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Research article

## Composing and Combining: Opposing Constructive Principles?

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### Abstract

The distinction between the constructive principles of combining and composing is discussed in terms of works of art, nature, and technology. How is the work that emerges from these different principles ultimately constituted and perceived as a definable entity and how is this important for the philosophy of technology? In contrast to composition, combining is presented as a strategy to give more importance to the processual, to the various spatial and temporal couplings and decoupling of the components of a work, to their relationship to their surroundings and also to the relatedness of the observer to the work. Gardenworks can stand for principles of combination as well as principles of composition. They are nature-culture hybrid forms, examples are discussed referring to 17th and 18th-century pleasure gardens. The emphasis on the principle of combination in the case of the English landscape garden ultimately produced a model for a sociotechnical handling with nature-culture constellations based on a policy of democratic principles. This combinational play in the garden can also be seen as a suitable heuristic for dealing with the comprehensive transformation processes occurring in the Anthropocene and for practicing corresponding forms of action.

**Keywords:** Principles of combination; Gardenwork; Art work; Garden history; Homo hortensis; Rauschenberg; Pleasure gardens; Principles of composition; Anthropocene; Technoscience

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Научная статья

## Композиция и комбинация: Противоречащие конструктивные принципы?

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### Аннотация

Различие между конструктивными принципами соединения и композиции обсуждается с точки зрения произведений искусства, природы и техники. Как работа, возникающая из этих различных принципов, в конечном счете конституируется и воспринимается как определяемая сущность, и насколько это важно для философии техники? В отличие от композиции, комбинирование представлено как стратегия придания большего значения процессуальному, различным пространственным и временным связям и разъединениям компонентов произведения, их взаимосвязи с окружением, а также взаимосвязи наблюдателя с работой. Садовые работы могут означать как принципы сочетания, так и принципы композиции. Они гибридные формы природы и культуры, рассматриваемые примеры относятся к садам удовольствий 17 и 18 веков. Акцент на принципе комбинирования в случае с английским пейзажным садом в конечном итоге привел к созданию модели социотехнического обращения с сочетаниями природы и культуры, основанном на политике демократических принципов. Эту комбинационную игру в саду можно также рассматривать как подходящую эвристику для рассмотрения всеобъемлющих процессов трансформации, происходящих в антропоцене, и для опыта соответствующих форм действия.

**Ключевые слова:** Принципы комбинации; Садовые работы; Художественная работа; История садоводства; Человек гортензия; Раушенберг; Сады удовольствий; Принципы композиции; Антропоцен; Технология

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## INTRODUCTION

In what follows I want to consider the extent to which it is possible to make a distinction between principles of combining and composing when a technological or artistic work is created, preserved and perceived. In what way are individual components assembled to form a work, how are the materials that make up a composed or combined work (be they immaterial signs or material objects) manipulated in the process? Do these principles differ, perhaps, according to the very demands made of the materials used? And how is the work that issues from these – as it is claimed – fundamentally different principles ultimately constituted and perceived as a whole? In other words, can the composing and combining be characterized by reference to different heuristics of collecting and connecting things, which are associated with different practices in each case and which then also lead to different stocks of knowledge and are manifested through the works?

These questions concerning a distinction between principles of composing and combining were prompted by a workshop held in 2016 in Padua entitled “Principles of Composition: Towards a Laocoön for works of technological art”, organized by Alfred Nordmann and Fabio Grigenti.<sup>1</sup> The title reflects their surprise that, conceptually speaking, composition as a principle has remained fairly inconspicuous to date in the philosophy of technology. The thesis put forward for debate at the workshop was that the development of principles of composition belong above all to the world of art and for that reason play no role in the *ars technica*. In seeking to carve an appropriate niche for composition in the philosophy of technology, they asked whether it might not be possible to reverse the usual hermeneutic perspective. What if it were not the work of art that was considered the authorizing object and thus the paradigm for (a) “work” but rather technological clockworks and sewing “works”, machine works and networks of technology? What if, for example, Ernst Kapp’s socio-technological hammer works, Gilbert Simondon’s concept of concrete machines, or the programming rules for software engineers were to be regarded as of equal value as an artwork and its compositional production?

While I was attracted to this idea of reversal, at the same time I also began to feel uneasy about the way it was taken for granted that a work – whether of art or technology – is brought forth by a practice of composing. Isn’t the principle of composing in technology also identified with a homogenizing and predominantly constructive practice, with the notion of a complete(d), “true” work and with a rationalistic order per se? Where would this leave the heuristics of tinkering and improvising in the emergence of a technological work – heuristics much debated in the philosophy of technology and science – and how would it account for the stubbornness of materials and their quality of affording possibilities? And what about the heterogeneity of a technological artifact and the radically open-ended dynamics of constant technological innovation, or at least of changing conditions in the technological and societal environment?

These questions brought up for me the complementary principle of combining and also a return to the question of how the emergence of a work of art and its significance as

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<sup>1</sup> <https://laocoön-conference.blogspot.com>



such is to be understood when viewed from the principle of combining as opposed to the principle of composing. Would this principle steer our attention more towards the *process* of acting and thinking, to the different spatial and temporal couplings and de-couplings of the component parts of a work, to the “dance of agency” (Pickering, 2008, p. 1) involving non-human and human agents?

My initial spontaneous impression, then, was that composing is one of those activities used by philosophers to claim that structures and processes are fundamentally posited anew, that this is a one-sided process, and that the condition for it to occur is a homogeneously formed material – musical notes, for example – which, when a rational set of rules are applied to it (the theory of harmony) – lead to a work that is complete in itself according to certain criteria. In pumping stations, for example, the composition of the countless individual components – pipes, valves, shafts – and the rules of hydraulics would, by analogy, be conceived as a composing activity represented by the “finished product” of a fully functioning pumping station.

With both forms of composing, other factors come into play as well, including iterative processes during the building of the work, as well as rules, adjustments and changes made during its operation. In a musical work these would be the performance practice, in a pumping station, by analogy, the ongoing maintenance – all of which clearly raises the question of how they are to be incorporated within the principle of composition. What also appeared to me to be problematic about this perspective is that in the act of composing, the author is putting him- or herself at a clear distance to the work, supported by the use of the relevant notation systems available. This seems to leave little room for the materials to manifest a “life of their own” or their potential for relation, whether it be sounds or pipes: they are tied into the principle of rational assembling on a two-dimensional medium, namely, paper.

In contrast to this, so the idea goes, a principle of combining would shift the emphasis more towards the materiality of the individual work pieces, towards the singularity of their contribution to the whole, with spontaneity and happy coincidence also being granted more space. Only through the willfulness of the material and perhaps a surprising resonance between individual parts can a musical work come into being – as expressed, for example, in mid-20<sup>th</sup> century *Aria* by John Cage.<sup>2</sup> Not explicitly named although similarly effective, the combinational principle can also be seen at work in an 18<sup>th</sup>-century pumping station located by the Notre Dame bridge in Paris – a gigantic, assembled water machine.

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<sup>2</sup> <https://youtu.be/USJBhk9Rzfw>



**Figure 1.** Pumping station Notre Dame, Paris; start of construction in the 18<sup>th</sup> century.<sup>3</sup>

So much for a somewhat historical reconstruction of initial ideas around the complementarity of composition and combination. I won't deny in retrospect that this involved a rather over-simplified understanding of composing. In the following I want to make a further attempt to render the two principles of composing and combining more clear-cut, using examples from art – still in somewhat sketchy manner, but hopefully illustrating the key arguments. I will then discuss the two principles using examples from the art of landscape gardening, where the garden proves to be an artifact of both art *and* technology.

## COMPOSING

The entry “compositio/Komposition” in the German-language standard work HmT *Handwörterbuch der musikalischen Terminologie* (Pocket dictionary of musical terminology) offers highly varied historical conceptions of composing, from the 11<sup>th</sup> century to the present day. My tendency to mistrust composing is reflected in definitions such as those described for the early 18<sup>th</sup> century. Composing here is understood as a science, backed up by attempts to provide evidence from physics; spontaneous and improvised procedures are ruled out explicitly. Johann Wolfgang von Goethe was a

<sup>3</sup> [https://commons.wikimedia.org/wiki/File:Charles\\_Meryon,\\_La\\_Pompe\\_Notre-Dame,\\_Paris\\_\(The\\_Notre-Dame\\_Pump\),\\_1852,\\_NGA\\_35110.jpg](https://commons.wikimedia.org/wiki/File:Charles_Meryon,_La_Pompe_Notre-Dame,_Paris_(The_Notre-Dame_Pump),_1852,_NGA_35110.jpg)



vigorous critic of such an understanding, arguing against composition as a “mean word” exclaiming: “How can anyone say that Mozart composed his ‘Don Juan’! – Composition! – As if it were a piece of cake or a biscuit mixed together out of eggs, flour and sugar!”<sup>4</sup> Composing in this sense can be understood as a procedure that follows certain numerical rules by means of which the material is normalized and transformed into an abstract, functional order. To this extent, then, composing is a deduction-oriented method, offered as a process that functions hierarchically and is aimed at the most complete control possible over the objects created.

In the 19th and to some extent in the 20th century, too, composing is claimed to be a mechanical procedure of construction that can be explained rationally (Bandur, 1996). At the same time, however, the binding rules of composition are lost at the start of the 20<sup>th</sup> century as atonality comes in; the term composition itself is used much less frequently. John Cage notes: “Construction in music consists in its being able to be divided up into movements, periods and phrases. [...] We describe as method the ensemble of means of controlling the continuity from one note to the next one. The materials of music are sound and silence. Composing brings material, construction and form together with the help of method.”<sup>5</sup> This understanding of bringing-together as a method in which material, construction and form are all considered equally surely comes closer to the principle of combining considered here.

In the visual arts, pictures by Josef Albers and Piet Mondrian celebrate a rational proceeding in Cartesian spaces. They are abstract representations whose constructive process is celebrated; the process of production itself remains secondary, the materials coming from a passive world of availabilities. Andrew Pickering has demonstrated that, in relation to abstractness, the pictures of Willem de Kooning are in no way inferior to those of Piet Mondrian; however, de Kooning’s pictures differ essentially in that the interaction between present impressions and the painting process becomes apparent in them, “leading in an open-ended fashion to canvasses that no one, including the artist himself, could ever have planned or anticipated in advance. [...] And if Mondrian's works couple this detachment with the asymmetric human domination of passive matter, then de Kooning's emphasize a much more symmetric interplay of the human and the nonhuman.” (Pickering, 2008, p. 2)<sup>6</sup>

<sup>4</sup> „Es ist ein ganz niederträchtiges Wort,“ erwiderte Goethe, „das wir den Franzosen zu danken haben und das wir sobald wie möglich wieder los zu werden suchen sollten. Wie kann man sagen, Mozart habe seinen ‘Don Juan’ komponiert! – Komposition! – Als ob es ein Stück Kuchen oder Biskuit wäre, das man aus Eiern, Mehl und Zucker zusammenrührt!“ (Eckermann, 1831) <https://www.projekt-gutenberg.org/eckerman/gesprache/gsp3109.html>

<sup>5</sup> „La construction en musique est sa divisibilité en mouvements, périodes et phrases. [...] Nous appellerons méthode l’ensemble des moyens de contrôler la continuité d’une note à l’autre. Le matériau de la musique est le son et la silence. Composer, c’est mettre en rapport matériau, construction et forme à l’aide de la méthode.” (John Cage in Bandur, 1996, p. 13).

<sup>6</sup> Pickering furthermore points out that “(o)ne cannot imagine a de Kooning as the translation of a preconceived mental image into paint on canvas. One has to think of them along the lines in which they were, in fact, executed.” (Pickering, 2008, p. 2)



## COMBINING

In the 20th century collage brought a procedure into play that came to be a favored method of bringing together the most varied materials and processes, especially in the fine arts and photography. Dripping splashes of paint, photographs, traffic signs, stuffed animals, or “[a] pair of socks”, as Robert Rauschenberg stressed, “are no less suited to making a painting than wood, nails, turpentine, oil and fabric” (Craft, 2013, p. 5). This combinational feast of materials became a new type of artistic work: “Combines” were born. The straight-lined, experimental technique of these combinations had profound and far-reaching consequences for both the creation and the perception of works of art. Works of art, even in a museum, no longer had to remain rigid and immutable: colors, surfaces and the position of component parts were allowed to change – even the audience was to be allowed to physically intervene. Rauschenberg’s repeated credo was that it was important to work with and not against the ever-changing nature of one’s surroundings. Accordingly, Combines are packed full of objects from the surroundings in which Rauschenberg lived and worked. This notion of the necessity of a relationship to one’s surroundings, represented and performed in the work of art, is something Rauschenberg passed on to his viewers not only through the Combines.

He also exhibited installations (“Black Market” for example) from which the viewer could take objects away with them or leave their own (which he documented using drawings) (Rauschenberg, 2006). The degree of freedom displayed by the Combines is fascinating in itself, as objects and materials are arranged on a receptive surface with no regard for conventional hierarchies of form or theme. This way of working was also described as “flatbed-picture plane” (Craft, 2013, p. 48), in a reference to the flatbed printing machine – so that (just in passing) a technological work became a model for an artistic technique.

To sum up, then, we can note that the principle of combining in Rauschenberg’s work is realized through material, sensory and conceptual relations between the work and its surroundings. Work and surroundings exist in mutual interaction, they shape and influence each other, forming a kind of ecosystem. Material, construction and form are brought together, the method is experimental and playful, while bricolage and trial and error procedures are the rule. On no account is this principle of combination deductive, and neither is it normative in relation to the materials used.

What is interesting here is the emphasis on surroundings, which are actively included, looked at as a part of the work, either materially in the work itself (such as the socks worked in) or through what the work offers its viewers – the invitation to add a component or take one away, which obviously raises the much-discussed questions: will “Black Market” still be Rauschenberg’s work when (how many of?) its parts have been swapped in or out, or is it being collectivized? What will become of it then? Will the idea of the work continue to exist independently of its physical realization and, if so, how will this be apparent? These questions are doubtless of concern to the art market, but more interesting here is above all the question as to the relationship between the parts of a work and the artwork as a whole.



**Figure 2.** Combine at Kunstmuseum Basel (Photo Daniel Cenci)

It was in Lessing's treatise *Laocoön* that this question as to the whole of a work was first posed. The concept is referenced in the subtitle ("Towards a *Laocoön* for Works of Technological Art") of the workshop mentioned above, "The Principles of Composition",





which in turn goes back to a series of lectures titled “Laocoön” organized by Alfred Nordmann at Darmstadt during the winter semester 2014/15.<sup>7</sup>

## VIA THE LAOCOÖN TO GARDENWORKS

For Lessing, a thing in space can be known on the basis of viewing alternately its parts, their connections, and the whole. In order to generate the impression of this whole, the mutual reference of the two schemas to each other seems indispensable: painting stands for the art of recognizing and working with all that co-exists, poetry, by contrast, for all that is consecutive, and music similarly. A thing in space can only be seen as a whole in the context of its existing alongside other things, but to be aware of this wholeness at all, insists Lessing, we need the rational mind (Todorov, 1984, p. 16). However, co-existing bodies can refer beyond themselves – and this is where gardenworks come into play: a curving path and an alley of trees that ends at the horizon can be read as random signs, with garden design, the plan of a garden, telling us something about the course they take. They engender certain expectations that allow them to be interpreted as a continuous line in space and as a continuation in time: we know – provided the plan (or experience) says so – that the garden will continue behind the horizon in this or that way and we think in terms of this continuation with the constituting idea of landscaped gardenworks as a whole. In this way – with a consecutive reading of the garden in space, a constant updating of its mutually referencing natural and arbitrary signs and of the borders on the planting plan, of our perception of proximity and distance and the construction of vistas – the idea of the whole is not just stabilized but is rendered available to experience in the first place.

Gardenworks, then, are a product of people’s activities and ideas, a well-defined artifact that must constantly be tended and simultaneously re-interpreted time and again. Gardens, like technology, testify to migration, domestication, colonization, to settlement models and economic systems. Yet gardens are also products of nature; their visible structures are, as a rule, overwhelmingly plant-based, but they are also visited, used and even constituted – usually invisibly – by animals, fungi and microorganisms.

Thus, a garden is neither art nor nature. It is art-and-nature: “In a special way the garden is dependent on the cooperation of nature”, notes David Cooper in his philosophy of the garden (Cooper, 2006, p. I). Since the 18th century, gardenworks have also been a topic of philosophy explicitly; in gardenworks there is discussion about how they should be arranged, what techniques are needed to design them, why they are valuable, and what expectations and emotions they evoke.<sup>8</sup> Gardens appear to be ideal objects to explore the issue of the principles governing combinational and compositional techniques. In conceptual terms, gardens exist at the boundary, they are nature and culture, ‘evolved’ and ‘crafted’, contain animated and non-animated elements, refer to historical and current

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<sup>7</sup> [https://www.philosophie.tu-darmstadt.de/media/institut\\_fuer\\_philosophie/pdf/ringvorlesungen\\_1/Programm\\_RV\\_Laokoon.pdf](https://www.philosophie.tu-darmstadt.de/media/institut_fuer_philosophie/pdf/ringvorlesungen_1/Programm_RV_Laokoon.pdf)

<sup>8</sup> Of course, the garden was already present before as a place and object of philosophical reflection. Damon Young (2020), for example, begins his book “Philosophy in the Garden” with an Aristotelian “Philosophy Alfresco”.



symbolic worlds. Thus, gardens can be examined as works of art and equally well as technological works – they embody scientific, technological and artistic knowledge all at the same time. Accordingly, gardenworks do not fit intuitively into the usual model of a “technical work” such as a machine, for example. Despite this, they can symbolically signify a high degree of order – a prime example of this being the formal gardens of the Baroque, but also garden landscapes that help nature to spread out freely and are at the same time thoroughly artificial works, such as the famous Branitz Park laid out by Prince Pückler near Cottbus.<sup>9</sup>

As a result, gardenworks can be used as a design principle of composing as well as of combining. Gardenworks and their socio-technical practices seem more than suitable candidates for more general philosophical consideration: “Gardening is a human activity that engages with core philosophical questions considering, among other ideals, human wellbeing, wisdom, the nature of time, political power, and ideals, home, aesthetic experience, metaphysics, and religion” (O’Brien, 2010, p. 1). In specific connection with techno-philosophical ideas, I have developed the figure of *Homo hortensis* to address environmental action in the Anthropocene as a socio-technological way of life (Schwarz, 2019, pp. 116-117), taking my lead from Hannah Arendt’s (1985) action theory ideas in her political philosophy, which she develops in relation to the figures of *Animal laborans*, *Homo faber* and *Zoon politicon*.<sup>10</sup> Here, the garden is conceived of as a real-life laboratory in which humans, either as gardeners or as ambling spectators, have to position themselves anew, over and over, in relation to their environment, to things and to living beings, and can thus learn to adjust to changes such as those posed by recent transformative processes.

### COMPOSITIONAL PRINCIPLE – THE FORMAL GARDEN

In the second half of the 18th century the garden was a veritable battlefield of new aesthetic as well as political forms in Europe: theories about the art of gardening, aesthetic concepts and also economic prosperity were in the air. In some ways, gardens were the nexus at which debates about natural history, art history, science, politics and colonialism coincided. The French Baroque gardens at Versailles and Vaux-le-Vicomte were an expression of a radically new cultural and economic change; they served as a stage not only for dramatic works but for the presentation of courtly society per se. The wealth of powerful families and thus simultaneously of the state’s political order were put on display, manifesting also in the domination of nature *qua* geometry. The global dimension of this order was displayed by means of exotic artifacts, plants or animals as well as – usually unwillingly – dislocated humans from the colonies overseas. The garden became a stage of increasingly widespread trade relations and of things whose value was actualized through the exercise of power.<sup>11</sup>

<sup>9</sup> <https://www.pueckler-museum.de/en/park-palace/branitz-park/>

<sup>10</sup> first published in English, *The Human Condition*, Chicago University Press

<sup>11</sup> Mukerji (2002) for the French Baroque gardens, a similar argument was put forward by Wise & Wise (2002) for the English Gardens in Germany (e.g. Peacock Island, Sanssouci or Babelsberg).



All this is part of the program of improving nature and has occurred through a planning strategy that is effectively a principle of mimesis, aimed at surpassing and improving natural givens by means of technology in the garden (Hunt, 2000). The garden order was additionally in a relation of direct exchange with orangeries, menageries and so-called acclimatization gardens, which were the first to provide the technological environment for maintaining the exotic exhibits, their current and potential capitalization. The gigantic “water machine” in Marly, for example, did not come about in the context of supplying potable water, as did the pumping station in Paris, but rather was built for the purpose of facilitating the elaborate fountains at Versailles (Epple, 2008, pp. 472-473).

Thus, drawing up plans had become enormously important, both for the theory and the practice of gardening – a kind of “flatbed-picture plane” *avant la lettre*. It was in the garden that new landscaping as well as urban construction / town planning techniques were invented. French landscape gardener André Le Nôtre became an icon for the development of a theoretical corpus of garden art, one which laid the basis for the professionalization of later landscape gardeners. He was the „Dessinateur des plantes et parterres de tous les jardins de Sa Majesté“ (Schweizer, 2013, p. 21), thereby reframing the craftmansship gardening into an art of designing, based on theoretical and practical knowledge. Since he left practically no written documents behind, Antoine-Joseph Dézallier d'Argenville took on the role of chronicler. The subsequent book on the theory and practice of gardening became a bestseller and established itself as a reference work in 18<sup>th</sup> century Europe (Dézallier d'Argenville, 1709). The “bible of Baroque gardens” (Ernest de Ganay) was renowned for its detailed and high-quality drawings and plans, while Dézallier’s plans were used even in the 19<sup>th</sup> and 20<sup>th</sup> centuries for most reconstructions of Baroque parterres. In the editions that followed, Dézallier updated his book constantly. Whereas initially it was almost exclusively gardens designed by Le Nôtre that were printed, from the 10<sup>th</sup> edition onwards the avant garde of landscape gardening increasingly acquired prominence: the English landscape garden.

It is this compendium that stabilized the professionalization of landscape gardening and in which explicit rules were drawn up regarding which elements go to make up a garden, how they are to be combined – and also what kind of design is suited to improve the natural features on a given site: “If one wishes to lay out a garden, it is important to bear in mind that one must stay closer to nature than to art” (Dézaillier, 1712, p. 16 as cited in Turner, 2000, p. 190).). In the Baroque garden a key concern is to display the “nature of the world” materially, as British garden historian Tom Turner (2004) put it (p. 190). The mastery of the laws of nature is demonstrated by laying out intricate ornamental patterns and symmetries in the garden; the compositional principle is celebrated excessively in the parterres and is put into practice in ever new variations throughout Europe. There is a fairly widespread theory that these formal gardens may not have come about if paper technologies had not been available: it is only on paper that the typical symmetries of formal gardens can be realized, and only thus were the complex calculations governing proportions and standards possible. The French garden is a composed garden when seen from a bird’s-eye view, and from this perspective its beauty becomes manifest, the references to classical allegories visible.



This kind of “plannability” of formal garden in Baroque is demonstrated with intriguing clarity in relation to the key importance of parterres. If these rules are applied properly, the harmony of the geometric proportions is perfect, the God-given laws of nature become manifest, and the garden is felt to be beautiful. It embodies the order of nature; consequently, theoretical debates on geometry and mechanics took place not only in the course of constructing standard clockworks or music clocks but also when working on the design of Baroque gardens.

In the 18th century gardens acquired ever greater significance as objects of intellectual culture. Signs of the impending Enlightenment became apparent in continual changes in the theory and practice of landscape gardening, especially in the transformation of the notion of the principle of imitating nature. The garden is no longer regarded as a work based on the idea of representing the nature of the world. Instead, the garden should show how the world of nature unfolds; it should demonstrate the special features of the *genius loci*, its inherent logic and autonomy, and not any universal lawfulness (Turner, 2004, p. 190). It then became the task of the landscape gardener to support the special features of individual plants and other design elements, to perceive individual imperfections or irregularities, in other words, to bring nature “home” in a sense. Out of this came the English landscape garden, which revealed its first theoretical and practical results during Le Nôtre’s lifetime.

### COMBINATIONAL PRINCIPLE – THE ENGLISH GARDEN

This was the start of a new combinational language in landscape architecture, which in turn brought forth new garden elements with surprising vistas and the staging of individuality and particularity, such as garden paths shaped as a meandering line instead of tree-lined avenues drawn with a ruler, or ditches that functioned as invisible fences and enabled a seamless transition between carefully planted flower beds and a lawn dotted with trees or a cricket pitch. The English landscape garden, then, was based not only on a different theory of mimesis but also on different techniques. German garden theorist Christian Cay Lorenz Hirschfeld criticized Le Nôtre’s “dreary, symmetrical gardens” (Hirschfeld, 1779, p. 157), highlighting in contrast the qualities of the English garden as a sequence of scenarios, as an aesthetic experience which enables specific emotional responses. Groups of dark spruce trees with an artificial graveyard evoke melancholy, while isolated trees with light green foliage on an open meadow evoke serenity. The Romantic gardens are a celebration of the interplay between autonomous entities, a combination of surprising constellations and pleasing objects. According to Hirschfeld the landscape gardeners have the freedom to fit together the many components – trees, lawn, ornamental flowers, watercourses and mounds – into a “harmonious whole,” respecting diversity and contingency as they do so. The scenarios of the garden become apparent only gradually and provide longer lasting enjoyment than the most beautiful landscape painting, which the eyes can quickly apprehend. Moreover, in the garden one can “really feel” movement, not just in the sense of visual perception but also through the activation of other senses (Hirschfeld, 1779, p. 157). In the garden, movement – for example that of a watercourse – can be experienced intuitively and not merely through



objects arranged next to one another on a canvas or an artistically elaborate parterre. These gardenworks, as Hirschfeld stresses, can also be perceived without any special education or explanation required. It is only when a person strolls through the garden that the natural and artificial objects are seen to exist in relation to one another, only then that an ongoing narrative arises; in this way the gardenworks are combined by means of the choice of sight lines, views and even of noises and smells.

The idea of these new gardens as works of art is consequently also closely associated with the viewer's own movement, as she has to actively construct the order in which the objects occur and can only thus perceive the interconnections between the signs in the garden, how they exist alongside one another and in relation to one another. It is the practice of strolling through the garden at different speeds and experimenting with viewing things closer up or farther off that makes it possible to recombine the signs to make a recognizable whole, a complete gardenwork. One important, if not indispensable, aspect of experiencing an English garden as a work of art, then, consists in adopting different positions and viewing angles, allowing oneself to be caught up in a movement that is at once intellectual and physical, and to assemble a whole, an edifice or an ensemble out of this – or allow it to happen.

This combinational playfulness in the garden also seems like a suitable heuristic for getting accustomed to processes of transformation as are required in the oft-cited Anthropocene epoch. Gardens invite us in no uncertain terms to find a considered relationship between humans and nature, with *Homo hortensis* setting itself caringly, enjoyably, angrily, contemplatively and mindfully in relation to the soil and the weather, to ornamental plants and herbs, to weeds and edible plants, by means of various modes of activity. In gardening practice, then the issue is constantly one of how the gardener relates to their object. In the garden, the bio-conservative conceptual figure of an antipodal relationship between technology and nature fails so obviously that there is no way to ignore how it might still be possible in the case of a demarcated, designated nature conservation area, a river floodplain or an Alpine landscape.

It is possible to show from the example of the gardenworks that composing and combining can be characterized by complementary heuristics of gathering and connecting things, and also that different practices are put to use in creating the work. In the formal garden of the Baroque, the material is geometrized and normalized, transformed into a geometric, functional order, while the design of the work follows compositional principles based on numerical rules. Through the gardenworks, the “nature of the world” is brought forth and staged/presented, the objects of the garden are represented in hierarchical patterns of relationship that also dominate the relations of the political order. The English landscape garden – albeit following a compositional plan – relies on combinational principles of design with which the “world of nature” is to be brought to itself (Turner, 2004, p. 190). Priority is given to the inherent logic and autonomy of the individual design elements, with irregularities, wavy lines and branching paths the correspondingly preferred design elements. With the transformation of the concept of mimesis it is no longer a matter of generating natural regularities by gardening means but rather of staging nature in its disorder, displaying the specific and individual aspects of nature. Above all, the visitor's own movement is crucial for any encounter with



gardenworks: the combined garden ensemble and the material obstinacy of its elements reveal themselves itself only in the on-going narrative; resonances become established between the individual sub-components, patterns of individual perception and the story of the garden design as an ensemble are placed in relation to one another. The fact that the English garden – especially Cobham’s Garden in Stowe with its Temple of British Worthies (Richardson, 2007) – has become a travel guide of democratic principles that has positioned reason against passion, citizen’s duty against vanity, in short democratic virtue against monocratic vice, is an interesting but as yet unresolved issue in relation to the debate about the complementary of compositional and combinational principles in gardenworks from a techno-philosophical perspective. This program has at any rate made the English garden into a successful export product that has been taken up throughout Europe and overseas. After visiting Stowe, Thomas Jefferson noted that he would also like to establish such a gallery in his garden that “stood for liberty and virtue as well as lauding the advances of science, political philosophy and exploration” (Wulf, 2011, p. 53) as a role model for the still young constitutional treaty of the United States of America. In this case, then, the “English Garden” as gardenwork truly becomes the authorizing object and paradigm for the political technology of democratic principles – and at the same time an early testing ground for the figure of Homo hortensis

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