

LANDSCAPE ARCHITECTURE TEACHING LANDSCAPE TO ARCHITECTS

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Abstract

The intention of the present essay is to explicate that concepts and design principles concerning landscape, from Renaissance onwards, were developed in close correlation to other composition and design practices as architectural, building or urban design, while we may also detect reference of modern landscape architecture to modern landscape painting. Thus we may describe a bilateral impact, which either transfers compositional manners from building and city architecture to landscape design, or promotes the reverse transition, from landscape perception to building architecture and to urban design.

It is in accordance to the above statements that a didactic methodology will be proposed in this essay, concerning tutorials on history of landscape architecture followed by studio lessons on landscape design, for students in schools of architecture or architects, already experienced in building architecture and urban design. The above approach may be supported by the identification of common mental processes underlying all compositional practices previously described. It may be supported by the supposition that all those previously presented practices are based on structural-organizational processes, concerning mental approaches of abstraction and schematization exerted on external reality elements; on elements that offer the primal reference that will be afterwards elaborated by compositional practices. Consequently, we may identify compositional abstract paradigms, compositional "shapes" or "schemata", to be applied in more than one compositional domain.

An additional conclusive remark of our essay concerns the specific significance of the schematized landscape perception, in reference to an extended number of contemporary cultural intuitions or scientific approaches. The cultural value of this perception explains the impact of landscape concepts on contemporary design practices in general; on landscape, building or urban design and even on object design as well.

Keywords: *Landscape didactics, landscape design, history and theory of landscape, schematism, schematization.*

Introduction: Organizing stages of a teaching methodology

The intention of the present essay is to describe, firstly, a teaching methodology gradually developed during the last four decades to be applied in landscape design tutorials for architects. Not only for students in schools of architecture, but for professional architects as well, starting from self-teaching application.

Thus this gradual approach, which will be described in detail in our presentation, included an extended first stage of self-teaching.

A second stage of theory seminars for postgraduate students of architecture followed, having as object the "*History and Theory of Landscape*".¹ During this second period a theoretical position was gradually formed. According to it the proposed methodology corresponded to the historical development of landscape design at the length of modern Western history. Thus it could be didactically enriched by the successive paradigms of the historical evolution of landscape and garden art. Moreover, during this second stage of maturation, a crucial concept of the proposed methodology became clear; the concept of "*schematism*", "*Schematismus*" in Latin or "*schematization*" correlated to central theoretical positions of modern philosophy.

At the third stage of the described development a fundamental position for the whole historical and didactic approach was formed, which has to be regarded as central thesis of the proposed methodology and the present essay. According to it, landscape design may be founded on the same normative compositional principles as building or urban design; or, using a term just previously introduced, on common principles of compositional "*schematization*" and "*abstract*" elaboration. In relation to this epitomizing thesis a didactic methodology was finally formed and applied in studio tutorials of landscape design for students of architecture.

We could continue explaining that we now work on a fourth stage of approach. We refer to landscape and landscape design, asserting that they both impose their perception to contemporary design in general and, moreover that they may be related to a broader range of scientific and epistemological domains as topology, catastrophe theory, or computational mechanics. They may all be related to a generalized "*epistemic*" feeling of landscape or, more precisely to an "*epistemic*" feeling of landscape under transformation.

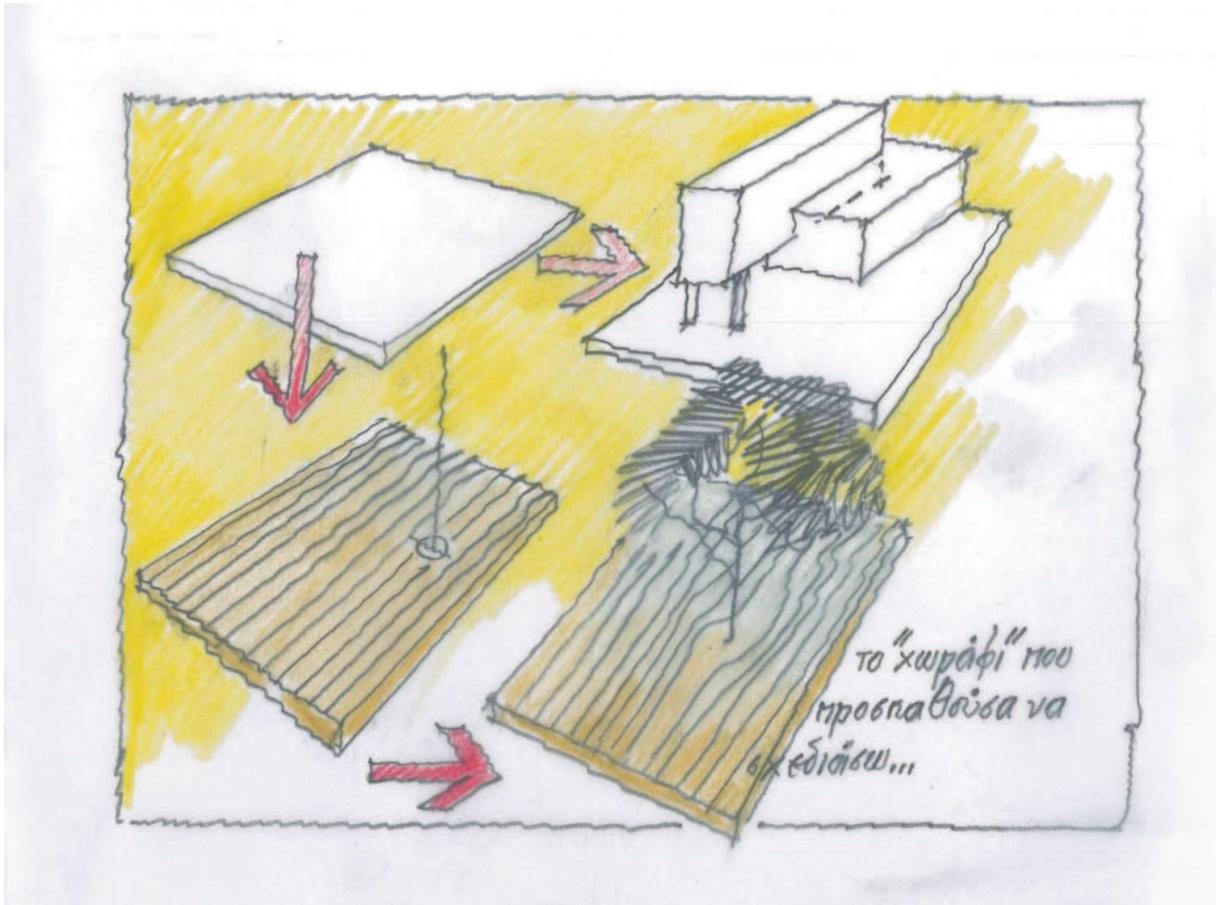
First Step: Organizing forms

First reference to the fundamental concepts of "*abstraction*" and "*schematization*"

We shall describe the first stage of approach through a real example of an effort to represent a cultivated piece of land, a ploughed field on which an olive tree was grown. The author of this essay tried to draw this part of external landscape reality, by designing parallel lines, the traces of the plough. One or two of those lines were interrupted by a small circle, the drawing of the section of the olive tree trunk, on the level of the soil.

For this drawing effort the designer was criticized for not presenting natural reality correctly. A more accurate description should have considered that the plough would not interrupt its movement would not 'fly' over the tree and then land again on earth to continue its course. A better rendering should insist on the fact that the plough, while approaching the tree, would continue its movement on curved lines, in order to avoid the trunk and then would gradually come back again to the traces of straight parallel lines. This second description of ploughing could create a second plan for the ploughed field, on which drawn lines representing plough traces, were parallel at first, then curved, avoiding the small circle representing the section of the trunk, then curved again in the opposite direction, and then, finally, gradually parallel again (Image E.1.).

¹ Seminar presented from academic year 1998-99 till now, as part of the Interdisciplinary Postgraduate Program "*Architecture – Spatial Design*", organized by the School of Architecture of NTUA in the didactic direction of "*Architecture, Space and Culture*".



E.1.: The white drawing paper, above left. A building drawing, above right, or that of an elementary landscape formation, a ploughed field with a tree in it, bottom sketches.

What have we just described? ...An abstract presentation of external reality, corresponding to a part of the landscape. According to it, what we are interested in were not minor details, as small clods of earth, or a beetle coming out of the ploughed soil, but principally the relation of the ploughing lines to the tree trunk. This description was at first drawn abstractly, eliminating every other natural detail, without the elegance of curvilinear traces. Then we went back to the real field, we accepted that our drawing was not presenting the image of the ploughed field convincingly and we redrew our image, abstractly again, however introducing the curvilinear traces this second time.

We moved from reality to its first abstract description. Then, looking back to the real field we decided that the first design was not satisfactory enough and altered the representation terms, so that we could better express our design intentions, thus producing a second design representation. Anyway, which were the abstraction terms that dictated those successive abstract representations? We tried to render the feeling of the ploughed field, corresponding to the representational signifier of the parallel lines of the drawing as well as the emphatic reference to the tree, that obliged the first principle, "*parallel formation of lines*" to be transformed to a second one; "*parallel formation, gradual curving of lines and final return to parallel formation*". The design process was defined by a first principle of abstraction, which was transformed afterwards, so that it could describe in a coherent way the external landscape reality.

We conclude in consequence that description of reality corresponds to an abstract convention, according to which most important features are presented and described, whether secondary ones are underestimated and "*abstracted*". The above process does not only correspond

to the representation of the existing reality, but also to the pre-design of the reality to be constructed. What we design during this second case refers also to a "schematizing" image of the desirable future condition, abstract in relation to its final realization; its primary elements are represented while secondary and unimportant ones are omitted.

We may insist therefore on a design process, capable to approach most important qualities of reality in a constantly ameliorating sequence. In the latter example what finally appeared as most important was not the representation of parallel lines but their distortion by a focal point of the composition. Thus we may refer to a sequence of schematizing forms, or more precisely to a genetic sequence of "schematization", through which we attempt to introduce the best possible stepwise approach of the final, existing or under formation reality (Moraitis, 2012).

Step Two: Historical support of the previous presented methodology

Our didactic proposal already previously cited, was triggered by our immediate professional experience, by our own effort to transform our building compositional experience that helped us to move forward, from building design to landscape design. Nevertheless this effort was also founded on the knowledge of the modern Western history of garden and landscape art, as well as on the elementary experience of a number of theoretical issues, as those concerning theory of "schematism", "Schematismus" in the Latin version of the term, or "schematization".

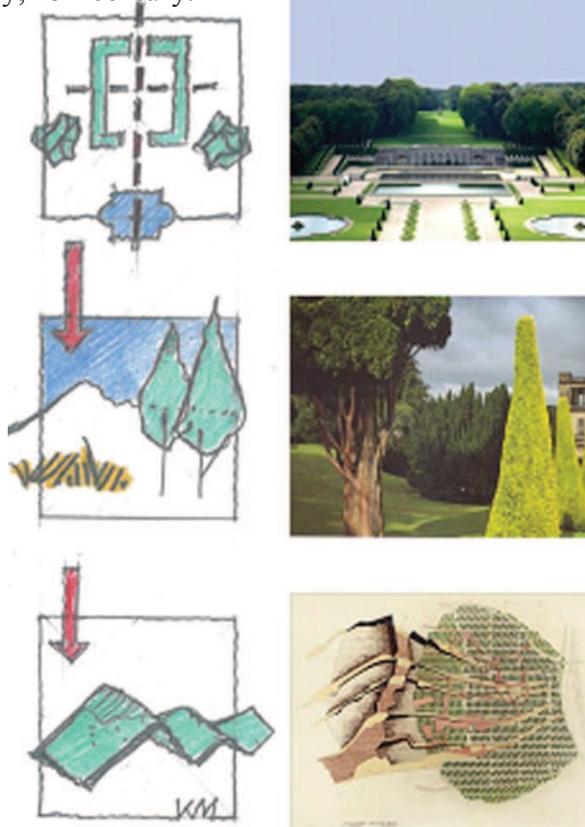
Throughout the larger part of modern Western history, landscape design appears to "fish" its compositional-design models in the rich "sea" of architectural perception. This relation initiates at Renaissance time, as a result of the social development "extra muros", outside the medieval walled cities, in a way that enabled newly born modern societies to create extended landscape formations. Then, in landscape and garden design, a compositional approach clearly applied. It was analogous to that of the enclosed building spaces, or analogous to the confined, enclosed medieval gardens, to the "horti conclusi", which were created in the interior of the cities, in the middle of building volumes, as uncovered but walled space entities.

The above compositional approach seems to characterize Renaissance landscape design, applied through the "stanza" principle that describes the composition of differentiated, partial, self-sufficient entities, similar to the self-sufficient significance of a "stanza", or verse of a poem. However it is the same Italian word "stanza" that is also used to describe a building chamber (Ree a.o., 1993, pp. 77-79). According to this compositional principle, self-sufficient garden rooms were constructed, walled though uncovered, their surrounding surfaces gradually covered by climbing vegetation and their interior enriched by minor vegetal entities or water formations. Moreover surrounding garden walls used to be created, with the sole use of thick slow-growing 'green' material. Those were real herbal 'green' walls, which nevertheless imitated 'hard' building structures, equipped with archways and window openings, shaped by the removal of vegetal mass. Similar controlling compositional principals were also used on the larger scale of landscape arrangement, founded on strict Euclidean organization, axial layout, symmetrical patterns and related to the surrounding open space through "scenic integration - integrazione scenica" (Ree a.o. 1993, pp. 25-27), already developed by the theatrical scenic design in interior spaces. The normative visual ethics of the Renaissance perspective were thus introduced in garden and landscape design, and the controlling priority of a central perception point was imposed. Graphic prototypes, as those published by Mannerist architect Sebastiano Serlio for exemplary theatrical scenes, prove that perspective norms were proposed for rural and urban territories equally, while perspective formation of cityscape is presented in an absolute way in the paintings of the ideal city, "Città Ideale".

The use of building or urban design principles in landscape design continued through Mannerism and reached the peak, in grandiose scale and overall glamour, in Baroque gardens. The latter probably present the outmost paradigm of geometric schematization, while being also comparable to extended urban formations. In Versailles Gardens for example, not only geometrical patterns are used, analogous to those applied in urban field, but moreover the Gardens themselves were conceived as a starting point of a future urban development. Thus we may discern the obvious compositional relation of Versailles with other urban schemes of the same historic period, as for example the one designed by Gian-Lorenzo Bernini for Saint-Peter's square in Rome.



E.2.: Renaissance landscape design as analogous to building space composition. Villa Gamberaia, in Settignano of Tuscany, 15th century.



E.3.: Three different periods of compositional influences on landscape design.

First group of influences during Renaissance and Baroque period (first line): Formalism of landscape design as analogous to building and urban structures. Impact from building or urban design to landscape design.

Second group of influences during 18th and 19th century (middle line): Impact from landscape painting exerted on nature-like landscape formations.

Third group of contemporary influences, during last decades (third line): Buildings and urban structures are designed as analogous to schematized ground relief, under transformation (P. Eisenman-Laurie Olin: *Fertilizers*).

The grandiose 'formal' strict geometric patterns seem to coincide, in 17th century, with the first appearance of differentiated, compositional paradigms of landscape design, originated in landscape painting, in Dutch landscape painting initially (Alpers, 1983). This painting approach is related to nature-like description, which attempts to discover compositional qualities in nature and reproduce them in painting. Certainly, the result is not nature untouched by civilization. In a more precise way it constitutes an interpretation of nature, a pictorial reconstruction of it, supported by abstracted forms, by schematization effects, which remain latent, undiscerned at first perception, however indispensable for enforcing the expressive quality of the picture.

The previous example concerns a painting expression of natural landscape or of natural and urban landscape in certain cases, composed through rules of design organization, indicating two basic design directions. That of the two-dimensional design mode of expression, based on the correlation between sizes and colors, and that of the three-dimensional 'depth' expression, being specifically important in the case of composition of forms on an extended field, as those concerning landscape extension.

Those two compositional principles may be applied in painting; however they may be equally used in architectural design, since they refer to a general, space organizing attempt. It is therefore easy to explain that during 18th century, when those principles were implemented to the natural-like design of the British landscape art, professional landscapers usually had to possess extensive architectural or painting education, while in addition they chose to characterize their activity as "landscape architecture".



E.4. Intervention in the territory of the Third Square area, in Keramikos, Athens. Space formation through perimeter building and plantation forms at the same time. School of Architecture Engineering NTUA, 8th semester course "Architecture of outdoor Public Spaces in an Urban and Natural Landscape". Acad. year 2008-2009. Students: Livathinos N., Triantafillou M. Professors: M. Mavridou, I. Mari, K. Moraitis.

We have already entered the period of nature-imitating design and we can gradually move, through Romanticism, to the interest for the non-designed 'natural' landscape. Non-designed, but at the same time recognized and reconstructed through abstraction and schematization procedures, since perception already refers to a first "constitutive" fermentation, to the reconstruction of outside reality through terms of social normative patterns and intention of control.

Step three: A teaching methodology in landscape design, using principles of architectural design

Having already presented the two prior periods of our research, we are able to reach a general methodological principle concerning the historical interpretation of landscape design, on the ground of abstraction and schematization procedure. We may also derive two minor, specific principles applicable not only in history didactics, but also in landscape design studios for students of architecture or architects.

We firstly refer to the principle of design organization of landscape elements, mainly vegetal, as analogous to the design of building elements. In this case we do not insist on the final formalization of the natural features of landscape. What we seek is an in-between design condition of formalism or schematization, in which herbal objects are not treated in terms of geometric order concerning their final form. What is important is its relative design position in the overall landscape design structure. *It is to this compositional mode of expression that we refer to, when we point out that we can use plantation in a compositional manner, in a 'structural' organizational way.* For sure we may follow a similar strategy of schematization in the case of ground or water design elements.

The second design organizational principle of landscape elements concerns their application in two-dimensional compositional terms, as used for example in painting synthesis or as used in the design of architectural façades, with the additional effort to enhance the feeling of depth. Obviously, the previous compositional proposals may also be implemented in cases of three-dimensional design, in models or in a three-dimensional electronic design.

According to the previous principles, we can understand the effort made by gardeners and landscape architects in United States, during 1930's, when they looked for compositional prototypes of abstract geometrical schemes in modern building architecture or in abstract painting.¹ *According to this reference, landscape design, architectural design and painting representation may be associated in compositional terms, and therefore mutually-defined.*

¹ In the text-manifest *Freedom in the Garden*, presented in 1938, by landscape architect James C. Rose (Rose, 1938).



E.5.(previous page): Urban landscape intervention in Klathmonos Square area. Use of plantation as formative element of outdoor space organization. School of Architecture Engineering NTUA, 8th semester course “*Architecture of outdoor Public Spaces in Urban and Natural Landscape*”. Acad. year 2012-2013. Students: K. Lambrou, A. Drivas, A. Lekou. Professors: N. Bellavilas, K. Moraitis.

Let us repeat the aforementioned; *mutually-defined in composition terms*. Thus we may describe a ‘metaphor’ of expression, from building architecture or painting to the field of natural elements composition, but we may also describe the reverse transference. That of the natural world paradigms implemented to the area of artifacts. Therefore, during the period of the rise and prevalence of romantic trends, we clearly note an imitation of natural examples in the design of objects and building constructional parts or in building forms. Not only in the decorative examples of Art Nouveau, of Jugendstil or Modernismo Catalán, but also in examples of more substantial structural reference, such as the one mentioned in the hypothetic association between the organic structure of the giant water lily *Victoria Regia*, with the static metallic structure of *Crystal Palace*, by Joseph Paxton. However in all those cases, we do not just notice the transmission of natural forms into object or building forms, but more precisely the transmission of natural forms’ schematizations in the schematization of artistic representation or of structural design. Therefore, when we refer to design or compositional associations between building architecture, painting and landscape architecture, we always refer to associations amongst different domains of schematizations. To the impact of schematization produced in one of the previous design areas, exerted on the schematization produced to the rest of them. Thus, contemporary interest in environmental-landscape topics, in other words developing ecological sensitivity, but also development of the technology of computer-aided design, permitting handy design schematization of natural forms, as well as the interest of important scientific areas in landscape forms, may explain the impact of schematizations derived from the natural reality, on the schematization implemented in the construction of objects, buildings or urban complexes.



E.6.: “*Landscape Intervention in the area of Acherontas sources, in Ipiros, Greece*”. School of Architecture NTUA. Diploma Thesis, February 2011. Students: A. Kafantaris, V. Koliaki, D. Sagonas. Professors: M. Tzitzas, K. Moraitis. In the proposition drawings, the composition of plantation is approached in two-dimensional design terms, with a simultaneous attempt of expressing landscape depth. The drawings were realized in relation to the painting manners used by English landscape architects of 18th century.

Historical reference to the theoretical approach of the terms “*schematism*” and “*schematization*”

In Immanuel Kant’s philosophical approach the theory of “*schematism - Schematismus*”, describes the conditions of the outside reality perception, in accordance to the inborn intellectual patterns, the “*schemes*”.

According to this particular theory, the “*scheme*” refers to an activity of intellectual over-definition of the real. The scheme contributes to the generalized equivalent of all partial, similar embodiments. It attributes to representations a background of intellectual validity, subjecting representation and through it objects to concepts. Scheme constitutes an intellectual means, an intellectual intermediate element, that presents itself as necessary for the association between experience and concepts and reversely indispensable for the rational validation of the ‘construction’ of forms and through them for the construction of objects. Therefore, the empirical perception of a dish may appear uniform to the sense of circularity and roundness, as described by Kant.¹ Conversely in order to fabricate a plate, a threshing floor, a circular plaza, I ought to refer to the suggestions of the abstract shape.

The transition in both directions of my intellectual reference becomes possible through the mediation of a representational form, which is called “*circle*” and which constitutes a scheme, in this case a geometric scheme. Similarly, the empirical perception of countless different trees may be generalized by “*a rule according to which the imagination can generally outline the form*”

¹ In his fundamental work *Critique of the Pure Reason*. “*The empiric concept of a plate*” he notes “*is uniform to the pure geometrical concept of the circle, since the circularity, which is understood in the first, become approachable to supervision in the second*” (Kant, 1979, vol. II, A 137, B 176). Our translation.

without being limited in some exclusively particular form offered by my experience, or in some powerful image I can represent specifically".¹

What principally interests us, in the aforementioned description, is not mainly the exploration of its philosophical depth, as the possibility of its correlation with the regulatory representation methods which can be implemented through design. The previous declaration tends to transfer us from the concept of scheme as a singular, unique form, to the process of formation which exceeds static performance and indicates representation methods - especially those concerning the regulatory arrangement of experience.

In this sense, if Kantian theory of formation ascribes an intellectual process which stands beyond the historic and gnoseology limits of Critical Philosophy², if it refers to a process capable of describing the intellect in general, then it can be extended beyond static Euclidian patterns. Using a convenient theory example, we may claim that Jean Piaget's dynamic structural approach is directed towards this very concept, by replacing the static term "*schematism*" with the term "*schématisation*", thus insisting on the dynamic character of the intellectual process. In this sense we believe that the Kantian proposal of "*schematism*", enlarged as a schematization condition can also be applied in control areas which refer to terms of change, as for example in the domain of topological geometry.

Going back to the landscape architecture example and to its historical determination based on exemplary regulatory representations, let us comment the immediate reference of Kantian aesthetics to garden architecture. According to this reference garden art has to be connected to design principles. "*In painting, sculpture and in all plastic arts in general*", the *Critique of the Power of Judgment* remarks, "*as well as in architecture and in architecture of gardens, up to the extent to which they are fine arts, the essential quality has to do with **design**.³ to which the principle of elegance does not consist in whatever is pleasant to the sense, but to what is appealing through its form*" (Kant 2005, p. 99).

We insist on the previous quotation. Architecture, just like garden architecture, may be considered an art and possess aesthetic quality, only in the case that its design, its construction surpasses experimental approach through its intellectual formation and its graphic elaboration. After all, the term "*form*" refers, in the following text, not to the totality of characteristics, but to a substantial, abstract background, which sustains other additional, appealing or obstructive "*side*" attributes, such as color. Therefore, the term "*form*" appears in this case as synonymous to the substantial, colorless, skeletal, almost immaterial sketch. Then, this sketch approaches the Kantian form of the *Critique of the Pure Reason*. It is not even the painting representation of landscape, but its abstract, regulatory background. Thus it can support a painting landscape; it can also support a landscape architecture proposal, as it approaches a regulatory method of representation, capable of bearing the weight of many different patterns of expression related to landscape perception. In the frame of the Critical Philosophy we may call this representational condition "*transzedental*" (Pelegrinis, 2004, p. 599-601), since it surpasses the boundaries of current shared experience. Related to mind categories and to basic forms of perception, it permits the organization of the polymorphic material of senses into uniform intellectual forms.

¹ Immanuel Kant's original example refers to the concept and form of the dog (ibid. vol. II, A 141, B 181). See also Kant's reference to schematization, in his work *Critique of the Power of Judgment* (Kant, 2005).

² Piaget attributes to schemes possibilities of change, of mutual assimilation and precession "*towards a new organized totality*" (Richmond, 1970, p. 110). Our translation.

³ Bold lettering of the word «*design*» is an editing decision of the initial text.

Therefore, Kantian theory of Schematism indicates formative methods of representation that may be used in design application, and moreover in landscape architecture design. We may accept this last statement as a general comment concerning gnoseology theory, while ascribing to it a particular historic value. At the general level of the theory of cognition, the previous statement underlines the fact that place controlling techniques are related to normative methods of representation, to "*design*" - using this term either to indicate graphic models, or in a wider sense in order to describe programmatic procedures of pre-vision. As a particular historic comment, the previous statement notes that Critical Philosophy, as offered by Immanuel Kant, historically coincides with the maturity of Western societies and their need for regulatory control, additionally accepting the relation of this need to particular techniques of representation, applied in plastic arts, as well as in architecture and landscape architecture.

Scheme, as defined by the environment of culture or civilization

We have just insisted on the statement that the attempt of controlling a place, of designing landscape, as understood during the period of the formulation of Critical Philosophy in 18th century, seemed to be connected to the terms of Schematism. However, if expanding our defining attempt, we may argue that the previous statement is also applicable for landscape perception of places in general.

According to a more elaborated description, landscape approach in terms of design or construction, as well as in terms of perception or cultural interpretation, presupposes schematizing procedures in general. As already stated, Kantian proposal insists on the mediation of scheme, as a general intellectual condition supporting our relationship with the conception of external reality. By expanding the Kantian statement, towards the direction of Jean Piaget's contribution, we may suppose that schematization constitutes an intellectual condition, fed by our relationship with the outside, natural or social environment. Within this context, we may consider schematization as synonymous, not only of an individual's intellectual activity, but also of a social oriented interpretation. Therefore, the schematization refers to regulatory terms corresponding to intellectual procedures, satisfying the approach of Kantian theory. However, it is also characterized by the historic field where each particular case of Schematism emerges from. It finally proves that Piaget's dialectic theoretical assumption of successive schematizations seems applicable not only in the frame of physical time, but also in the frame of historical change.

We can therefore assume that schematization, to return to our previous landscape example, does not only express a generalized spirit of an individual care, determined by intellectual conditions defining human being in a fixed, unhistorical way. It also describes the historical shift of design provision manners that move from the perspective illusionist "*anamorphosis*" of Baroque landscape to the Euclidian clarity of the Dutch garden patterns, in 17th century, to continue with the elaboration of picturesque English landscape architecture, and finally to end up in nowadays attempt to control terms of change.

The history of landscape may, therefore, be apprehended as the history of the successive schematizations of place, differing by historic period, in Euclidian, painting oriented, or topological terms (image E.3.). However, if in the specific case of landscape, schematization may be identified by the attribute of "*locality*", in its general interpretation, the content of the term "*schema*" may be correlated to structural qualities. Thus the scheme becomes a character of the structural elaboration, since it clearly represents organizational terms; organization of individual's intellect, social organization, cultural organization and at the level of obvious perception, organization of expression or construction. After all it is not just a coincidence, the interest that

Jean Piaget attributes to schematization. Piaget is also known for his interference with “*structural*” composition in general, namely for his interference with the theory of “*Structuralism*”.

This structural physiognomy of scheme, its bidirectional certainty according to which on one hand organized structures refer to terms of schematization, while on the other hand the scheme constitutes a structural organization of characteristics, bears the seedbed offered by schematization to the establishment of meaning. If Gilles Deleuze recognizes symbolic order as a substantial element of structure (Deleuze, 1990), we ought to accept an equivalent recognition for the social content of scheme as well. Therefore, the scheme constitutes a social background of meanings organized by civilization or culture or in a better description, it constitutes the impartible expression of meaning. By this last phrase the problem of time priority is raised. What comes first? Landscape schematization, structural organization or its symbolic, “*semantic*” expression? In effect, by repeating the exemplary suggestion for the indivisible formation of the “*sign*”,¹ we may not but accept that each landscape schematization, under theoretical, expressive or constructive terms, attributes immediately social meanings, while, in an opposite direction, the development of symbolic references urges to the choice of schematization.

If we accept perspective as a way to schematize the natural procedure of sight, therefore the naturally given field, or the natural place, and if we accept in addition that perspective possesses a symbolic quality, then we may also agree that the analysis of perception, as attempted by Erwin Panofsky, a descendant of the new-Kantian direction in Marburg Schule, Marburg School of philosophy becomes extremely interesting.

Erwin Panofsky presents *Perspective as a Symbolic Form* (1975), while Ernest Cassirer, in his three volume work *The Philosophy of Symbolic Forms* (1957), chooses to mention, in the introduction of his second volume, the Kantian schematization. However Cassirer is also connected to Marburg Schule and to the new-Kantian direction of philosophy, proving that his consideration of symbolic forms and of their schematic articulation, refer directly to the original introducer of the theory of “*Schematism*”, to Immanuel Kant himself.²

Schematization as the organizational base of design practice in general

We can finally consider schematization as respective to structural organization, since the latter, the recognition and “*construction*” of structure, necessarily implies the selection of substantial structural characteristics, substantial properties that sustain the particular structural elements in unity. At that case, any correlation between elements in broader unities, any synthesis of elements, any structural organization they may have, presupposes schematization, as its base.

The last affirmation could also explain the possible “solidarity” amongst the particular composition practices. The possible reduction to abstract structural relations, may offer suitable

¹ The view that in every “*signifier*”, in every perceptual image, definitely corresponds a “*signified*”, a meaning, constitutes a basic principle of Semiology or Semiotics. Ferdinand de Saussure explains that “*they have often compared this unity with two faces with the unity of man who is constituted by body and soul ... One could think more correctly a chemical composition. Water, for example, is the hydrogen and oxygen compound, if we take each of those elements separately, then none of them has the properties of water*” (de Saussure, 1979, p. 139). Similarly we may use the parallelism between the sign and a sheet of paper, comparing the signifier or the signified with its two inseparable pages. If we could cut back the sheet to its thickness, we should have again two sheets of paper, two pages for each of them. We should gain two new signs, and each would have its own signifier and signified. In no case can we have perceptual reality freed from meanings, neither meaning not related to its perceptual referendum.

² It is worth adding that the theory of Schematism offers an extremely fertile sequence of impacts, which is not limited to the previous association with the theories of Piaget or Cassirer, but grows in a wide number of theoretical proposals from Fichte and Hegel, to the member of the School of Frankfurt.

expressive proposals for several compositional domains simultaneously. Let us suppose this condition expanded to the ultimate degree. We may then imagine the submission of all particular structures to a mass "over-structure", which may include all possible particular compositions, regardless of the particular differences of expressive systems. If however, we avoid this "metaphysical" exaggeration, while maintaining our interest on the structural correspondences in multiple, relative expressive fields, we could theoretically affirm everything that we have already historically discovered; namely, synthetic analogies amongst relative practices, such as painting, architecture, and landscape architecture. Analogies which suggest common terms of schematization or the possibility of applying common abstract schemes in several expressive areas, which imply everything we already discovered by searching historical examples.

Step four: The contemporary epistemic imposition of the landscape intuition

The interest on landscape in general, the architects' interest on landscape specifically, constitutes in a way a characteristic of our times. It is relative, as we have already underlined, to the general direction of the contemporary civilization, to a generalized way of thinking and expression, to a "spirit of the era" from which important cultural intuitions, representative ideologies, artistic expressive tendencies, as well as scientific approaches, rise.

The previous overall presumptions, the previous background which allows knowledge to emerge, Michel Foucault (Foucault, 1966, 1986) characterizes it with the term "epistemic", a term which we have already referred to. With this term it is not the scientific regard that is been described, but a broader cultural atmosphere from which knowledge derives. Therefore, it is not only the general environmental sensitivity of the developed countries population that favors nowadays landscape intuition. Neither is it only environmental scientific approaches that guide our care. Even topological mathematics seems landscape oriented, by choosing natural bas-relief transformation as perceptive equivalent of geometrical surfaces under transformation. However, the study of the "morphogenesis" explored by this mathematical theory refers to a final "structural stability". *Stabilité structurelle et Morphogénèse* (Thom, 1984), is the title of a well-known book by René Thom, known for his interference with topology and catastrophe theory. It obviously concerns the final structural stability of an algebraic approach, capable of ensuring the description of changes, capable of schematizing the terms of change.

The topological-landscape approach traverses, as a broader field intuition, multiple areas of contemporary theory. Psychoanalysis, for example, by developing an older "local", however static description of the psychic processes, moves to a "topological" description, through Jacques Lacan's proposals, in order to demonstrate the terms of their continuity and change (Evans, 2005, p. 284-286). In the field of philosophical theory Gilles Deleuze, in his work *Le Pli; Leibniz et le Baroque*, (1988), also expresses a topological interest, without however insisting on the landscape object. His student and collaborate, Bernard Cache, will successfully attempt the same approach, by connecting the topological formation of the pleat with the electronic design of landscape, in his own book titled *Earth Moves or Terre Meuble* (1983,1995). Thus he will be found in the center of a broader movement regarding landscape design, buildings design, urban organizations or even industrial objects design, having obvious influences from the schematization of the natural ground, in all four previously mentioned cases. Even more specifically he will be related to obvious influences in all four composition domains with earth formations indicating transformational processes of movement.

Conclusive remarks

The historical review of landscape design examples, in the whole range of the modern history, convinces us on the exchange relationships of compositional models developed between this planning field and the fields of architectural and urban design.

Based on this initial historical-theoretical statement, we attempted to introduce, first, the “structural” theoretical position of the patterning of natural elements as characteristic of landscape design.

Afterwards, we attempted to compare this schematization primarily with architectural, and secondarily with painting design patterns.

Finally, based on the previous historical-theoretical findings, we attempted to support the didactics of the History of Landscape and of Landscape Design studios to students in schools of architecture.

At the same time, we underlined the cultural and civilization significance of landscape regard in all previous periods of the modern Western history, emphasizing particularly its strong current epistemic and scientific centrality.

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