop can demotivate the stakeholders. At the same time, drawings that inform on time issues in a clever way may contribute to awareness and a sense of urgency. One reason for making representations of time would be the need to organize the interventions in time. For Desvigne organizing the interventions over time is essential, as seen in the Bordeaux project [Fig. 4.29 / drawing 28]. Bosch Slabbers has a contrary statement: Clients will give a landscape architect -as an average- only one chance in a few decades to make a design for a certain place. Therefore, no design action should be postponed to the future: you do not have any certainty it will be executed.

Projects
In several interviews, and later additional conversations [36], projects were discussed as an expression of ‘the operational side’, the project being the organizational entity that encloses the entire range of brief, contract, design, decision and making. Specific projects were spoken about in order to examine how the phase of drawing and designing can differ from the phases of deciding, making and maintaining, or how the length of the planning process may introduce new elements that change the course of the plan. This is a very relevant topic in relation to time, as the entire debate on how to represent time in drawings more or less supposes a stable condition for the making of plans, which is often not the case. Lubbers’s Strijp S project is a good example of how design, drawings and reality can converge, and how the issue of time ‘escapes’ the drawing, also, as Lubbers notes, because the office had no examples of how to catch such processes in drawings [see Fig. 4.35 / drawing 34]. Lubbers was active in a series of smaller commissions in this former industry area. The housing development corporation searched for (temporary) initiatives, to attract new users. One of Lubbers’ commissions concerned roof gardens. These gardens were partly located at existing buildings that were to be renovated, and partly at new buildings. [Fig. 4.46ab]

[36] Additional conversation with West 8 on the Schiphol project, April 2012; additional conversation with Lubbers on Strijp, August 2012. Interview and field trip with Jack Hock, Trudo Housing Corporation, September 2012; additional conversation with Hosper on Zuiderburen, April 2012. Interview and field trip with Rein Bergsma (formerly at municipality of Leeuwarden), August 2012; additional conversation with Desvigne on Greenwich, February 2014; additional field visit with project designer Berdje Olthof and Ronald Buiting, advisor for forestry aspects, October 2012.
As the planned new buildings were postponed due to the decline in the economy, the project goal shifted from roof gardens to a temporary idea for the footprint of such buildings. Later on, the depth of the crisis once again required an update of the master plan, and the footprints were no longer kept. A temporary program lost its relevance. So the position of the landscape architect in this project is rather fragile: Most of these temporary proposals exist only in sketches. However, two roof gardens were built. In such a context, design drawings mainly provide a starting point, preferably with cheap and simple first steps, while having the capacity to mobilize bigger changes. As Lubbers puts it, such questions exceed the boundaries of the profession of landscape architecture as it is by necessity about entrepreneurship. At the same time, landscape architects are considered to be capable of contributing due to their capacity to visualize what could happen, and for their broad approach to public space. In 1994, Hosper was commissioned to draw the Leeuwarden extension, Zuiderburen, comprising 1500 houses. As was usual in the Hosper office, the project started with a brainstorm in which simple sketches were made. [37] [Fig. 4.47]

One of these early sketches helped to structure the process that ensued. Initial drawings were made by hand. Drawings with strong colours made with Carisma coloured pencils are clearly part of the Hosper vocabulary. [38] The Zuiderburen project represents a typical Dutch phenomenon: Urban assignments are taken over by landscape architects. The main idea is that the landscape architect provides a landscape setting in which the city develops. The building phase of an urban extension takes a long time. The idea of providing a landscape setting is an important landscape concept. A forest could be such a setting, as was claimed in the Zuiderburen project. In due time the forest gives the growing new city a landscape identity, and could accommodate future programs. In Dutch planning this was denoted as voorinvesteren, or pre-investing [see also Fig. 31 / drawing 30]. However, planting a forest in the early years, giving the small trees some time to grow before the first inhabitants would come, requires a stabilized plan in which no big changes will occur. One has to be sure that the fragile young trees are not harmed by building activity. Concerning Zuiderburen, in retrospect this ‘future forest’ turned out to be highly rhetorical. The narrative of this project has it that a pre-investment in landscape was made, but as Hosper also acknowledges the reality was quite
different. In 1995 the office produced a document on the forest to be planted, but the city of Leeuwarden chose to be pragmatic by keeping the northern part of the central forest as a soil depot until 2010; a decision that would overrule any drawing independent of its time aspects. [Fig. 4.48] The aspect of time for that reason is not as strong as the narrative of the project suggested. This reveals an interesting aspect: A project has a reality, but can independently serve as a precedent in its idealized form.

To some extent, these comments on projects are anecdotal. One could even say they are trivial, as such things happen when projects are designed and built. But particularly in the context of a debate on landscape architecture, representations and time this is crucial: we need to know the story of the project to be able to understand why drawings showing aspects of time were there (or not), and how they operated in relation to the reality of the project. Desvigne’s Greenwich Millennium Park, realized in 1998, is part of the regeneration of a former industrial area in London. About 20% of the area of 120 hectares was re-designed by Desvigne. The plan introduced an urban forest. It is not easy to convince clients that the long-term involvement of the designer is a necessary part of a project. It was expected that each new development stage of Greenwich would pose new design questions. The central drawing [Fig. 4.16 / drawing 16] suggests a steady development via several stages, valuable in themselves, towards the mature landscape. In reality, the office was not permitted to be involved in that process. For that reason, the actual development of Greenwich is only a partial realisation of the designer’s drawings. The H+N+S Noorderbos, completed in 2002, typically is a project in which the objectives changed substantially during the design process. The

Noorderbos was developed on a former water purification area [Fig. 4.49a-c, 50]. It is a mix of environmental regeneration, leisure facilities and forest. A sand pit to provide sand for a new road, and a main electricity transport system had to be integrated. The brief for the project changed substantially over the course of the years, and the design process lasted almost a decade. The aspect of water infiltration was taken out of the brief, for fear of pollution, whereas the aspect of forestry became more important. But perhaps the most interesting aspect of this project is that even if forestry is a time-based practice, hardly any drawing showing time aspects was made. As the office put it, expertise was present in the team, and was not necessarily needed in drawings. Visits to other forests and
Fig. 4.49a-c  Noorderbos as designed by H+N+S landschapsarchitecten, situation 2013. Photos by Johan van Grinsven.

Fig. 4.50  H+N+S landschapsarchitecten, Noorderbos project, 2001. Diagram displaying the arrangement of forest types.
exchange of photos guaranteed a shared understanding. A less obvious explanation for the absence of time drawings is the slight resistance in the team to explore time. As Berdie Olthof expressed it, landscape architecture is also about certain surprises. Here a starting point based on expert knowledge is created, enabling the forest to unfold itself. This unfolds, to some extent, as expected but at the same time is driven by its own dynamics. A drawn prediction would ‘spoil’ the surprise. [39] West 8’s 1994 Landscaping Schiphol not so much diverged over time from its original aims, but reveals how complex is the relationship between drawing and reality. The ‘landscape strategy’ -a characteristic novelty of this time- aimed to brand Schiphol as a green airport by giving it a rich green setting, while at the same time providing an adequate response to the permanent changes that occur at an airport. [40] [Fig. 4.51a-c] As Schiphol shows an endless number of leftover spaces, either permanent or temporary, it was proposed that such spaces would be filled with masses of young birches that would provide a green ‘haze’. The designers came up with Betula pubescens, to be planted densely and to be thinned out in three steps - if they were to survive the dynamics. [Fig. 4.52] The West 8 Schiphol project is a rather unusual one, for the office and for landscape architects in general. What is called the Schiphol project in fact is a series of projects -up to now numbering about 70- for which the basis was given in the landscape strategy. In current Dutch landscape architecture a long-term commitment of 20 years is quite exceptional. Although Schiphol is highly dynamic, it is exactly its pragmatism as commercial organization that supports West 8 to go on. In terms of landscape architecture, the project is relevant for its radical and strategic reasoning in which the permanent planting and removal of birches is key. The project is too pragmatic to require finished
drawings. In fact, the idea is so simple that many of the changes do not even require a drawing from West 8 at all. The necessary instructions can be given by the internal services of Schiphol using the guidelines made by West 8. If West 8 is involved in new Schiphol interventions, small documents suffice to communicate them to the client. The real estate department, which acts as the direct client, is experienced and there is no need for slick visualizations. Simple plans or sections and a reference to the core landscape strategy document are sufficient. These minimal plans do not form part of the public architecture debate. Therefore, almost no drawings are available that represent aspects of time. It is not deemed necessary; the knowledge is embedded in the project. The project has been documented very well in photographs, and with the exception of initial diagrams one could say that every change is drawn 1:1 in reality. So the irony is that here we have a project that is extremely engaged in aspects of time, made by an office known for its skills in representation, and in contrast with that, or even as a consequence, the actual project reality lacks adequate representations of time.

Paradoxality

Perhaps this is the narrative that fully reveals the paradox that is ‘drawing time’. It may be essential for landscape, it may even be the aspect of landscape that helps in distinguishing landscape architecture from other disciplines, but that does not mean that dedicating drawings to the topic is always appropriate, or really helps to control over time. In contrast to ‘landscape time’ there seems to be ‘project time’ - and this type of time escapes the designer’s control, and is thus not present in drawings. At the same time, designers acknowledge that hardly any project is not influenced by this ‘project time’ in which the aims of the project change, and new interventions have to be made. In relation to the client or the larger public, both the aspects of time and drawings of time seem to have a difficult position, as they may muddle up the debate, or restrict the designer’s room to manoeuvre. It is of interest that 150 years ago Humphry Repton expressed his thoughts on this in relation to the Red Books and how they performed as mediators between the designer, the client and the actuality. Today’s situation shows that designers are still very aware of this mediating between their work, the client and the public, be it with drawings or without drawings. These interviews suggest that certain implicitness -as Repton also acknowledged- is essential, and that apparently the issue of time falls in this category. At the same time we can refer to Olmsted. He made the issue of time more or less explicit in his texts. The making of one project book or one drawing at one moment would not suffice to guide the process. In that sense, the

Fig 4.52 West 8 Urban Design & Landscape Architecture, update Landscaping Schiphol project, thinning strategy, 2007. Diagram.
issue of time is part of a general strategy to manage a process, in which drawings are only one of the means, thus confirming that we must distinguish between drawings and texts or internal considerations. The absence of time aspects in drawings cannot lead to the conclusion that designers fail to take time into account.

**Types of assignments**

‘If one designs a garden, one certainly has to represent time’, states VPxDG, ‘as the owner needs to know that gardening is engaging permanently with change.’ [41] The type of assignment matters when speaking about depicting time. While VPxDG would say that drawing time in the case of gardens is essential, as the owner needs to be aware that when caring for a garden one is permanently dealing with time, Anouk Vogel however thinks that the growth of trees is so evident for every owner and user of a garden that drawings are not strictly needed. Gardens are mostly associated with private clients. Experienced garden designer Pieter Buys notes that generally these private clients are aware that things have to grow and take time, so there is no specific need to show that in drawings. If one can assume embodied knowledge on the side of the designer, and tacit understanding from the client’s point of view, no drawing is needed. Speaking about the garden in which the office is situated, Latz points out the beauty of the combination of hedges and roses, which are also extremely beautiful in winter. [Fig. 4.53] But one would not hand over a winter image of roses, as that in general is not considered very attractive. It recalls the observation in Laird’s work on the preference of summer in gardening.

Assignments related to forestry and water have an evident time aspect. Dutch offices like H+N+S, Vista and Bosch Slabbers often work in such fields. As Bosch Slabbers notes, the dynamics of high and low water are essential in such assignments – so one simply has to draw them. This is not only considered a service to the public, but also a means for the office itself to gain insight. Forestry is essentially about time. As Lola and VPxDG put forward, designing a forest is at the edge of regular landscape architectural knowledge and for that reason drawings are vital for developing and testing knowledge while designing. H+N+S states that in such projects the office itself also has to generate insight. This seems to be an important point. As such projects are at the edge of regular knowledge, both exploring time during the design process and communicating the aspect of time are essential. Apart from drawing, forestry forces designers to make decisive choices in terms of time. Vista, for example, has no affinity with the traditional forest planting strategy that relies on planting whips. In the eyes of the office, this results in rather boring landscapes. Succession, starting from scratch or helped a bit with sowing, is more dramatic and presents itself as something that is already part of the design.

In urbanism time is important in a different way. As Lubbers says, urbanism is strongly related to uncertainty. Lubbers speaks of urban ‘fields’ that have to be programmed within a stable structure [Fig. 4.24a-d / drawing 23]. In urbanism today the idea of a ‘final image’ or blueprint, describing what the plan will result in, has lost its position of importance. Different from previous times, there is no rigid final image anymore. Karres + Brands tend to use the word ‘scenario’ to describe an urbanists approach to how a rich main structure is designed, leaving open what is to be built.
Fig. 4.53 Garden at Latz office, Ampertshausen, winter image, 2012.
in between, and only defining some basic rules. Karres + brands works with the idea of ‘pioneers’: How to make an early investment that attracts other investors? The Lammenschans urban transformation project [Fig. 4.22a-e / drawing 22] contains a nursery in which trees for later phases are raised. The nursery will be a playground in the future. Vogt is also increasingly interested in integrating a nursery in its long term and large-scale projects, as it is a logistic challenge to provide trees of a certain size. We can relate this to the Bijnouwer/Doorenbos exchange, but even more to the theory of gardening as put forward by the likes of Reid in his 1683 gardening handbook The Scots Gard’ner, or the theory of forestry as handed over by Evelyn in Sylva or A Discourse of Forest Trees & the Propagation of Timber (1664). [42] Hosper frequently includes larger water bodies in its urban projects [Fig. 4.31ae / drawing 30], as water bodies can be realized quite quickly and have an immediate effect - in contrast with a forest, which takes a lot of time and has to be planted as early as possible. Okra, referring to its Croydon project, is aware that only parts of the plan will be realized soon, and many temporary solutions are needed. These temporary solutions should also stimulate the development of a subsequent part, and seduce investors. In fact, as Okra admits, plan drawings have limited meaning in such projects, as the future situation is unclear. [Fig. 4.54] Nevertheless, the office still relies on plan drawings, mainly as it feels it has no better way to do the job. Quadrat positions the thinking about time in a Delft urbanism tradition that looks at plans as growing entities. For Quadrat, it is very obviously appropriate to draw series of plans showing development over time. This could prove how a small intervention is able to respond to, or stimulate, potential developments in its surroundings [Fig. 4.26ac / drawing 25]. Quadrat refers to urbanist Van Emden, who stated that plans should always be positioned in their ‘possible futures’. [43] An urban plan should become part of the morphology of the city. For this reason Quadrat sometimes draws its plans in existing maps, using the graphic language of such maps with much precision [4.27ab; drawing 26]. This helps make the intervention graspable, and allows the consideration of the next stages that develop from the initial situation.

The many rather ‘stony’ designs for urban open space in the last two decades do not seem to relate to issues of time. DS and H+N+S indeed think that urban open space is the least interesting category when looking from the perspective of time, given the dominant hard surfaces. Other offices think differently. The transformation of urban open space is always done in phases. If one part works very well, it creates the conditions for the next part. A smart designer anticipates possible next commissions via the designs of individual parts, a strategy revealed by MTD. Urban open space is less stable than one would tend to think. MTD would plant a group of trees expecting that after 15 years they should fit in an eventual new layout. As MTD says, they should be planted to ‘resist change’. [44] So the paradoxical situation is that the stony public space is subject to renewal in a regular rhythm, and it is up to landscape architects to counter those dynamics with resilient design. Kristine Jensen puts it differently, but in fact arrives at a comparable conclusion: Urban open space is not meant to reflect time – it should be time-less. DS, despite stating that urban open space is not so interesting in terms of time, has also in reality a more layered approach: as the use of an open space changes quickly, and even the furniture is subject to rash changes, the pavement, being often the biggest investment, should be durable and resist quick changes. Okra

[42] See Reid 1683 and Evelyn 1664.
[43] Interview with Quadrat, June 2011.
[44] Interview with MTD, May 2011.
approaches the subject from another angle. Urban open space should be lively and therefore have many features stimulating a rich and varied usage. Different forms of usage during the week or over the seasons contribute to that richness. Okra thinks about space as if it were a stage to be programmed. Designing furniture that is ambiguous in its potential use helps to engage the public. A bench should not only be for sitting on, but designed in a way that it is also for sitting on, alongside other optional uses. This ambiguity creates a dynamic use of space. Activity calendars are a helpful representation technique. By speculating on possible uses via such drawings, designers aim to use them to seduce and effect enriching new usages.

When it comes to more planning oriented or strategic designs the issue of time holds another position. As Bosch Slabbers points out, such studies -indeed these are often studies in which text, maps, and diagrams are important- do not consider only one future endpoint, but different scenarios -in Zerubavelian terms multilinear narratives- to prepare for a political choice. The study should illustrate the consequence of choices. Describing and evaluating future prospects, they are by necessity about time. In such situations, drawing has another role. Lola recalls its Grevelingen project. The image of the preferred final situation would, without doubt, never be realized in the way that it was presented, but it was necessary to motivate people. One could make visualizations for in-between states but that is quite dangerous, as it suggests a rather obsessive idea of control. In their precision such images are an illusion.

In Chapter 3 roles of drawings were discussed. The difference
between drawings as being explorative and of use for the designer herself, or mainly as a communicative tool for the public, is stressed here, and, even more importantly, related to certain thematic fields. Urbanism reveals itself to be a very useful point of reference. This is underlined by the work of Kevin Lynch, but also of Frits Palmboom. Perhaps one could say that landscape has a predictable unpredictability. We are familiar with the whims of gardens and nature over the seasons, while the development of cities follows paths that are less familiar - perhaps Zerabuvel would describe them as staccato, and discontinuous. We are certainly in the realm of the multilinear narratives. Once again, in this context we see that drawings can be risky if they suggest too much precision and reliability.

The generation of 1985

‘The idea of a generation is fluid’, Lola states when asked about its position. ‘Offices renew themselves continuously because of people coming and going’. [45] The year 1985, the starting point for the period of study here, was a turning point in Dutch landscape architecture. How do offices look at this? It was certainly a vibrant time. West 8 made a jump-start: ‘In the early days you had to be brutal, but most plans were only statements on paper.’ [46] As Vista recalls it, a new spirit came from the many competitions that were organized in the Netherlands. For Vista, just as it was for some others, this stimulated the founding of an office. Competitions were not the primary reason; - it was evident that there was room for new offices. Just as importantly, it was a reaction to the professional climate in the preceding years. For Vista regional design was important, as was an interdisciplinary approach. Within the state service in which its founders worked, there was no place for such things. Landscape architects working in state service were often on the backbench, and now discovering that alternative paths were possible. The founders of Quadrat worked in the Rotterdam municipal planning agency, and experienced the growth in the importance of the landscape designers at that time. They stress the role Riek Bakker, co-founder of B+B and later part of the Rotterdam planning department, had in this. [47] In making quality guideline booklets, setting out the desired image and standard of the future landscape, landscape architects moved into a better position in between urbanists and architects. [48]

De Kern Gezond in Den Haag was experienced as an important new project. In retrospect Quadrat looks at this time as the start of a new era. The office started as a consequence of a reorganization of the municipal services. One cannot say the office, nor other offices that were the result of the same reorganization, replaced public services for landscape - it simply motivated the profession to having a more office-driven character. Buys & Van der Vliet recalls a jump in professionalism at that time, mainly due to the imminent arrival of the computer. But Van der Vliet also remembers how the Parc de La Villette competition was an event that had already seemed to mark a new era at that time. Copijn observes that in these years plan processes progressed to a more complicated level, with more parties engaged. As Copijn puts it, ‘in former times you spoke with two people, and now it’s with 20’. [49] This required more process organization, and more drawings. In economic terms this helped offices, but at the same time, this came with a loss of authority. Convincing the public and the client became more important, and landscape knowledge on the client’s side diminished.

[45] Interview with Lola, March 2011.
[46] Interview with West 8, August 2011.
[47] Interview with Quadrat, June 2011.
[49] Interview with Copijn, April 2011.
For Copijn urban open space in the eighties became a new theme, which the office relates to the influence of Riek Bakker’s work in Rotterdam. Karres + brands tends to see the second half of the eighties as the start of a new era simply because of the crisis that preceded this period. Sylvia Karres saw her portfolio change dramatically: going from plantations in the green parts of the city, before starting karres + brands, towards more urban open space projects. The founders of H+N+S all worked in state planning agencies. They note how the role of drawings changed. In their first years of professional experience, the drawings were simple – they were a means to build, and in later phases details could be worked out. After 1985 it became necessary to seduce with drawings. For H+N+S this coincided with the Eo Wijers competition Nederland Rivierenland that defined the start of the office. Okra and Hosper are of a somewhat younger generation. Both offices mention the strong influence of French park design in the late eighties, and the important role of a park exposition in the Dutch architecture institute in the early nineties, as it put the city park at the forefront of the debate. [50] For the founders of Okra, travelling to Paris and Barcelona was essential to distance themselves from the restrained Modernistic climate in Wageningen, where they studied, and to develop their interest in the rich formal language of a design as an independent value. The founders of Okra were deeply influenced by the interviews they had with Corajoud, Coulon and Chemetoff, forerunners of the new French landscape architecture. [51] Both Okra and DS in retrospect see how quickly they got substantial jobs, so that within only a few years they could celebrate built projects. [Fig. 4.55ab] DS deems it important to mention the role of the project developer. As the government retreated in the late eighties, much was left to the market. This new competing mechanism

[50] In 1991 the Dutch architecture institute NAI in Rotterdam organized Het nieuwe stadspark – opvallende vormen en pakkende scenario’s, an exhibition which was important for the debate on city parks.

stimulated the hiring of young offices, such as DS. In the eyes of DS, the city itself became more important in these years, also prompted by events such as Nederland Nu als Ontwerp, and by developments in Paris, London and Barcelona. [Fig. 4.56] Maike van Stiphout, founder of DS, speculates that she is part of the first generation for whom ‘urbanity’ got an independent value. [52] The dynamic evolution of architecture as seen in the work of OMA aided this development, and certainly the upcoming image culture did too: Van Stiphout recalls how architects became stars. DLG reads the transition in the making of drawings. Until the early eighties, the state service simply produced drawings with some supplementary text. Then the making of booklets started. This coincided with the growing influence of the general public. Previously, the designers had mainly discussed their designs with the engineers.

The description of 1985 as turning point in Chapter 3 is easy to recognize. Drawings, or representation, had a role in this, as several interviewees note, both as a facility that transformed under influence of other changes, but also as a driver for such changes. Offices wanted to join the rash and on-going development, and especially the acceleration new software brought. Presupposed effects of drawings on the client or the public became much more important: being seductive, for example, became a quality in itself. In that sense, drawings as a means to precisely (and verifiably) describe what is going to be made became more ambiguous, being added an implicit layer that, similar to advertisement, hinted at certain emotions or expectations. The office as a new phenomenon is very present in how designers understand this period, as well as the changing relationships with clients. Even if drawings are not explicitly discussed in this context, they have an important role - think for example of Gomart’s observation of large-scale design processes in landscape architecture offices: ‘the aim being to improve negotiations by linking various alternatives in unexpected ways’. [53]. Drawings are needed to do this, and needed in a smart way. The issue of time in these transitional years does not seem to be important for offices to enhance their profile, nor to answer questions from clients, and hence the issue is not dominant in their readings of this dynamic period. There seems to be a consensus that ‘a new era’ can be found in the changes in the profession, with relation to types of assignments, a culture of designing, and the organization of the profession, but none of these specifically as related to time. An exception must be made for the thematic field of nature development, for which Plan Ooievaar is a point of reference, and which does coincide with these turning years.

Reflection
Drawings in (landscape) architecture may sometimes be considered stable and the core business of a design, but as anthropologists note, text, speech, and gestures are necessary companions to drawings, and drawings originate from a process of thinking and experimenting. In that sense, text and speech as carriers of knowledge and opinions could be just as informative as drawings, but for various reasons as discussed in Chapter 3 drawings have an autonomous position. Considerations underlying a drawing are often not known. There is a lack of insight into how landscape architects operate with and without drawings. It is necessary that the interviews done here influence our reading of such drawings. The narratives confirm that drawings are made, corrected and presented with diverse considerations that we cannot see in the

[52] Interview with DS, November 2011.
Fig. 4.56 Study for extension of Almere as part of Nederland Nu als Ontwerp design event, B+B, 1987. Drawing by Jos Jacobs.
Interviewing is not a standard way of reflecting on design. In fact, it proposes in itself a way of looking at design both as a product and as a social activity. It suggests that information on designs, and design drawings, can seldom be found in design products only, but is part of an implicit body of knowledge and opinions. Interviewing, therefore, proved to be a very fruitful way to reveal how designers think about the many seemingly obvious aspects of their work. As was already stated in Chapter 2, it is not so much ‘truth’ or ‘logic’ that is being addressed here. This is about what apparently drives designers in their decisions. As an activity, designing has a narrative character, in which the way one is perceived and the way in which one presents oneself is important. These interviews tell us how designers want to be perceived in relation to the topic at hand. That is interesting in itself, but even more so if we can connect it to actual drawings, projects and realised landscape.

As a research tactic interviewing requires careful procedures. Not used to being interviewed in this way, offices often felt it necessary to add to or correct statements in my reports. Many designers struggled with the status of the interviews. If interviews seemed to suggest a theoretical position, it became important to discuss whether such a position should be recorded and made publicly available via this research. In general, designers have, or think they have, control on their presence in media, especially if projects are the vehicle for demonstrating these positions. The interviews certainly map the thinking of designers in general, but because a vast (metaphorical) landscape was covered, in many cases only an initial exploration of certain aspects could be made. Obviously, the subject would allow for an extensive second round of interviewing. What follows from this first exploration is that we may expect rich and revealing narratives arising from subsequent interviews, expanding on specific themes such as drawing materials. In terms of interviewing, it proved to be difficult to tap into deeper layers of thinking with regard to time. Does this tell us that current designers are not engaged in a more abstract or philosophical approach? Perhaps it mainly tells us that current designers in general are not inclined to offer an explanation of their professional activities from a moral or philosophical point of view. It certainly also follows from a focus in the interviews on daily practice, and on concrete products, such as drawings.

A recurring issue in the interviews is that the word time is experienced as too abstract and too wide in its range of meanings. Even if that is true, the interviews reveal that exactly this width is what comes to mind when speaking about time, which also became clear in some of the sources referred to in the previous chapter, especially in Lynch’s description of the topic. The interviews reveal a striking ambiguity on several topics. This concerns, for example, landscape architecture’s position on architecture. In many interviews architecture was a point of reference. One could use the metaphor of the elder brother to describe the view of the relationship: architecture as a discipline is more experienced, more daring and world wise. At the same time, especially in the decades covered in this research, architecture, and also urbanism, were professions with which to compete, to reach a more independent position and to conquer terrain. Often the issue of time was central for interviewees when the difference with architecture...
had to be marked. But so far that apparently has not encouraged landscape architects to invest strongly in this specific niche.

For most of the interviewed landscape architects drawings are seen as a means of communication, helping to present a project to the client and the public. There were many different interpretations of what communication via drawings means exactly, but there is a widespread agreement that this is an important goal of drawings. The opinions on the other role of drawing, that is exploring and testing the design in the office before something is presented publicly, were much more diverging. ‘Drawing is not necessary for ourselves – we have this knowledge already’ contradicts sharply with ‘drawing is an essential space for finding out how it works and if it works’. Such remarks were clearly related to different categories of assignments, but that does not solve the apparent discord. For example, most offices working in the thematic field of forestry and water are experts. For some offices, drawing is seen as essential, to enlarge, control and apply expertise, whereas for other offices drawing was considered unnecessary for the designers themselves, because of them being experts. Yet, on the question of whether drawing is necessary for informing the public, there is agreement. The interviews do, however, reveal that the central issue of representing time is looked upon with reservation. If the designer thinks it necessary, it should be represented, and if not, then it should not. This is contradictory in more ways. If we were to assess an average set of design drawings, especially in the context of presentations, their level of necessity would vary greatly, from undoubtedly necessary to superfluous, just made out of habit, as the large amount of visualizations as made today seems to be driven by habit more than being a necessity. In that sense the argument that time drawings should only be made if necessary, is not so strong. The second contradiction is in relation to the orientation on what the client wants, and what he does not. Attitudes of designers differ but it is evident, as demonstrated in preceding chapters, that designers often oppose or neglect or at least influence what the client wants. Therefore, if designers thought it important to include time drawings, the limited scope of the client’s requests would not necessarily have to dissuade them from producing such drawings. If time is considered inherent to landscape, how can it be that the representation of time is not an established part of the shared set of professional values, and that it is not very present in text, speech and drawing?

On the basis of the interviews I elaborated on a small set of projects that were looked at in the interviews as having a strong time-based character. My assumption was that they could be informative on the role of representation and the thinking about time. An important conclusion for this set of projects, but arguably for projects in general, is that the project reality is very ambiguous. Ambitions with regard to the issue of time were often not realized, and drawings representing that subject hardly turn up in the project documentation. What struck me was the recurring phrase ‘but this was a rather unusual situation’, to explain the lack of representations depicting aspects of time, the changing aims, or the nature of these projects in general. We could sort this out in two categories: projects being unusual, and therefore susceptible to changes, up to the point that a specific approach to time was never realised, and projects that, due to their unusual character, required radical solutions in terms of drawing - such as not drawing at all. An obvious conclusion is that there is no
immediate connection between a strong time aspect of a project and the presence of drawings displaying that. What is remarkable is the attention given to drawings in the early phases of a project, and the lack of drawings in the phase that projects are realized and implemented. Therefore we often face a divergence between design and reality. This starts with the fact that it is often difficult to define the formal design that was supposed to be built. In between a general approval of the design, contracting a company to have it built and finishing the building process, many smaller and bigger changes occur. Once the design is ready it keeps evolving as a consequence of unforeseen interventions in or around the project area. This was confirmed by a student’s investigation in the context of this research. Loes van Schie critically compared the designs and the actual realisation of five projects of the Dutch office Feddes Olthof and found that in most cases it was very difficult to do so, first and foremost due to the fact that actual reality differed substantially from the approved designs, but also due to the many small changes in the process of approving and contracting.

How do interviews, drawings and projects relate? In which cases can one strain of research be helped to better understand the outcomes of another strain? One of the obvious connections is the role of interviews in explaining the absence of drawings concerning time. In several interviews designers commented how their expertise made it evident for them that drawings concerning time were not urgent - as was the case for Vista, and also for H+N+S, for example in the Noorderbos project. A second interesting relationship is the existence of excellent time drawings, and the mismatch with the actual reality. Desvigne’s *Greenwich Millennium Park* project is the best example for this: as a drawing of time aspects the central plan drawing couldn’t be better, but the banal reality of the project meant that the office had no role in later stages of the project, and Bordeaux is preferred as the better example of a project in which time aspects are fully integrated. The same distance to a realised (and applauded) project can be seen at Studio Vulkan’s *Oerliker Park* project. Interviews also reveal how designers themselves read a drawing, or use it in a didactic way. Buys & Van der Vliet created a drawing ([Fig. 4.14 / drawing 14](#)) which was mainly intended to instruct architects on the growth of trees. Instructive in another way is the H+N+S-example of the Emscher project. Here the drawing is used as much to teach the designers themselves how the design will operate as it is as an explanatory presentation for the public. The discussion of the DGL-drawing and how to understand the circle and the dot teaches a reading of a drawing that is certainly not the only, and perhaps even not the most probable, reading of a drawing, and yet it is the way the designer wants to speak about it. Concerning drawings in an urban context, we can conclude that these drawings often show scenarios or options, but that in doing so designers follow parallel paths: one is to explain such scenarios in a neutral way as being possible, and the other to promote certain scenarios as being desirable, for example because they could have the potential to ignite certain future stages. Such considerations in general are implicit, but the actual drawings are certainly used as instruments to influence the debate. In that respect it is relevant to note how designers consciously choose particular ways of drawing. Quadrat and VPxDG refer to certain drawings as deliberately creating room to manoeuvre, for example by using watercolour, or drawing by hand as ways to make the drawing not too precise. [Fig. 4.57](#) These
Fig. 4.57 van Paridon x de Groot, hand-drawn report of interviews for Westflank Haarlemmermeer project, 2010. Felt tip pen on paper.
drawings are not technically time drawings, but they reveal how drawing, thinking and acting are connected.

Drawings are autonomous objects and at the same instruments in an argumentation; they are a reality in themselves and part of a larger set of considerations; they display craftsmanship and technical innovation; they are essential to manage design processes and yet can also disturb communication with the client and the public. The interviews provide overwhelming evidence that the representation of aspects of time is especially influenced by these ambiguous characteristics of drawings, and that time as an issue in landscape architecture design has an ambiguous position. Against this background we understand that despite technological progress and despite the growing attention for design challenges that incorporate time, the presence of time in drawings and the innovation of how to represent time in drawings is modest, even today.

4.3 Experiments

Between 2010 and 2015, during this research, 14 design experiments have been conducted. The background of these experiments has already been discussed in Chapter 2. Design experiments are consciously placed outside daily reality, operating within a controlled set of conditions. ‘Design experiment’ as a term is consciously chosen. Even if the nature of such practices might lead one to describe them as exercises or workshops, from the perspective of this research they are indeed experiments, in which assumptions were verified and new options were generated and evaluated. These experiments can be seen as a series of simultaneous happenings. The first experiment was already organized in 2010, at the very beginning of this research. Consecutive experiments integrated results from earlier experiments and reacted upon new material generated by the research, up to an ultimate experiment in January 2015, shortly before finishing the research. Because of varying conditions, experiments differed in length, size, level and focus. In terms of length, they varied from two days to three months. Three months is the lead time, including a starting lecture, preparatory individual work, an actual workshop after which students could elaborate on the material, and an evaluative meeting to discuss final results. In terms of numbers the smallest experiment involved six participants, and the larger ones 25-30. The level varied from bachelor students to PhD-candidates and young professionals. The most important difference for the progression of the research was in the way the basic question was posed. In some cases there was already an assignment given by the hosting school, and a set of predefined learning outcomes. In these cases I could introduce an extra layer to the existing module, for example via a lecture on the representation of time. It remained to be seen if this would result in a specific focus on aspects of time. In other cases it was unambiguously asked that aspects of time be considered and depicted. This evidently shifted the focus towards how to do it. Students in these workshops had already positively engaged with the issue, were informed on the intermediate results of the research and were confronted with clear questions with regard to final results.

Of these fourteen experiments, five are described here. The other nine, for different reasons, had no results that are of relevance
In the early set up of this research experiments were anticipated, but actual implementation had to be done along the way. Many practical difficulties influenced successful implementation, such as a competence level of the students that proved not to be high enough to overcome the general challenges of the design task at hand, and to arrive at an exploration of the issue of time. Therefore, some of the experiments did not arrive at coherent results. Even if these failed experiments were valuable as such and helped to improve subsequent experiments, I will only focus on five of the experiments here: [Fig. 4.58a-f]

- Kijkdoos [Diorama] / Autumn 2010 / Academy of Architecture Amsterdam. [55]
- Wachsen Lassen [Let it grow] / Summer 2011 / Technical University of Stuttgart. [56]
- Drawing Time Now! / Winter 2013 / Academy of Architecture Amsterdam. [57]
- Dancing Drawings / Summer 2013 / SNDO Amsterdam. [58]
- Højstrup Parken revisited / Winter 2014-2015 / Copenhagen University. [59]

These five experiments varied considerably, but common to all is the active search for the representation of time. What happens when we throw light on the aspect of time in landscape? In what ways can we represent aspects of time? In two cases (Drawing Time Now! and Højstrup Parken revisited) the research Drawing Time was the larger framework in which independent experiments were organized to work on these questions. The other three cases, and the experiments not discussed here, were at the invitation of schools, as these questions seemed to fit in and enrich the existing module.

Can we rethink representation, and particularly in relation to time? Already in the early stages of this research the work of Lawrence Halprin was studied. This introduced the *score* as a type of

*Fig. 4.58ab* Impression of design experiments Wachsen Lassen, Drawing Time Now! and workshop at École Nationale Supérieure de Paysage at Versailles.
Fig. 4.58cf  Impression of design experiments Wachsen Lassen, Drawing Time Now! and workshop at École Nationale Supérieure de Paysage at Versailles.
representation of the argument. It inspired a crucial thought: If it were true that the representation of time is hindered by the lack of a type of representation that is particularly well suited to that specific goal, would then the score as a new type help to overcome this barrier? In fact, as it has already become clear in the preceding sections, the existing system of drawing types allows for the depiction of time, for example using the technique of small multiples as mentioned by Tufte. It has also been observed that other disciplines offer a range of representational strategies that are effective in depicting time and may be applicable for landscape architecture, like animated film and comics. In the larger design experiments the score was presented as a potential and promising new type of representation, specifically suited to the depiction of time. As only a small number of existing scores relate to landscape architecture, it is mainly the idea of a score that could be handed over. It was necessary to explore what a score could be in practice.

*Kijkdoos [Diorama]* proposed to understand the diorama as an unusual presentational tool that invites one to depict landscape in unexpected ways. By its very nature, the diorama might suit the representation of landscape. Corner argues: The diorama places one in the landscape. A diorama has no specific capacity to display time but existing examples show that the diorama can do so very well, for example using slides, and in supporting the idea of motion. *Wachsen Lassen [Let it grow]* was aimed at raising the awareness of processes of growth. The organizers proposed working with dough, so as to confront the students very directly with growth and change. Students explored what they expected to happen, and how to notate this. Different conditions (for example the amount of yeast and sugar, or warmth) that would influence the outcome were tested and selected. Finally, students had to register in drawings how their experimental ‘design’ behaved.

*Drawing Time Now!* was organized as part of this research. In the assignment, addressing the transformation of a park in Amsterdam, aspects of time were very present. The design experiment started with a public seminar with lectures on the theme. In the assignment the score was proposed as a relevant option for displaying time, and the production of a score was explicitly asked for. A second representation of time, in any other form, was also invited. A formal definition of the score as a type of representation was prepared and distributed to the participants at the beginning of the experiment. *Dancing Drawings* was envisioned as a meeting of the architectural tradition of drawing, and notation in the field of choreography. The question was whether to use an existing choreography and notate this performance in drawing, or to prepare for a new performance via drawing. Due to the meeting of two fields of expertise the experiment was very much focussed on scores, and the use of drawing(s). *Højstrup Parken revisited* concerned the park by Sørensen that was encountered in Chapter 1. Students did a speculative reconstruction of the development of the park over its 50 years of existence. Speculative, as this development is only known in bits and fragments. I was not so much the true story that was recounted in this reconstruction, but a coherent and convincing account of how it could have happened, mainly meant to inform how we, in case of new designs, can speak about the development over time.

Evidently, these five experiments were very different in terms of organization, the programme, the site, the participants and more.

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[62] See also http://en.wikipedia.org/wiki/Diorama: ‘The word diorama can either refer to a 19th-century mobile theatre device, or, in modern usage, a threedimensional full-size or miniature model, sometimes enclosed in a glass showcase for a museum.’
That also counts for their results, varying from concrete objects in *Diorama* to individual drawings in *Dancing Drawings* and to a more general workshop outcome in *Drawing Time Now*; from individual to group work and from explorative sketches to elaborated (computer) drawings. Here I focus on the aspect of time as present in the results.

**Results**

*Kijkdoos and Wachsen Lassen*

*Kijkdoos*, an eight-week exercise that took place on Friday afternoons, explored plain, hand-made dioramas. Participants learned that using a diorama to present images aids the understanding of change in landscape, just as it is suitable for following a sequence of views moving through a landscape. One of the produced dioramas allowed for the insertion of new pieces of scenery, in the form of hand-made slides, and in doing so helped one understand how the design would change the landscape, as seen from one point of view. [Fig. 4.61ab / Exp. 1] A comparable diorama functioned as a low-tech slide viewer in which different views can be shown, representing a walk through the designed landscape. One very relevant diorama engaged with the specificity of landscape: The view was organized as a 360-degree panorama for one person, to be turned around while standing, providing a landscape experience. [Fig. 4.62 / Exp. 2] Another diorama abstractly tested the presence of sunlight in a new building during the day. This was explored by making small cut-outs in a model, using an external lamp, and photographing a series of images from the inside that register the change of atmosphere. [Fig. 4.63 / Exp. 3] *Wachsen lassen* started with a lecture on growth, time and representation, and an exploration of existing designs that engage in these themes. The actual workshop used dough as an unusual but suitable material that by its very nature represents and even incorporates growth and change. Teams explored how dough behaved, and how the growth of dough could be notated. [Fig. 4.64 / Exp. 4] In a second step specific interventions were tried out. Interventions ranged from adding colour, extra doses of yeast, or additional sugar, and stimulating growth using a heating installation. [Fig. 4.65ab / Exp. 5] One group put the dough in a closed box with a number of ‘chimneys’, speculating that dough would be pushed out through the chimneys and form a *Pilzlandschaft* or a ‘mushroom landscape’, because of the emerging forms. This group also kept the box closed until the evaluative session, to see to what extent the material degraded over time, a the relevant fact that landscapes also decline. [Fig. 4.66abc / Exp. 6] Groups developed a detailed observational programme, and on that basis a drawn forecast of the effect of an intervention. In the last step a final experiment was executed and registered very precisely in a more elaborate notation. In this experiment time was very present in the notations, but also as a pressing external condition that urged the students to act. The purpose of drawing here was to both register what actually happened, and to represent an intended result. The workshop was followed by an elaboration of the material, and an evaluation.

*Drawing Time Now!*

*Drawing Time Now!* was organized as an eight-day workshop, starting with a public seminar on the issue of time and representation. As this experiment was part of the research *Drawing Time*, several
aspects of the organization could be influenced in favour of valuable results, such as a public seminar at the start in which concepts of time and representation were discussed. Apart from that, participants were challenged to hand in an image or text on the issue beforehand on a public website, to stimulate an engagement with time and representation. Participants worked in groups from different disciplinary backgrounds and nationalities. Products here concerned a design for the transformation of a park, including, as was required, two representations of time, one being a score. This specific requirement often was not fulfilled, but still prompted a detailed exploration of potential representations of time. A first group relied on seeding, metaphorically and literally, to extend the park – a strategy for a future situation that by definition relates to time. One of the drawings was a timeline, which could also be understood as a score. [Fig. 4.67ab / Exp. 7] Two groups prepared a book for the final presentation. One group focussed on the change of seasons, another on spontaneous development. In both cases they used the idea of a book as a useful structure to organize and present their narrative, or put differently, to speak about time. [Fig. 4.68ab / Exp. 8] In a third example, the group wanted to create the park extension by new trees planted by park users. In that way, the park would develop over time. This group made an animated film, by drawing their plan as to how exactly it would evolve over time, and by photographing all intermediate steps. [Fig. 69ab / Exp. 9] Through this, both a final drawing was produced, being the accumulation of all subsequent steps, and an animation of the growth over time. One group had a rather different background, rooted in art and choreography. These participants were interested in how people, moving through the park, could change it as a consequence of their moving around. Drawings were made as a simulation of moving around and physically changing the ground. This was represented in ‘drawings’ made by folding and cutting, and by adding foldouts. Drawings were collected in a book. This book was presented as a performance, using a camera and flipping through the book. [Fig. 4.70ac / Exp. 10] The last group proposed a newly planted ‘forest’ in which trees would be planted over time. Their drawing follows this logic. If we read it from left to right, we experience time unfolding over 25 years, in steps of five years, and see, if we study the drawing attentively, the number of trees accumulate, and the individual trees grow to the point when they are felled and replanted. The drawing is stamped using a piece of eraser and pink ink. [Fig. 4.71ac / Exp. 11]

Dancing Drawings and Højstrup Parken revisited

Dancing Drawings was a very condensed two-day workshop with only six participants with a choreography background, most of them without much experience in drawing but with a very specific interest in scores. Therefore, this experiment arrived at unexpected results. As a consequence of not having drawing experience, drawings were researched with a somewhat phenomenological interest: What is it exactly a drawing can do to prepare for or reflect on a performance. One of the students ‘just drew’ as a means of meditation from which she expected to obtain new ideas on dance. [Fig. 4.72ab / Exp. 12] Remarkably, her drawing -both the result and the process- appears from the outside to be close to a possible choreography. One other student understood (a) drawing as a sheet on which traces could be made and taken away, registering over time the development of her thinking. [Fig. 4.73ac / Exp. 13] At any moment this drawing could be the starting point for
a choreography. Its different states are not archived. Preceding stages are lost and only the accumulated actual state is available. A third student had used drawings more often. Through the media of drawing, he researched the spatial organization of the stage, and how a performance would run over time. [Fig 4.74ab / Exp. 14] Remarkably, this young choreographer also used such drawings on stage, as part of the performance. [Fig. 4.59] The representation enters the physical world it represents. It is a very intriguing thought that design drawings are ‘emancipated’ as real objects within the design. Højstrup Parken revisited was organized as a three-day workshop within a larger seminar on issues of growth and change in relation to urban forestry. It started with a tree planting exercise. One of the tree circles of Sørensen was ‘rebuilt’, to confront oneself with the difference between the actual state and the (simulated) initial state. After that, groups of students
reconstructed the development of Højstrup Parken over time, and in some cases went on with reconsidering its future development. One group represented the process in a watercolour drawing. Watercolour is used here as a drawing means that enables one to see through it, and in that way to read different layers of time. Tiny trees as planted in 1954 are seen ‘under’ the mature tree of today, thus incorporating the planting system and the actuality in one representation. [Fig. 4.75 / Exp. 15] In a surprising way this watercolour drawing brings to mind a drawing from 1949 by Axel Andersen for the close-by Søndergårds parken. [Fig. 4.60] Although a totally different drawing technique was used, the same solution for the representation of time can be observed. One of the students engaged in an original exercise which focussed on what is not there anymore: the (approximately) 870 trees taken out over the years. At least 150 trees were removed as young adults, and used for timber and other goods. [Fig. 4.76 / Exp. 16] This exactly is what Ruyten, as discussed in Chapter 3, points out: How can design deal with aspects of time efficiently, and reduce the ‘matter’ to be taken out? [63] A next group represented the process as a fictional DIY (Do It Yourself) in the same way that a known Swedish firm provides graphic notations of DIY furniture. [Fig. 4.77 / Exp. 17] Portraying it in this way, current ‘expert’ management is rejected in favour of informed citizens deciding on management actions to be undertaken, as a form of civic empowerment. A fourth example captured growth in a series of diagrams that show how trees are ‘released’, as in a forestry strategy in which the healthy tree is given both protection and space to develop. This group revealed the interesting difference between a general depiction of trees and the precise registration of specific individuals. [Fig. 4.78 / Exp. 18]
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Fig. 4.61ab Diorama as seen from the outside and example of slide on inside, Form study program 2009, Academy of Architecture Amsterdam.

Fig. 4.62 Surrounded by landscape. Form study program 2009, Academy of Architecture Amsterdam.
Fig. 4.63  Testing the presence of sunlight in a building with a diorama, Form study program 2009, Academy of Architecture Amsterdam.
Fig. 4.64 *Wachsen lassen*. Exercise in notating the effects of different treatments of dough, Technische Universität Stuttgart 2011.
Fig. 4.65ab  Wachsen Lassen. Notation and real-time experiment with different dough conditions, Technische Universität Stuttgart 2011.
Experiments / Let it grow / 6abc

Fig. 4.66a-c  Wachsen Lassen, Pilzlandschaft. Notation and real-time experiment with dough enclosed in box, Technische Universität Stuttgart 2011.
Fig. 4.67ab  *Drawing Time Now!* Visualization and timeline, 2013, Academy of Architecture Amsterdam.
Fig. 4.68ab  *Drawing Time Now!* The book as a representation of time in spontaneous processes, 2013, Academy of Architecture Amsterdam.
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Fig. 4.69ab  Drawing Time Now! The making of the drawing transformed into animated film, 2013, Academy of Architecture Amsterdam.
Fig. 4.70a  *Drawing Time Now!*
Simulating the ‘moving around’, 2013, Academy of Architecture Amsterdam.
Fig. 4.70bc  Fold-out for certain moments, and presentation with videocamara and beamer
Fig. 71ab  Drawing Time Now! A
former eraser and pink ink as new
drawing media, Time unfolding
from left to right 2013, Academy of
Architecture Amsterdam.
Fig. 4.71c  Drawing Time Now! Development of a forest over 25 years from left to right, 2013, Academy of Architecture Amsterdam.
Fig. 4.72ab  *Dancing drawings.*
Drawing as a meditation, preparing for performance, 2013, DasArts Amsterdam.
Fig. 4.7a-c  Dancing drawings. The drawing as a continuous registration of ideas, 2013, DasArts Amsterdam.

"It is quite a stupid action to fall on your both knees.
It is like a light between body, mind and gravity."
Fig. 4.74ab Dancing drawings. Dialogue between drawing and performance, 2013, DasArts Amsterdam.
Fig. 4.75  Højstrup Parken revisited, watercolour as a means to see through layers in time, 2015, Copenhagen University (partial).
Fig. 4.77  *Højstrup Parken revisited*, an analysis of what is not there anymore, 2015, Copenhagen University.

Ecological and economic benefits of urban ecosystem management in *Højstrup Park*
As newly planted the oak seedlings are fragile to wind.

When the oaks reach a height of 2-6 meters they are less fragile to wind, but more fragile to shadow.

Therefore remove the hedge so it does not over shadow the oaks.

6-8 oaks per planting circle

Thin approximately 50% evenly
Fig. 4.77  Højstrup Parken revisited, sectional portraits of trees released over time, 2015, Copenhagen University
Reflection
Can aspects of time be present in landscape architecture drawings? Which types of representation are suited to doing so? Is it done in today’s practice, and if so, how? As discovered via interviews and in collecting drawings, daily practice is restricted by a lack of instructive examples and the (assumedly) difficult position of representations of time in communicating design projects. However, both the exploration of literature in Chapter 3, and a set of successful examples suggest that the representation of time is very possible. In these design experiments the researcher can be seen as a virtual client, explicitly asking for representations of time. Individual results of the experiments can be judged as starting points for discussing promising ways to represent time.

Chapter 1 positioned this research in the domain of pragmatism. This philosophical school expects theory to be instrumental – pragmatism, as Dewey said, ‘insists upon the possibilities of action’. It has been claimed in the professional designer’s community and in scholarly reflection that competitions and workshops are a space for innovation. In Chapter 3 the École des ponts et chaussées was presented as a space where fundamental innovation in the domain of drawing was achieved. Today, many educational programs of (landscape) architecture more or less follow the idea, an example of which was presented by Schön, that the design studio is a simulation of practice. In such a view it is less obvious that an educational program is an independent realm with its own aims. Design experiments as done here attempt to, in the tradition of the École, explore innovation in drawing in itself and to explore the ‘possibilities of action’.

These experiments show how fragile the level of control is, if we think about design as a method to retrieve answers to questions in a verifiable way. How far can results be defined by the conditions in which they are produced? For example, would it make a difference if some of the participants were explicitly asked to deliver representations of time, and others not? The fragile level of control is a serious constraint if we look at these experiments from a scholarly perspective. But that is a problem shared with many other experiments in design, and such constraints can be relieved, for example by understanding the experiments Drawing Time Now! and Højstrup Parken revisited as the first parts of a series. In keeping the conditions as much as possible the same, small but decisive variations in what is asked for can be made. Or, by reversal, variations are avoided, as it is clear beforehand that participants will be different. Participants are probably the most haphazard factor, both in their individual background and the chemistry of their collaboration. It is part of the culture of design that the context and conditions shift, and are redefined. Even the fact that in some cases a score was explicitly asked for does not guarantee that a score is produced! In fact, this research sets out an agenda of consecutive experiments, with different set ups, to be carried out in education or practice, testing out a range of hypotheses. Carrying these out will also help to gain insight into the relationship between the set-up of design experiments and their results.

An important goal of these experiments is to see if new ways of representing time can be discovered, and to reflect on how such discoveries could be applied in practice. However, the outcome of these experiments is not only about drawings. It is just as important to observe what happened during the experiments. This

is an instance of backtalk: How does drawing as activity, and how do drawings as artefacts, influence the thinking on next moves to be made? [67] Discussions on representation, graphic aspects and the issue of time are essential, both as a learning strategy for the participants and to explore the research questions. How are aspects of time defined in particular situations? In what way can they be represented and how would that be appealing in graphic terms? Tests are done, first tries are rejected - even drawing as such may be rejected. The experiments also revealed an insight into how far the themes spoken about in this research are present in educational programmes. These programmes are very formal - and give little importance to indications of time. Many of the students revealed to be rather alone with their interest in the representation of time, as in most schools this was not explicitly addressed.

The design experiments depart from the representational needs of landscape with regard to time, in line with the argument by James Corner in his essay ‘Representation and Landscape’, Torres’ challenge to develop a landscape-specific way of drawing and Amoroso’s and Balmori’s overview of current innovative attempts in landscape representation. [68] Obviously, this does not solve the presumed resistance of the client or the larger public, as discussed in the interviews, but as it is acknowledged that drawings have influence on design conversations, new ways of drawing may open new doors. Experiments that do not follow conventions in that sense can be very instructive. With reference to Nelson Goodman, the experiments can be judged as exercises in notation. [69] In particular, Let it grow resulted in a number of innovative notational explorations [as in Fig. 4.64; 4.65ab; 4.66abc / Exp. 4; 5ab; 6abc]. Many of the outcomes in this experiment are to be understood as diagrams, often consisting of small multiples. They note the process in an abstract way and engage in (the change of) form, both as a prediction and a registration. Those drawings that included actions to be taken at certain moments, as well as agents to undertake such actions, could be classified as scores. Amoroso refers to the diorama. [70] But the Kijkdoos experiment, with its use of slides [Fig. 4.61ab / Exp. 1ab], relates even more to the work of Humphry Repton and his ‘before’ and ‘after’ slides, especially given the gestural quality of folding out or pushing in. [71] The specific example of one person’s panorama [Fig. 4.63 / Exp. 2] in fact answers one of the difficulties of the representation of landscape as noted by Corner: Landscape is around us, and not before us. [72] The diorama experiment also taught us something about presentation. Dioramas are viewed individually, and create a very intimate experience. Dioramas require a certain concentration in which all other parts of the design presentation are, in that moment, literally out of sight. This suggests different ways of controlling the public’s experience in design presentations. Dancing Drawings tested the borders of drawing both as verb and as noun. What is it a drawing does? What role can a drawing have in conceiving a performance? That opened up discussions on a drawing being ‘emancipated’ into the physical world of the performance [Fig. 4.75ab / Exp. 14ab], the act of drawing as the main focus [Fig. 4.72ab / Exp. 12], and the drawing as an ever unfinished accumulation of traces [Fig. 4.73abc / Exp. 13abc], at every given moment a possible inspiration for a performance.
In *Drawing Time Now!* participants took up the challenge and really concentrated on time. As a consequence the aspect of time was (too) heavily stressed in comparison with other relevant aspects, such as leisure, or nature, or infrastructure connections. A professional practitioner therefore might find the results beyond his or her needs. But we have to make a distinction between the drawing as an instrument within the regular practice of producing plans and constructing landscapes, and (the) drawing as an independent mental space with its own history, expectations, possibilities and problems. Again, I mention the École des ponts et chaussées as an environment where drawing was exercised for its own sake. The drawing by Valentina Chimento, Astrid Bennink, and Hannah Schubert [Fig. 4.71abc / Exp. 11abc] is a good example of such an independent mental space, challenging our reading abilities. This comes back to the basic idea that architectural drawings are codified, and that we have to learn to read the code. Equally relevant was the contribution by Mathilde Christmann, Yukina Uitenboogaart and Emilie Gallier [Fig. 4.70abc / Exp. 10abc] as an exercise on how to represent change, erosion or weathering in the physical landscape, as well as on posing questions in relation to presentation. A book-their product-allows control over the narrative of what happens over time. To present the book by means of video had a striking effect; the presentation became a performance. This left open the fascinating question of whether we had witnessed in this performance a work of art, or the representation of something still to be built. It helped to define the score as a type of representation that shows all relevant aspects of time in a design, the time scales in which they operate, the moments at which they become manifest, the actions by which they are provoked and the persons or institutions doing so. In discussing this it became clear that the score is already subject to very specific interpretations and meanings, mainly due to the revival of interest in the work of Lawrence Halprin. Scores are used in his work in a much more broad way. Therefore, the recent interest in Halprin is also a problem: existing interpretations confuse the search for the possibilities of the score today. Nevertheless, I share his hope that scores will lead to new ways of designing landscapes whose essential nature is complexity. Both the results of the experiments and this discussion on the score inspire a shift in attention from a specific


type of representation towards a group of types: could the score be part of a group of ‘temporal representations’, as opposed to spatial representations such as the plan and the section?

Torres urged landscape architects to react upon Corner’s rich article ‘Representation and Landscape’. [75] Balmori argued that it is curious for a discipline in which everything is in constant change that there is so little in landscape representation that reflects time. [76] Today’s landscape architecture, probably due to its professional success, neglected innovation in its standard of representation. Certainly techniques changed, but in a more fundamental sense landscape architecture relied on the drawing conventions as handed over by the architecture tradition. Many of the experimental results as shown here can contribute to a fruitful debate on representation and on the role of drawing. This is a call for theory, as it challenges the taxonomy of types of representation, ways of presenting landscape architecture and the position of designers between clients and the larger public. And, obviously, it challenges practice to transform these emerging ideas into realistic innovations.

[76] See Balmori 2014.