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Space-based Landscape Site Perception: Teaching Principles and Methods for the Basic Course of Landscape Architecture

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ABSTRACT

Replacing abstract form-making training with the perception of landscape site has been an important trend in the basic course of landscape architecture. Based on theoretical research and the authors' teaching practice, this article aims to explore the significance, objects, and methods of site perception training. The authors argue that because landscape design is stemmed from the perception and interpretation of site characteristics, experiencing landscape sites must precede form-making training to become the foundation of design learning. Human-scale spaces that concern elements, structure, processes, and feelings for perception, representation, and design would be a suitable object of focus and the starting point for site perception training in basic courses. Five methods for landscape site perception and representation are introduced then, including sketch of space, sequential sections, notation, sketch model, and spatial structure mapping. These methods provide a visualized and operable pathway for site perception, which also involve preliminary design training, offering a reference for the teaching of site perception in basic courses of landscape architecture.

KEYWORDS

Landscape Design;
Basic Course;
Site Perception;
Composition;
Spatial Representation;
Teaching Principles and Methods

HIGHLIGHTS

- Site perception must precede form-making training as the foundation of landscape design learning
- Human-scale spaces are objects of focus and the entry for site perception training in basic courses
- Five methods of representation are developed as visualized pathways for site perception

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1 Introduction

Basic courses are essential for the education of landscape architecture[1], which are known by different names in China's universities such as "Fundamentals of Design," "Preliminary Design," "Fundamentals of Form-making," and "Spatial Representations." Since the early 1980s, modernist "composition" principles originated from the Basic Course at Bauhaus have been introduced and taught in China's architecture and landscape architecture schools[2], and form-composition training is still fundamental in the basic courses till today. However, if not considering site characteristics, space or functions, form-composition training would have drawbacks in design learning[3]. Despite the popularity in China, composition principles are seldom taught in basic courses at landscape architecture institutes in Europe and North America, where more emphasis is put on developing understandings of the landscape site[1][4]~[8]. Nowadays, some landscape architecture schools in China have also started experimental explorations on basic courses mainly by supplementing or replacing composition-principle-based training with the perception of specific sites[9]~[13].

However, these emerging efforts also encounter difficulties in actual teaching. Compared with composition principles that directly address forms, site perception trains students' ability to deal with more complex objects through more diverse approaches. The implications of site perception for design learning may not be as apparent as that of composition principles, or even, freshmen in landscape architecture often find it difficult to get started or struggle to understand the purpose of site perception practice for design learning. Operable objects of focus, intelligible design objectives, and practical design methods would greatly assist students in comprehending the training of site perception.

Based on theoretical research and the authors' teaching practice, this article specifically addresses three questions in the basic courses of landscape architecture. 1) How to understand the relationship between form-making and site perception? 2) What is the main object of focus for site perception? And 3) how to conduct site perception and representation training that targets and benefits design learning?

2 Form-making and Site Perception

2.1 Composition

The concept of "composition" was developed from the art theory research and teaching of Arthur Wesley Dow, an American art educator in the late 19th to the early 20th century. In his book *Composition* first published in 1899, Dow defined composition as putting together line, notan (dark-and-light), and color to create harmony. He proposed five principles of composition: opposition, transition, subordination, repetition, and symmetry[14]. Later, composition concepts were further developed at Bauhaus into a modernist reductionism theory[15]. Johannes Itten, who first devised the Basic Course (*Vorkurs*) at Bauhaus, considered composition the general theory of contrast in brightness-darkness, material and texture, form and color[16], as abstract visual elements. In his teaching, Itten attempted to make students unlearn everything they already knew; only after this, true learning could begin[17]. Wassily Kandinsky, who taught at Bauhaus for eleven years, tried to find the basic elements in different categories of art through "dissection" before investigating their combinations[18].

Compositional principles suggest that elements must be arranged according to certain patterns to create an aesthetic whole. Such notion is not merely typical in modernism, but also exists in post-modern design theories. Christopher Alexander, a pioneer of pattern language, proposed 15 properties of "living structure" in natural and human-made things in his book *The Nature of Order*, including levels of scale, strong centers, boundaries, alternating repetition, local symmetries, contrast, and gradients[19]. These properties were similar with modernist compositional principles while varying at scales and keeping evolving over time.

Contemporary scholars have discussed landscape compositions from linguistic and semiotic perspectives. Designers use compositions to represent design concepts visually, and users perceive the landscape through a meaning-interpreting process[20]. People often use similar spatial-visual vocabulary to describe the elements, properties, and organization of landscapes. For example, "path," "edge," "district," "node," and "landmark" are used to describe the elements in spatial design and perceptions[21][22]; "enclosure," "balance," "tension," "dominance," and "openness" are used to depict the properties of the elements; "connectivity," "sequence," "orientation," "coherence," and "variety" are used to express the organization of the elements. These vocabulary make up the "syntax" of landscape design[20].

2.2 Perception of the Site

American landscape architect Anne Whiston Spirn also believes that there are underlying patterns in landscapes. However, patterns result from many interwoven processes, varying in response to the natural environment and culture and to the idiosyncracies of individuals[23]. Spirn points out that landscape

patterns are essentially described by "fractal" geometry, instead of Euclidean geometry. In the meantime, she does not oppose the use of Euclidean geometry in landscape design, because it may heighten our perception of the natural forms and the processes that produce them[23]. Nevertheless, Spirn does not try to seek universal patterns of the landscape, while she "reads" specific landscape sites. Her reading starts with details before coming to understand the whole through connecting numerous details[24].

Today, site perception by walking through the landscape has become a common method in landscape architecture and its teaching[4][25]. When Spirn was Chair of Landscape Architecture at the University of Pennsylvania from 1986 to 1994, she encouraged James Corner and Anuradha Mathur to reform the curricula focusing on the representation of the site[26]. In the basic course (501 Studio) taught by Mathur, students were asked to traverse across the site, to understand the site through walking, measuring, photographing, plotting, and modeling, and to envision possible ways of interventions[1]. In the design studio taught by Carola Wingren at the Swedish University of Agricultural Science, walking and dance performances are regarded as exploratory design tools, and drawing and sound and video recording are used to represent the landscape features[4]. In the landscape architecture studio at the University of British Columbia, Canada, Susan Herrington asked students to directly experience the site through repeated walking, perceive the site using photographs, texts, and collage, and find design methodologies and construct future experiences[5].

These cases share the same teaching idea—site perception activities are the seed of design. In other words, design originates from how we walk, draw, and measure landscapes[1]. This design process also complies with the notion of "place–writing," which entails not only objectively describing and recording the place, but also subjectively "writing" on it; by "place–writing," one will naturally consider how to observe, represent, and imagine the future outcomes and how to get there[27].

2.3 The Relationship Between Form-making and Site Perception

Site perception does not ignore forms. While considering functions, processes, and forms as a whole, Spirn eventually attributed her theory to a "new aesthetic"[23]. Corner and Mathur used mapping to explore and establish the latent meanings of landscapes, while their mappings imply a "sense of form-composition." In the fundamental studio at China Academy of Art, which practices the site perception methods adopted from the University of Pennsylvania, Ying Zeng encourages students to observe natural phenomena on an authentic site and then abstract and represent them in design languages[10].

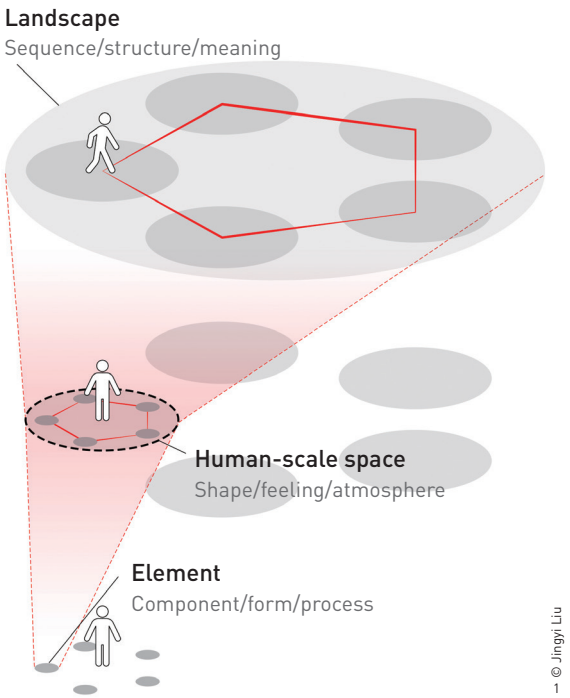
On the other hand, landscape forms are stemmed from the inherent characteristics of the site, rather than abstract or transcendental rules. Landscape design requires designers to first gain an insight into the site characteristics and highlight them using design approaches, so that the users can be affected and resonate with them[7][28]. In this regard, forms, being obviously important for landscape design, essentially result from an in-depth understanding of the site. The sensibility of landscapes is a common faculty for all human beings[20]. However, such an ability may not fully grow unless consciously cultivated and, importantly, directly experiencing the site—this explains the significance of site perception in fundamental education.

According to Edmund Husserl's phenomenology theory, "natural objects… must be experienced before any theorizing about them can occur"[29]. This statement stressed the priority of empirical knowledge. In landscape design learning, if students' ability to perceive the landscape is not developed first, their sensibility of perceiving may be suppressed by normative knowledge. Therefore, although form-making training is necessary, the experiencing of landscape must come first, serving as the foundation of landscape design learning.

3 The Object of Site Perception

After recognizing the priority of site perception, it remains to be answered what should be the main object for site perception. A landscape site can encompass numerous elements and processes, which are broadly related with biology, meteorology, geology, society, etc. When experiencing the site, students may put their attention to plants, animals, hydrology, soil, or even trash, drying clothes, and ragpickers. Although these components and their dynamics have unignorable impacts on the landscape, further in-depth investigations into them would become biology, pedology, or social studies. While the outcomes may be intriguing or innovative, these studies can hardly serve the objective of basic courses, i.e., to understand the landscape, nor can they help with future design learning.

The object of site perception must be both holistic (as a whole) and perceivable (as a unit). Placing in a landscape site, what one directly perceives is, instead of individual elements, an integral environment surrounded by interrelated element—a space defined by the scale of human perceptions. The space enables linkages between multiple things (Fig. 1), including various elements,



1. Human-scale space enables linkages between materials and feelings, local-scale elements and macro-scale structure, and space and time, which is operable for site perception.

2. Site and traverse route for the site perception practices in the arboretum at South China Agricultural University (the red sectors show the locations and perspectives of photographing).

scales, and processes, where space is an objective material entity and also relates to body experience and subjective feelings[9][30]. A space encompasses local-scale elements, while multiple spaces interconnect and form the macro-scale landscape. Such space also closely relates with processes over time: spatial forms are shaped by processes, and the sequence and structure composed by multiple spaces must be experienced through time. However, compared with feelings, structures, and processes, space is more operable for perceiving, representing, and design. As a result, in basic courses, human-scale space would be a suitable object of focus to start with site perception training.

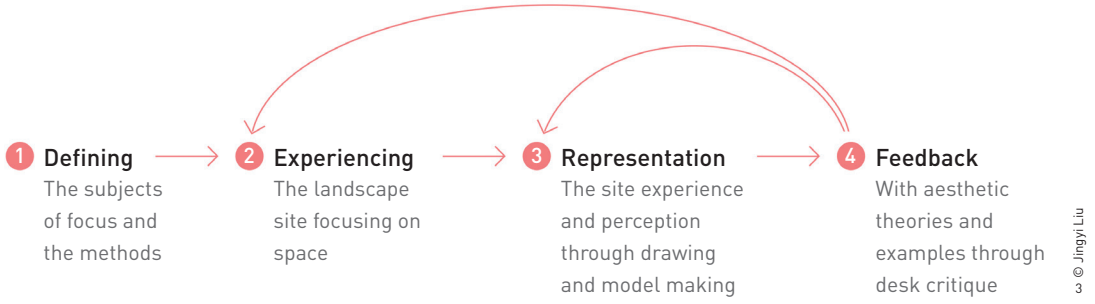
4 Teaching Methods for Site Perception

The authors have been teaching design representation courses for lower-grade undergraduate students in Landscape Architecture and Landscape Gardening at South China Agricultural University since 2018. We gradually explore and develop five methods for site perception and representation practices. These methods result from explorations based on, rather than a direct use of, existing methods[1][4]~[10], for the purpose of more effectively grounding design learning and making their implications more accessible to beginners.

These methods consider site perception, representation, and design as a whole. As a basic course, the emphasis is put on perception and representation. Representation provides a visualized and operable pathway for perception and different representation forms would lead to varied contents and ways of perception. These methods are interconnected and gradually deepened—from an individual space to spatial sequence and configuration, from concrete representation to abstract structure and relationship.

This course designates a landscape site within the university's arboretum for students' repeated experience (Fig. 2). At the foot of a hill, the main traverse route spans roughly 700 m with an elevation variation of around 20 m. The route goes through several spaces with different landscape features, including tree-shaded paths, forest path, pond, and cypress-forest (*Taxodium distichum*) swamp. Some parts on the route exhibit linear spatial characteristics, while the others are open (e.g. the pond and the cypress-forest swamp). The site is less designed and primarily shaped by diverse natural processes and spontaneous human activities.

The course has 32 credit hours in total and lasts eight weeks. The practices are done by students individually with teachers' aid



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and guide. The teaching process for each practice consists of four steps as follows (Fig. 3).

1) Defining: teachers introduce the objects of focus and methods of each practice through classroom instruction, which orients and facilitates students' exploration to avoid deviation from the training objectives.

2) Experiencing: students experience the site in each practice; in the first week, teachers lead students to the site and accomplish a site traverse while discussing with students about the key points for site perception (e.g., how different space boundaries influence one's feelings).

3) Representation: back in the studio, students represent their perceptions of the site using the methods defined for each practice.

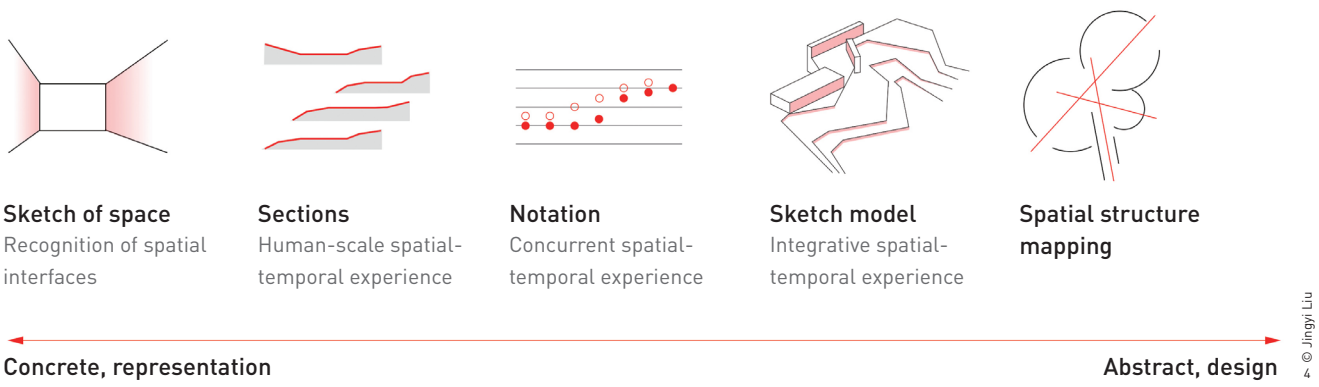
4) Feedback: teachers give feedback on each student's work through desk critique, during which teachers may bring up specific aesthetic theories and demonstrations of form-making examples; form-composition principles should be accordingly offered in the feedback stage for students to improve their work, rather than taught before students' site experience and representation; during desk critiques, students are allowed to bring their works all over together, forming a loop between practice and feedback.

The remainder of this section will introduce the forms and requirements of the five practice methods for site perception and representation (Fig. 4), with student works as cases, and discuss their implications for landscape design learning.

4.1 Sketch of Space

Perceiving the characteristics of space and highlighting them through design are important abilities for landscape architects. However, as space experiencing is so-ordinary in everyday life, students seldom consciously observe and truly perceive spaces. Through guidance and definition, this practice makes students actively perceive a space of interest in the site and represent it using sketch. Sketch is an important means of observing and understanding the site. The goal of sketch practice is not art training, but to help students quickly capture the overall atmosphere of the site[9]. Sketches allow for instant trials and adjustments that can stimulate constant feedback between "seeing" and "thinking"[31][32].

Compared with existing methods that target at two-dimensional images or landscape elements, this sketch practice requires students to focus on a human-scale space. They need to regard the surrounding elements as spatial boundaries and investigate how the height/size, shape, solidity, and dark-and-light conditions affect



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3. The teaching process for each practice
4. Five methods developed for site perception and representation

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5. A student's work of sketch of space

the characteristics and the atmosphere of the space, as well as one's feelings and emotions. Students must actively filter what they see on the spatial boundaries, rather than recording everything. They can also add annotations to make the sketches more analytical and exploratory.

Teachers do not make quantitative recommendation on the size of space, which can be a nearby environment defined by trees, terrains or walls. The sketch of space does not require a strictly proportional drawing; rather, students should correctly represent the relative sizes of different objects. Starting from the space, students can shift their focus to spatial components, investigating the dynamics and interactions in-between, while these must be addressed in terms of how they affect the spatial feature and atmosphere.

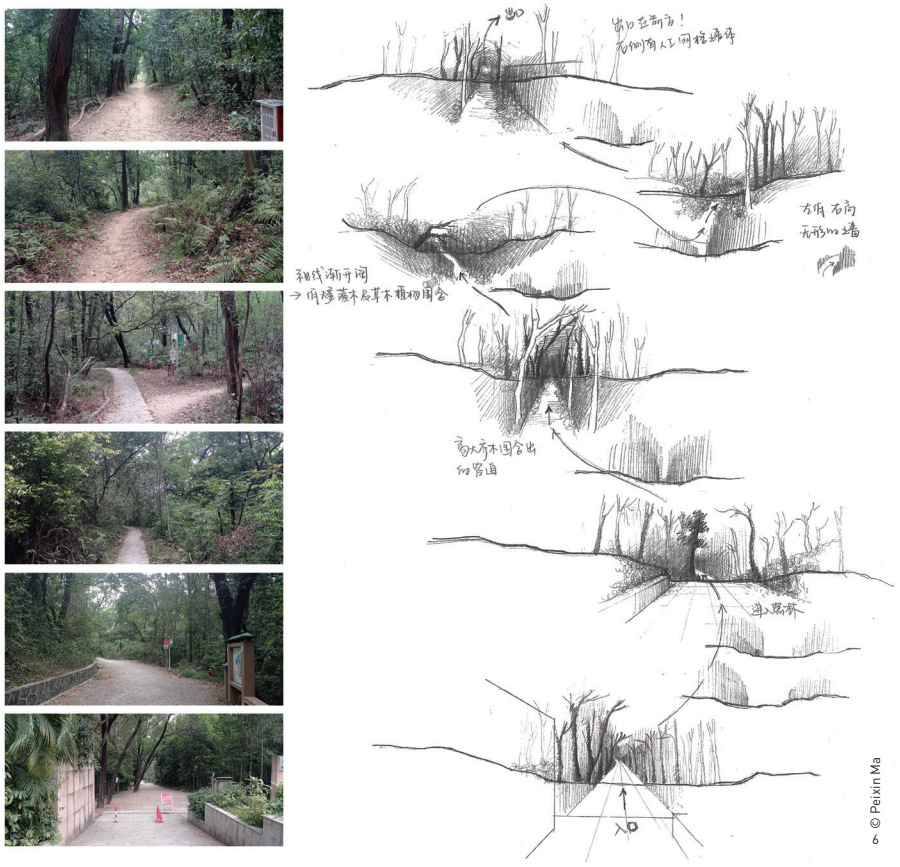
The student's work shown in Figure 5 studied the low-lying cypress-forest swamp. With annotations of perspective lines, shadowed surfaces, and coloring in the center, this sketch depicts the spatial boundaries with directionality, outlining a deep, sacred atmosphere. Regarding the components, the student did not make her efforts on portraying details but caught the vertically stretched forms of the swamp and the complex texture of the ground. The work highlights the understanding of the interactions between water flows and the objects on-ground—gravels and deadwood are carried downstream by the meandering water, and deposit at the bends when water slows down, which in turn impacts the water flow. In this sketch, no component exists in isolation; they appear in the space as a whole, together shaping the spatial characteristics.

4.2 Sequential Sections

Plans emphasize the boundaries between spaces but often ignore the fluidity and interrelations of spaces in reality[33]. In Mathur's teaching, she asked students to draw sections correspondingly based on measurement, in order to improve students' understandings of scales, elevations, and features of the site[1]. Such sections can distinctly help understand and represent topography and soil, investigate body experiences, and contemplate the interactions of objects at different scales[34]. On the other hand, Herrington's teaching rejected using plans in the first "grounding" on the site and encourages students to perceive and represent the landscape based on their direct experience[5].

This practice requires students to represent human-scale spaces with sections, as well as to represent their spatial–temporal walking experience with multiple continuous sections. Students need to first walk through the site without referring to any plans, and draw sections of several nodes that reflect spatial changes. Similar to the practice of sketch of space, sequential sections also highlight the spaces enclosed or defined by different elements that are purposely selected and annotated; the sections may not adhere to a specific scale but should reflect the relative sizes of objects within and between the sections. What differs from the previous practice is that students should consider the arrangement of different sections and the resultant whole at a larger scale. The sections can be organized either in line with the traverse direction or individual's perceptions while walking. Scale, in this practice, is not perceived by quantitative measurements, but rather by the representations of the relationships between elements, spaces, and the whole.

The sequential sections shown in Figure 6 illustrate the student's spatial–temporal experience when walking through a forest. Each section depicts the view and openness of the space at her standing spot and renders an ambiguous spatial shape and atmosphere created by the plants and topography. The sequential sections make up a whole at a larger scale, and the layout of the sections implies spatial and temporal relations in a continuity and rhythm. The curve and arrow annotations indicate the twisting and turning of the traversing and the lead on the movements as the landform rises and falls. The drawing process enables the student to realize that some paths on the site were initially formed by spontaneous stepping, which meander along with the change of the terrain in the mountain valleys, bringing about diverse spatial–temporal experiences.



6. A student's work of sequential sections

4.3 Notation

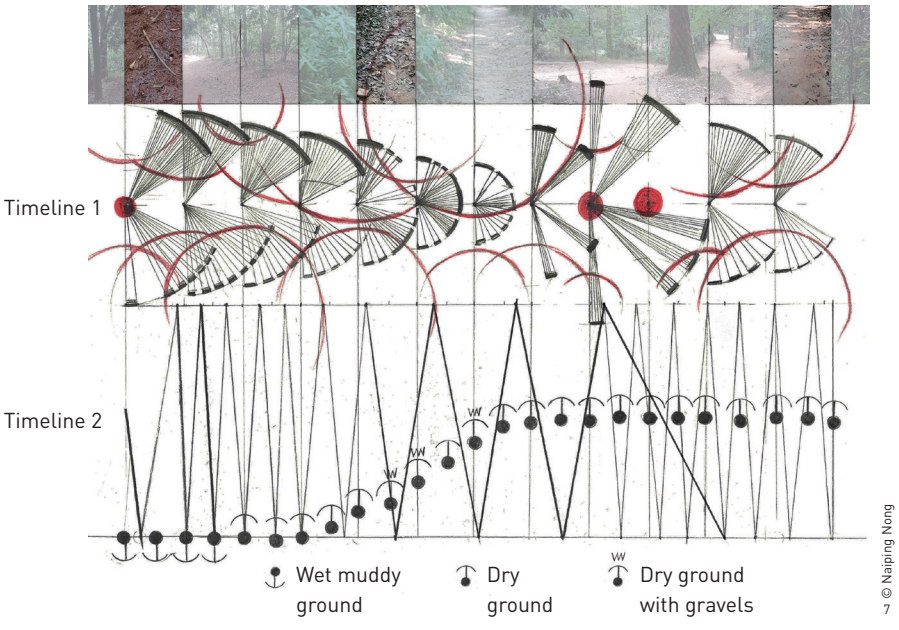
Notation is a method of recording the act or process using abstract signs on timelines, which is commonly used in time-based arts, such as music, dance, and film[35]. Notations are also used in the representation of landscapes' temporal dimension. For example, Lawrence Halprin used "motation" (movement notation) to study people's movements, perceptions, and behaviors in spatial sequences[36]. Valerio Morabito uses "verbal drawings" composed of pictograms, ideograms, and psycho-ideograms to represent forms and spiritual features of landscapes, which are also used in his teaching[37]. Instead of describing the visible image of specific objects, notations explore and reveal the internal structure and relationships that are "invisible"[38].

Like sequential sections, the notation practice in this course also focuses on human-scale spatial–temporal experiences. Meanwhile, notation entails a further information evacuation multi-dimensionally, including multisensory experiences and latent influences of space on human activities. Such multi-dimensional information can be represented on parallel timelines or overlaid on a single timeline. This makes the cartographer's perceptions travel across different moments and information, enabling explorations of their relationships and even creating new relationships (i.e., design). Similar to the previous practices, this notation practice is not to be represented proportionally; nonetheless, the signs on the timeline must indicate the pace of walking, and the spatial elements must reflect their relative sizes in reality.

Notation also requires an active filter of the reality. What is different from the previous practices is that this practice requires using abstract forms. Students need to abstract not only the elements or forms they see, but also the spatial boundaries shaped by the interrelated elements and their walking experience changing over time. Through representations of the features, similarities, and variations of different spaces using simple and unified forms, students can deepen their perceptions of elements and forms onto spatial organization patterns. Such abstraction helps record, evacuate, and translate one's multi-dimensional experiences about the real site—landscape design is also about the representation and reproduction of the dynamic and combined experiences that may affect people.

Figure 7 discusses multiple walking experiences and their relationships on two horizontal timelines. The vertical lines denote basic units of the temporal–spatial experience like the beats in music. On the upper timeline, a series of black arcs from a top perspective annotate the size and solidity of spatial boundaries and the changing views along moving. The lower timeline depicts the influence of the topography, texture, and wetness of the ground

7. A student's work of notation



on one's walking speed. At the overall scale, this notation presents a cross-reference of multiple factors in space and time, revealing their dynamic interrelations—human activities and stepping were less found at locations with steeper slopes, where there are more ground cover plants and shrubs, narrowing one's view and slowing down the walking pace; flat and dry ground at a higher elevation was more compact due to relatively intensive human activities, where arbors grow with open views, attracting people to walk through or stay.

4.4 Sketch Model

The practice of sketch modeling uses 3D models to explore site walking experiences, because physical model is one of the most immediate tools for spatial representation and design[39]. Although digital models have been widely used, they cannot completely replace 3D manipulations because they must be displayed on 2D screens and lack materiality[40]. Moreover, unlike digital models that can be zoomed freely to any scales, physical models are made at a fixed scale, which compels the model-maker to simultaneously pay attention to both the parts and the whole, as well as their relative proportions.

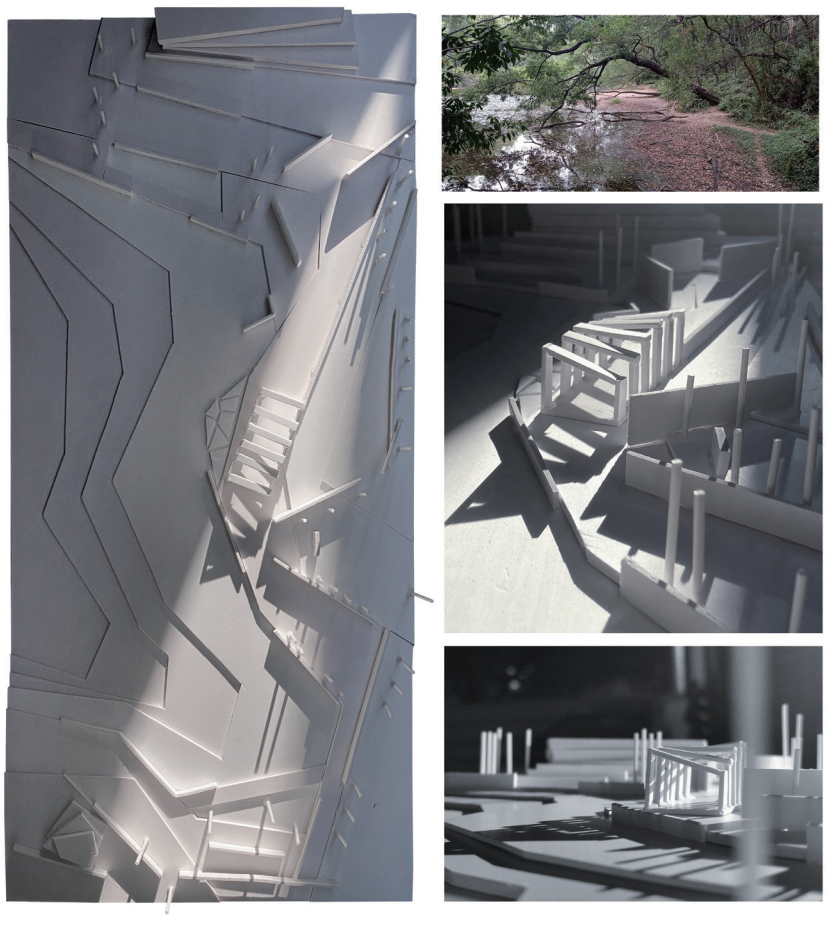
Sketch modeling relies on simple materials and quick modeling techniques. It is similar to 2D sketching, where students can try various manipulations and immediately adjust them, inspiring further perceptions and generating a continuous loop between "seeing" and "thinking." Therefore, sketch modeling well facilitates the learning-by-doing process[41]. In this practice, we encourage students to employ abstract physical forms to represent spatial boundaries and atmosphere—and their variations—to think about the logic of spatial formation. Although such model-making is not a down-scale "duplication" of the site, the relative sizes and proportions of elements, spaces, and the whole should be consistent with those in reality.

The sketch model shown in Figure 8 represents the spatial sequence of a waterfront. The student first created the landform of the site (as basic spatial structure), and then used foam boards and plastic sticks to define the spatial boundaries along the path. Instead of an explicit enclosure, the boundaries, together with the landform, imply a series of spaces that are shaped by erosion and sedimentation as water rises and falls. Deposition takes place at the hollow of the bank, forming a relatively broad flood land. Plants encroach on the water–land interfaces, while human stepping leads to paths and flats on the elevated ground. Without any clear boundaries, water and land, as well as different spaces, interweave and infiltrate each other and grow into a fluid and ever-changing whole. Through model making, the student experimented with various forms and positions of the boundaries in an attempt to replicate the site experience, which is greatly supported by the materials used—foam board is easy-to-cut and allows for quick adjustment.

4.5 Spatial Structure Mapping

Previous practices use sections, notations, and models to facilitate students' understanding of the sequential spatial structure, while the practice of spatial structure mapping extends the explorations towards the spatial structure on a 2D surface. Horizontal extending is a basic property of landscapes, so it is important to perceive and respond to a landscape's horizontal structure in design[42]. Perceptions of spatial structures can be sensitive. For example, in Guy Debord's "Psychogeographic Guide of Paris," a spatial structure was built based on the drifting experience and psychological connections of different spaces[43]. Spatial structures can also be perceived by measurement. For instance, Mathur asked students to use triangulation, in which a triangular

8. A student's work of sketch model



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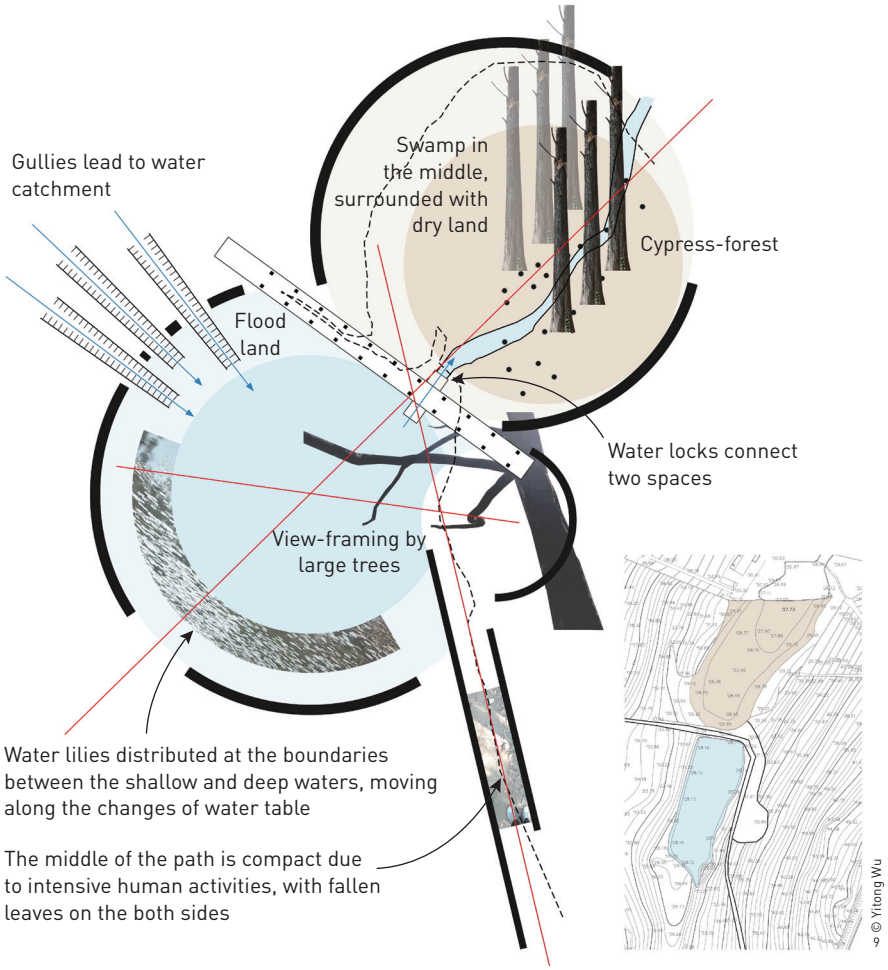


9. A case for spatial structure mapping

network structure is developed through the walking, observing, measuring, and plotting processes[1].

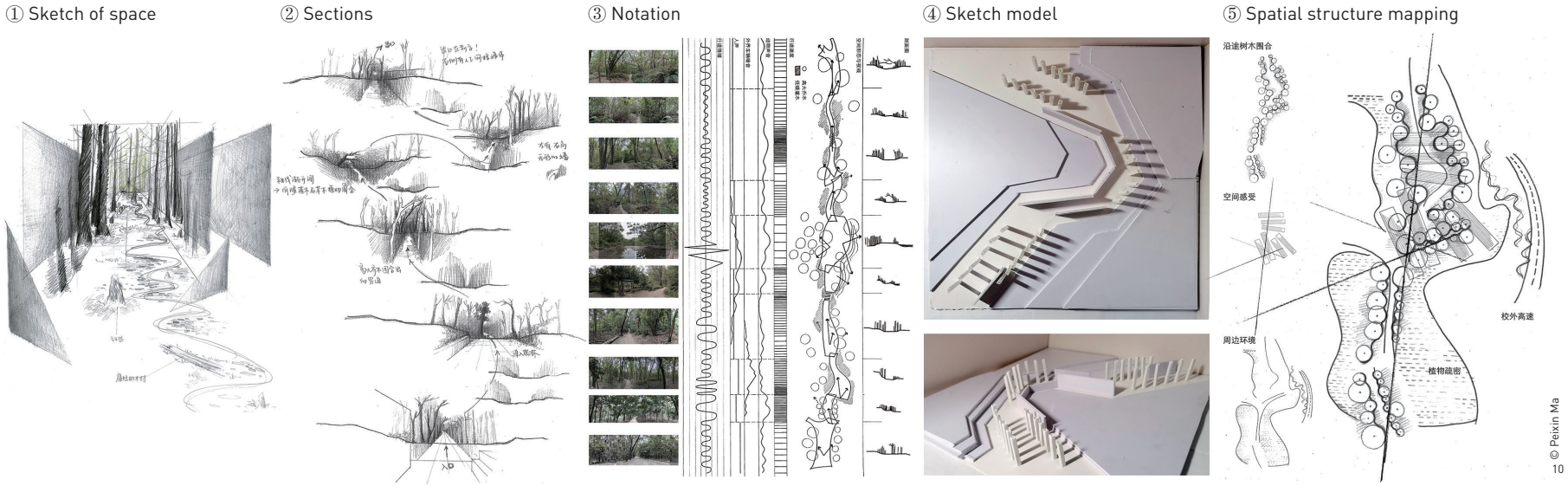
This practice focuses on multiple horizontally-extending spaces, and uses abstract forms to describe and heighten their organizational structures. Compared with triangulation, spatial structure mapping starts from human-scale spaces rather than from elements as points. Moreover, instead of being homogeneous, landscape structures may exhibit aggregation, cluster, nest, or their combinations. Furthermore, we do not designate students a single perceptual framework or abstraction method because individuals may have varied perceptions and interpretations of landscape structures. When students experiencing and representing the site, they can either refer to site plans or follow their feelings without referring to any plan. This practice operates upon continuous transitions between particular human-scale spaces and the whole. The perceptions of scales, like in previous practices, result from the representation of relationships. The view from spatial structures can furhter help students investigate how the spaces are shaped by natural processes or human activities.

In the work shown in Figure 9, the student first extracted the main spatial boundaries to establish a basic spatial structure of the site, and then investigated landscape processes. For example, different shades of blue represent the boundaries of the water body and its dynamics; the annotations of gullies and locks show the analysis of the water catchment process, revealing how the pond is formed and why the water level changes—these processes are also structural components of the site. The superposition of multiple structures portrays the natural and cultural processes that shape this landscape, and the abstract forms summarize and heighten the student's perceptions of the structures and processes. The photo collage further presents the material, forms, and context of spaces, which are also affected by natural processes or human activities—for example, water lilies (*Nymphaea tetragona*) are distributed at the interfaces between the shallow and deep waters; the border between the path and vegetation is blurred, while the middle of the path is more compact due to intensive human activities. The making of collages and annotations can continue with the deepened site perceptions while interconnected on the overall scale.

4.6 Outcomes of the Site Perception and Representation Practices

Figure 10 shows the outcomes of one student using the above five practice methods. In the spatial sketch, the student established the concept of human-scale space through the observation, generalization, and representation of spatial boundaries. Sequential sections allowed the student to realize the variations of spatial boundaries and the dynamic continuity of spatial–temporal experiences, as well as to develop a perceptual understanding of scales. Notations helped the student come to understand the interactions between landform, texture, and vegetations of the ground, and investigated how multisensory experiences and the organization of spatial–temporal sequence affect the walking experience. Sketch model enabled the student to perceive and experience the physical spaces and sequences, thinking about the spatial formation process and the relationship between the parts and the whole. Finally, spatial structure mapping allowed the student to perceive the structure of spaces on a horizontal surface and the processes that shaped it.

While these understandings are gained from and dedicated to the specific site, they may be applied to the perception of other sites. The boundary shapes, organizational patterns, dynamic experiences, and perception methods of spaces could be similar in the cases of, for example, classical gardens or urban parks



10. Outcomes of one student using the five practice methods

and streets, though where the landscape components may largely deviate from those in this site. These practices can lay the groundwork for students in their future design learning to create attractive and versatile spaces and heart-touching experiences.

In representation training, the identification of spatial characteristics also involves design training. Notation, sketch model, and spatial structure mapping, originating from the perception and abstraction of the site characteristics, show high form qualities in many students' works. If these works are integrated into site construction or applied into conceptual garden design, they may stimulate pleasant visiting experiences. Through these practices, students will learn that landscape design is derived from the representation and emphasis of site characteristics and experiences, whereas pure form-making regardless of the site can hardly offer such qualities.

5 Conclusions and Discussion

5.1 The Significance of Site Perception

The significance of site perception depends on the objectives of landscape design—in addition to meeting aesthetic standards and satisfying functional demands, expressing meanings and creating heart-touching experiences are also long-standing goals for landscape design. Accomplishing such goals entails the perception, response, and extension of the existing characteristics of the site itself, rather than imposing "design concepts" irrelevant with the site. The ability to perceive the landscape is a common faculty of human beings, while, for most students, it needs to be trained and sharpened. Basic courses of landscape architecture can foster students' perception ability, making it a foundation for their future knowledge construction, whereas preconceived form-making training may constrain the cultivation of this ability. Many teachers may agree that if form-making training comes first, it often compromises students' sensibility to the site conditions, leading to a habit of imposing form-composition principles on the site. Once such a habit was developed, it could be extremely difficult to change it.

5.2 The Object of Focus in Site Perception

A landscape site encompasses numerous components and processes. If the object of focus is not clearly defined, site perception practices may fail to serve the training objectives. The human-scale space is an ensemble of elements, structures, temporal processes, and body experiences; it is also more operable for site perception and design. Therefore, human-scale space can be a viable starting point for site perception in basic courses. Site perception can help students develop spatial concepts, enabling them to consciously manipulate spatial boundaries and envision the resultant spatial characteristics and experiences. Defining the perception object would not limit students' creativity but tries to steer students' creativity toward the understanding, imagination, and translation of the site itself, instead of unusual objects of focus. Although students would inevitably select and represent the objects subjectively according to their personal interests in site perception,

this subjectivity still should be grown from the site, rather than imposing personal interests or self-expression on the site.

5.3 Five Methods of Site Perception

This article introduced five practice methods for site perception and representation, namely spatial sketch, sequential section, notation, sketch model, and spatial structure mapping. These methods provide visualized platforms for site perception, which also involve preliminary training of design thinking. Additionally, a purpose of these practices is to sharpen students' sensitivity to the landscape, so that whenever they are in a landscape, they can sensitively feel, instead of being blind to, the landscape's specialty and fascinations.

Today, more up-to-date media and technologies for representation offer new opportunities to innovate teaching methods. The methods discussed in this article may be further improved, but the ultimate goal of this effort is to better help students deepen their understanding of the site itself, and to make the design implications more comprehensible for beginners. To future exploration of landscape architecture basic course reform, returning back to the site may be more essential than new representation forms[23].

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基于空间的景观场地认知：景观设计基础课程的教学理念与方法探讨

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摘要

以景观场地的认知取代抽象的构成训练正在成为景观设计基础课程教学的重要趋势。然而，如果缺乏易于切入的关注对象、易于理解的设计意义和针对设计学习的练习方法，场地认知练习可能难以实现基础课程的目标。基于理论分析和教学实践，本文试图深入探讨场地认知的设计意义、关注对象和练习方法。本文认为，由于景观设计源于对场地特质的感悟和调动，对景观场地的体验需要先于造型训练，成为设计学习的基础。以人为尺度的空间实现了要素、结构、过程与感受的连接，且更易感知、表达和设计，因而适合作为基础教学中场地认知的主要对象和切入点。本文介绍了5种景观场地的认知与表达方法，包括空间速写、剖面序列、谱记、草图模型和空间结构图析。这些方法为场地认知提供了可视化、可操作的载体，同时也包含了初步的设计思维训练，可为场地认知在景观设计基础教学中的实施提供参考。

关键词

景观设计；
基础课程；
场地认知；
构成；
空间表达；
教学理念与方法

文章亮点

- 场地认知需要先于造型训练，成为景观设计学习的基础
- 以人为尺度的空间适合作为基础教学中场地认知的主要对象和切入点
- 在现有方法基础上，形成5种表现方法，为场地认知提供载体

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1 引言

基础类课程对于景观设计专业教学至关重要[1]。在中国的不同院校，基础类课程有不同名称，包括“设计基础”“设计初步”“造型基础”“空间表达”等。20世纪80年代初，源自包豪斯基础课程的现代主义“构成”（composition）概念被引入中国建筑和景观设计教育[2]，构成训练至今仍是多数中国院校景观基础课程的重要内容。然而，构成是一种纯造型训练，如果与场地特征、空间与功能脱离，容易损害设计意识[3]。与此同时，欧洲和北美院校的景观设计基础教学较少涉及构成，而更加关注对景观场地的认知[1][4]~[8]。目前，一些中国高校的景观设计专业已开始基础教学改革的实验性探索，其中，通过具体场地的认知来补充或取代以构成为核心的造型训练已成为基础教学的重要变化趋势[9]~[13]。

然而，这一新教学理念在实施中也面临着困难。因为与直接关注形式原则的构成相比，场地认识的对象更加复杂，方法也更加多样，且场地认识与设计的关联往往不如构成训练那样直观。在这种情况下，刚刚接触景观设计专业的学生常感到难以着手，或较难体会到场地认知对设计学习的作用。如果缺乏易于切入的关注对象、易于理解的设计意义和针对设计学习的练习方法，场地认知练习可能难以实现基础课程的目标。

基于相关理论研究和教学中的实践和思考，本文试图探讨景观设计基础教学中的三个具体问题：1）如何处理造型训练与场地认知的关系？2）场地认知的主要对象是什么？3）如何进行以设计为目标的场地认知和表达训练？

2 造型训练与场地认知

2.1 构成

“构成”概念发展于19世纪末至20世纪初美国艺术教育家亚瑟·卫斯理·道的艺术理论研究和教学。在首次出版于1899年的《构成》一书中，他提出，构成是将线、明暗和色彩放到一起，以形成一种和谐，并提出了五个构成原则：对比、渐变、主次、重复和对称[14]。而后，包豪斯进一步将构成发展为一种现代主义的还原论理论[15]。最早设计了包豪斯设计基础课程的约翰·伊顿认为，构成的本质是对比，这种对比存在于明暗、材质、形状和色彩等抽象视觉元素中[16]。在教学中，伊顿认为，需要首先使学生抛弃关于一切事物的既有认知，然后真正的学习才能开始[17]。在包豪斯任教11年之久的瓦西里·康定斯基则试图通过“解剖”（dissection）得到不同艺术门类中的基本元素，然后探讨它们的组合[18]。

在构成原则下，一个符合美学观念的整体中各要素的组织往往遵循一定的模式。这种认识并不完全是现代主义的，也出现在后现代设计理论中。模式语言的先驱克里斯托弗·亚历山大在《秩序的本质》中提出了15种“生命结构”的基本特质，例如尺度层级、强中心、边缘、交替重复、局部对称、对比、渐变等；这些特质反复出现在自然界和人造物中[19]。这些特质大多与现代主义的构成原则类似，只是它们出现在多种尺度上并不断演化。

一些当代学者从语言学和符号学的视角探讨了景观中的构成。构成是设计师对设计概念的视觉化表达，而认识景观的过程是一种意义解读过程[20]。人们常使用相对一致的“空间－视觉词汇”描述景观的要素、特征和组织方式。例如，“路径”“边缘”“区域”“节点”“地标”等描述了空间设计和感知的基本要素[21][22]，“包围”“均衡”“张力”“主导”“开放”等描述了这些要素的特征，“连接性”“序列”“指向性”“凝聚性”“丰富性”等描述了多种要素的组织。这些词汇共同组成了景观设计的“句法”[20]。

2.2 场地认知

美国景观设计师安妮·惠斯顿·斯本同样认为景观具有潜在的模式，但模式源于景观中大量交织的过程，随特定场地的自然环境、文化乃至个体特质而变化[23]。斯本指出，景观的模式呈现为分形几何，而非欧氏几何。同时，斯本并不反对景观设计使用几何形态，因为它们可以强化对自然形式以及塑造这些形式的过程的感知和表达[23]。然而，斯本并未试图寻找所有景观中通用的形式法则，而是主张对具体的景观场地展开“阅读”。这种阅读始于细节，而对整体的认识形成于大量细节的连接[24]。

今天，通过行走体验认识场地成为景观学科的重要方法[4][25]，并广泛应用于景观教学。斯本在担任宾夕法尼亚大学景观系主任期间（1986—1994），曾鼓励詹姆斯·科纳和阿努拉达·马瑟开始以场地再现为核心的教学改革[26]。在马瑟的基础课上，学生被要求在场地中“多次穿越”，通过徒步、测量、摄影、标绘和模型制作等活动认识场地，并设想可能的干预方式[1]。卡罗拉·温格伦在瑞典农业科学大学的课程中，将行走和舞蹈表演作为探索性设计的工具，并以绘画、音频和摄影等方式表达景观特征[4]。在加拿大英属哥伦比亚大学的课程中，苏珊·赫林顿要求学生通过多次行走获得对场地的直接体验，以摄影、信息记录和拼贴形成场地认知，并寻找设计方法、构建未来体验[5]。

这些案例体现出同样的教学理念，即场地认知活动是设计的种子；或者说，设计始于我们如何行走、绘画及测量景观[1]。这种设计过程也可以称为“场地－书写”（place－writing），既包括对场地的客观描述和记录，也包含在场地上“书写”这一主观行为；在“场地－书写”过程中，人们自然会考虑如何观察、描述和想象最终结果，以及实现这种结果的策略[27]。

2.3 造型训练与场地认知的关系

场地认知并非不关注形式。尽管认为功能、过程和形式是一个整体，但斯本最终将自己的理念归为一种“新的美学”[23]。科纳和马瑟试图使用图析（mapping）探索和建构景观中的潜在意义，但这些图析也不乏“构成感”。在践行宾夕法尼亚大学场地认知方法的中国美院基础课程教学中，曾颖引导学生从观察真实场地中的自然现象出发，逐步提取出可作为设计语言的再现形式[10]。

另一方面，景观的形式更多地源于场地本身特质，而非抽象的、先验的法则。景观设计要求设计者体察到场地的特质，并将其通过设计手段充分调动出来，令使用者受到情感触动并产生共鸣[7][28]。形式对景观设计固然重要，但景观设计中的形式归根结底源于对场地现状的深入认知。对景观的感知能力是每个人与生俱来的禀赋[20]。然而，如果缺乏有意识的培养，这种禀赋可能无法得到充分的发展。与此同时，这种能力很难通过在场地中亲身体验以外的方式培养——场地认知在基础教育中

的关键意义也正在于此。

埃德蒙德·胡塞尔的现象学理论强调“自然事物必须先被体验，然后关于它们的理论才能形成”[29]，指出了经验知识的优先地位。在景观设计学习中，如果没有首先发展对景观的认知能力，其敏锐性反而可能被规范化的知识所压制。因此，虽然造型训练仍有必要，但对景观的体验需要先于造型训练，成为景观设计学习的基础。

3 场地认知的对象

在确定了场地认知的主体地位后，场地认知的对象就成为教学面临的重要问题。景观场地包含大量要素和过程，它们与生物、气象、地理、社会等紧密相关。在场地体验中，学生可能对场地中的植物、动物、水文、土壤乃至垃圾、晾晒的衣物、拾荒者等产生兴趣。虽然这些要素及其动态过程对景观有着不可忽视的影响，但如果对这些要素的研究深入下去，很容易变成生物学、土壤学或社会学研究；尽管最终的结果可能十分有趣或新颖，但就低年级的基础课而言，这种研究很难达到认识景观的目的，也较难对未来的设计学习提供帮助。

场地认知的对象必须足以反映一个整体，同时也需是一个易于感知的单元。身处景观场地当中，人们直接感受到的往往不是独立的要素，而是由身边的要素相互关联而围合成的环境，一个以人的感知为尺度的空间。空间实现了多种内容（包括多种要素、尺度、过程等）的连接（图1）——空间既是客观的物质存在，也与个人的身体体验和主观感受紧密相关[9][30]；空间内部包含了微观的要素，而多个空间又连接形成了宏观的景观；空间与时间过程紧密相关，空间中的形态由多种动态过程塑造，多个空间形成的序列和结构也需要在时间过程中体验。与此同时，与感受、结构和过程相比，空间感知、表达和设计更具可操作性。因此，对基础课程而言，以人为尺度的空间更适合作为场地认识的主要关注对象和切入点。

4 场地认知的教学方法

自2018年开始，作者承担了华南农业大学风景园林和园林专业的本科低年级设计表达课程的教学。我们在教学中逐渐探索，初步形成了5种场地认知与表达练习方法。这些方法建立在现有方法的基础上[1][4]~[10]，但并非对现有方法的移植。我们探索的出发点是如何更好地为景观设计学习提供基础，并使其意义更易于被初学者理解。

这些练习将场地的认知、表达和设计视为一个整体。作为基础课，我们将侧重点放在场地的认知和表达上。表达为认知提供了可视化、可操作的载体，不同的表达形式影响了不同的认知内容和方式。这些练习相互联系且循序渐进——从单一空间到空间序列及空间格局认知，从相对具象的表达到相对抽象的结构和关系探索。

为方便学生多次体验场地，本课程为学生指定的场地位于校园内的树木园（图2）。课程将山脚下的一条路径作为主要穿越路径，长度约700m，高程变化约20m。这一路径串联了多样的空间，包括相对宽阔的林荫道、狭窄蜿蜒的林间小路、水塘和一片落羽杉（*Taxodium distichum*）沼泽。路径的一些段落具有明显的线性空间特征，而水塘和落羽杉沼泽则具有相对开阔的空间特征。与此同时，场地现状设计干预程度较低，多样的自然过程和自发的人类活动在场地特征的塑造中扮演了主要角色。

这一课程持续8周，共32学时。这些练习均由学生个人独立完成，并伴有教师指导。每个练习的教学过程大致分为四个步骤（图3）：

1）限定：在课堂上，我们首先对各项练习的主要关注对象和方法做出集中讲解和限定；这些限定为学生的探索确定了方向和边界，以免学生无从着手或偏离训练目标。

2）体验：每一次练习都需要学生到场地中去体验；在第一周的课程中，教师带领全班学生完成一次场地穿越，并结合场地探讨空间感知的要点（如不同空间界面对感受的影响）。

3）表达：学生在回到工作室以后，以各项练习所要求的形式表达对场地的认知。

4）反馈：教师以桌面评图的方式对每一名学生的作业提供反馈，并视具体情况提供形式理论、案例或示范。教学过程避免在学生进行场地体验和表达之前教授构成原则，而在反馈阶段有针对性地提及，并要求学生完善作业；每一次评图中，学生都可以将前几次的作业一同展示，从而形成一种练习和反馈的循环。

下文将结合学生作业案例，分别介绍5种场地认知与表达方法的形式和要求（图4），并探讨它们对设计学习的意义。

4.1 空间速写

体察空间的特质并通过设计手段将其充分地调动出来是景观设计师的重要能力。然而，由于对空间的体验过于司空见惯，学生很少有意识地观察和感知空间。通过引导和限定，这一练习试图使学生有意识地感知场地中令其感兴趣的空间，并以速写的方式表达。速写可以作为观察和理解场地的重要手段，其目的并非美术训练，而是快速捕捉场地的总体形象[9]。速写具有可以快速尝试和更改的特点，因而可以激发“观”与“想”之间的不断反馈[31][32]。

与现有方法相比，本练习要求速写的关注点必须是以人为尺度的空间，而非二维视觉图像或景观要素。学生需要将身边的景观要素理解为空间界面，探究其高低、形状、虚实、光影等如何影响空间的特征和氛围，以及如何影响人的感觉和情绪。这一过程要求学生对所观看到的对象进行主动取舍，即着重观察和表达空间界面，而非对所见对象进行全

面记录。学生还可以在空间速写中添加标注，使空间速写更具分析性和探索性。

我们没有对空间的大小做量化要求，而以个人感知到的附近环境（例如身边的树木、地形、墙体界定的范围）为参考。空间速写虽然无须按一定比例制图，但需要注意不同要素间的相对比例关系。以空间为起点，学生可以向更小尺度的空间组成要素聚焦，探究其动态过程与相互作用，但这些内容必须以它们如何影响空间特征和氛围来展开。

图5所示的学生作业研究了树木园内一片地势低洼的落羽杉林。通过透视线、面状标注和中心部分的少量色彩，这一速写表现了带有指向性的空间界面，空间呈现幽深和神圣的氛围。在要素层面上，学生并没有巨细无遗地描绘场地中的所有细节，而是着重表现了落羽杉竖向延展的形态和地表的复杂肌理。学生着重表达了其对水流与地表物体的相互塑造过程的认知——水沿着地表的沟壑蜿蜒流淌，碎石和枯枝被带向下游，并淤积在沟壑转折处水流较缓的位置，它们又进一步影响了水的流向。在速写中，所有要素都不是独立存在的，它们出现在一个空间整体中，共同塑造了这个空间的特征。

4.2 剖面序列

平面图强调空间的界线，而忽略了现实中空间的流动与关联[33]。马瑟在教学中要求学生在平面测绘的基础上绘制与平面位置相对应的剖面，从而建立对场地尺度、高程和特征的理解[1]。这种剖面表达对理解地形与土壤、探寻身体感知及不同尺度间的事物联系具有重要作用[34]。赫林顿的教学则试图在场地初识中摒弃平面图资料，要求学生根据在场地中的直接体验来认识和表达景观[5]。

本课程的剖面序列练习要求学生以剖面图表达以人为尺度的空间，并以多个连续的剖面再现行走过程中的时空体验。学生首先在不借助平面图的情况下，以行走的方式体验场地，并选择数个反映空间变化的节点绘制剖面。与上一练习类似，这些剖面具有空间速写的特点，着重表现不同要素围合或暗示出的空间，并通过取舍和标注加以强化；剖面可不按特定比例绘制，但要注意每个剖面内和不同剖面间的相对比例关系。与上一练习不同的是，学生还需要考虑多个剖面的组织，及其组成的更大尺度的整体。剖面的组织可以参考路径的平面图，也可根据行走中的主观感受来布置。在这一练习中，对尺度的感知并非来自定量的测量，而来自对要素、空间和整体的相对关系的表达过程。

图6所示的剖面序列记录了林中穿行的时空体验。每个剖面着重表达了该学生所处空间界面的开合，并以明暗色调渲染了由植物和地形暗示出的空间的模糊形态和朦胧氛围。多个剖面构成了更大尺度上的整体，且剖面的布局反映了其间的时空关系，呈现出连续性和节奏感。曲线和箭头进一步指明了路径的蜿蜒和地形起伏对行走产生的牵引。这一过程使学生进一步思考，场地中的一些路径最初由人们自发踩踏形成，它们多分布在山间的谷地并随地形变化而蜿蜒，带来变化丰富的时空体验。

4.3 谱记

“谱记”是一种使用抽象的符号在时间线上表达动作或过程的方法，常见于音乐、舞蹈和电影等基于时间的艺术形式[35]。谱记也用于表达景观的时间维度。例如，劳伦斯·哈普林使用“运动谱记”研究和设想人在空间序列中的移动、感知与行为[36]，瓦莱里奥·莫拉比托使用象形、表意和精神表意符号形成“语言绘画”，用于表达景观中的形式和精神特征，并将其用于景观表现教学[37]。谱记的主要作用并非描述具体事物的可见形象，而是探讨和揭示不同事物之间“不可见”的内在结构和关联[38]。

与剖面序列类似，本课程的谱记练习仍要求学生以人为尺度的时空体验为主要关注对象，同时需要学生进一步挖掘更多维度的信息，既可以包含多种感官体验，也可以包含空间对活动的潜在影响。不同维度的信息可以分别表现在多个平行的时间轴上，也可以在同一个时间轴上叠加。这种表达形式使作者的认知在不同时间、不同信息之间跳跃，为探索它们的关系乃至建立新的关联（设计）提供了可能。与上述的练习类似，谱记练习并未规定比例，但时间轴上的标记须反映行走的节奏，空间要素须反映其在现实中的相对比例。

谱记同样包含了对现实的取舍。所不同的是，这一练习要求学生尽可能使用抽象的形式语言。抽象的对象不仅是所看到的要素或形式，而且要关注不同要素关联形成的空间界面和行走体验及其变化。通过使用简单、统一的形式表达不同空间的特征、共性与差异，学生的认知将从具体要素或形式深入到空间组织的模式层面。这种抽象是对真实场地多维体验的记录、挖掘和转译。景观设计也正是对触动人心的动态、复合体验的调动和再现。

在图7中，学生在两条横向的时间轴上探讨了穿行过程的多重体验及其相互关系，而纵向上的格网类似于乐谱中的小节，标记了时空体验的基本单元。在上方的时间轴上，一系列平面视角的黑色圆弧标记了行走时感受到的空间界面大小、虚实，以及视线随移动的变化。图面下半部的时间轴进一步标注了地形、地表材质和干湿情况对行走速度的影响。在整体上，这一谱记呈现多种因素在时空中的相互参照，揭示了它们的动态关联，即坡度较大的位置上，人类活动相对较少，地表踩实程度较低，因而生长着大量地被和灌木，空间和视野较为狭窄且人的行走相对缓慢；平坦而干燥的高地地表踩实程度较高，因为这里的植物以乔木为主，更便于行走，同时开放的视野更吸引人在此停留。

4.4 草图模型

这一练习使用三维模型探讨人在场地中的行走体验。实体模型是空

间表达和设计最直接的操作方式[39]。虽然计算机模型早已广泛使用，但由于它们必须被显示在二维的屏幕上且缺乏物质性，因而并不能完全再现三维空间中的操作体验[40]。另外，实体模型不能像计算机模型一样任意缩放视野，而要在一个固定大小的整体上操作，因而模型制作需要同时关注局部与整体，以及它们之间的比例关系。

草图模型是一种使用简单的材料和技术快速制作模型的方法。在认知过程方面，草图模型与二维的速写类似，学生可以灵活地尝试各种操作，并在三维空间中得到快速反馈，从而激发进一步的认知，形成“观”与“想”的反馈。因此，草图模型的制作是一种“做中学”（learning-by-doing）的过程[41]。在练习中，我们鼓励学生使用草图模型，以三维空间中的抽象形式概括空间的界面、氛围及其变化，并思考空间的形成逻辑，而非按比例“复制”真实场地中的所有要素和细节。虽然草图模型不必遵循特定的比例，但模型带给人的直观感受必须与现实空间相一致，需考虑要素、空间与整体的相对比例关系。

图8中的草图模型探索了一段滨水地段的空间序列。学生首先制作了一个起伏的地形，形成了基本的空间结构；在此基础上，用泡沫板和塑料棒探讨了一条路径中空间的界面。这些界面并没有形成明确的围合关系，而是与地形共同暗示出一系列空间。这些空间由水面涨落过程中的冲刷和淤积而成，岸线凹陷处更利于淤积，河漫滩也相对宽阔。植被逐渐向水陆交界处生长，而地势较高的边缘被踩踏出小径和平地。水陆之间以及不同空间之间没有明确的分界，而是相互穿插和渗透，形成一个流动、变化的整体。模型制作过程中，学生反复尝试不同的界面形态和位置，试图再现场地的空间体验。泡沫板易于快速切割和改变的特点为这种反复试验提供了极大的帮助。

4.5 空间结构图析

之前的练习运用剖面、谱记和模型认识了空间的序列性结构，空间结构图析练习进一步将视野扩展到场地二维表面的空间结构。景观具有水平向延展的基本特征，对场地结构的认识与回应对景观设计至关重要[42]。对空间结构的认识可以是感性的，例如在居伊·德波著名的“巴黎心理地理导览”中，不同场所根据漫游体验和心理上的联系形成总体结构[43]。空间结构也可以基于测量而被感知，例如马瑟让学生采用三角测量方法，在行走、观察、测量和制图过程中逐渐延伸和认识地物之间的关系，形成一个网络骨架[1]。

这一练习要求学生关注水平向延展的多个空间组成的整体，并使用抽象的语言描述和强化这些空间的组织结构。与三角测量方法相比，这一空间结构认知练习并非从点状的要素出发，而是仍从以人为尺度的空间出发。由于空间的结构可能并非均质，而是呈现出聚集、组团、嵌套或多种结构的组合，且不同个体对结构的认知和理解也存在差异，因而我们并未指定统一的认知框架和抽象方法。学生可以参照场地平面图进行场地体验和表达，也可以不借助平面测绘资料，遵从自己的实际感受开展练习。这一练习需要在以人为尺度的空间与多个空间组成的整体两个尺度间切换。与之前的练习一样，对尺度的认识来源于对事物相对关系的感知和表达。从空间结构出发，学生还可以进一步探索自然过程和人类活动对空间的塑造。

在图9所示的作业中，学生首先概括了场地中的主要空间界面，构建了场地的基本空间结构。在空间的结构之上，学生进一步探讨了其中的景观过程。例如，不同深浅的蓝色表现了水岸边界和水位的动态变化；冲沟和水闸的标注分析了场地的汇水过程，揭示了水塘的形成及水位变化的原因——这些过程同样是场地中的结构性要素。多种结构的叠加展现了自然与文化过程对景观的塑造，抽象的形态概括并强化了对这些结构和过程的认识。微观尺度上照片的拼贴进一步表达了空间的材质、形式与氛围，它们同样受到自然过程或人类活动的影响——例如，受水位变化的影响，睡莲（*Nymphaea tetragona*）多分布于浅滩和深潭交界处；道路边缘与植被的界线相对模糊，而道路中部土壤的踩实程度更高。在一个基本结构的基础上，拼贴和标注过程可以不断深化，对场地的认知也将更加深入，同时在整体尺度上保持关联。

4.6 场地认知与表达练习的成果

图10展示了一名学生连续运用上述5种练习方法的成果。在最初的空间速写中，学生通过对空间界面的观察、概括和表达，形成了以人为尺度空间的概念。断面序列使学生认识到空间界面的丰富性和时空体验的动态连续性，并初步建立对不同尺度的感性认识。谱记练习中，学生进一步认识了地形、地表质地和植被的相互塑造，挖掘了时空序列中的多种感官体验及空间组织对行走体验的影响。草图模型使学生建立对空间和序列的三维感知和体验，思考空间形成的过程，并进一步认知局部与整体之间的比例关系。最终，学生在空间结构图析中认识了空间在水平表面上的结构及其背后的塑造过程。

这些认识一方面专属于这一特定场地，同时也可以迁移到对其他场地的理解中。例如，在古典园林、城市公园和街道中，虽然场地的组成要素大相径庭，但空间的界面形态、组织模式、动态体验和认知方式具有相似性。这些练习可以为学生在未来的设计学习中创造宜人、变化的空间和触动人心的体验提供经验基础。

场地表达中，对空间特征的提炼过程也包含对设计思维的训练。谱记、草图模型和空间结构图析一方面源于对场地特征的感知和抽象；另一方面，不少学生的练习成果单独来看都颇具形式感，如果结合到场地建造中或作为创意花园设计，应该可以激发丰富的游观体验。通过这些训练，我们试图使学生认识到，景观设计源于对场地空间特征和体验的再现与强化，而脱离场地的造型设计很难具有这种丰富性。

5 结论与讨论

5.1 场地认知的意义

场地认知的设计意义源于对景观设计目标的理解——除了符合美学标准、解决功能问题以外，传达意义、触动人心同样是景观设计长久以来的追求。实现这一追求需要对场地现有特质进行认知、回应和延伸，而非赋予场地一些无关的“设计概念”。对场地的感知能力是人类与生俱来的禀赋，但需要通过训练使其更加敏锐。基础教学需要挖掘和培养学生的这种禀赋，使之成为他们未来知识建构的基础，而先入为主的造型训练可能压制这种禀赋及其敏锐性——很多教师或许有这样的经验，如果造型训练先入为主，学生容易丧失对场地现状的敏感性，形成在将美学原则强加于场地的设计习惯。一旦形成这种习惯，再想改变则十分困难。

5.2 场地认知的关注对象

景观场地包含大量的要素和过程，如果场地认知练习中不对认知对象加以限定，可能会使这种练习偏离基础教学的目标。以人为尺度的空间形成了要素、结构、时间过程与身体感受的连接，且对于场地认知和设计而言更具可操作性，因而更适合作为基础教学中场地认知的切入点。场地认知可以帮助学生建立空间的意识，从而在设计中有意识地塑造空间界面，并设想这种空间具有怎样的特质、能够激发怎样的体验。对认知对象的限定并非限制了学生的创造性，而是试图将其创造性引向对场地本身的理解、想象和转化，而非奇特的关注对象上。虽然在场地认知过程中，学生必然会根据个人兴趣对认知对象进行主观筛选和表达，但这种主观介入仍需从场地本身出发，而非将个人兴趣或自我表达强加于场地。

5.3 场地认知的方法

本文介绍了5种场地认知和表达练习方法，包括空间速写、剖面序列、谱记、草图模型和空间结构图析。这些方法为场地认知提供了可视化的表达载体，同时也包含了初步的设计思维训练。除此之外，这些练习的一个重要目的是使学生通过训练提升景观感知的敏锐度，在身处景观时能敏锐地感受到其特质，而非对其动人之处视而不见。

今天，更加新颖的表达媒介和技术为教学方法的进一步创新提供了可能性，我们也在对这些方法进行不断探索和改进。然而，方法创新的最终目的是更好地帮助学生更深入地认识场地本身，并使场地对设计的意义易于被初学者理解。在景观基础教学改革的探索中，回归场地本身或许比形式创新更加重要[23]。

致谢

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图 1. 以人为尺度的空间实现了物质与感受、微观要素与宏观结构、空间与时间的连接，且对场地认知而言更具可操作性。
图 2. 位于华南农业大学树木园的认知练习场地和穿越路径（红色扇面表示照片的拍摄位置和视角）
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