

# 身体与体验 ——以场地为核心的景观基础教学

## BODY-SCALE PERCEPTION AND EXPERIENCE: A TERRAIN-BASED FOUNDATION STUDIO OF LANDSCAPE ARCHITECTURE

### 1 引言

2015年11月，在东南大学一场关于设计方法的研讨会上，香港中文大学顾大庆教授说道：“我于20世纪70年代末到80年代初在东南大学接受的建筑学教育是纯粹的以绘画为核心的训练。一年级我们花了很多时间训练绘图和渲染技巧，却不清楚这些与建筑设计有什么关系。”<sup>[1]</sup>这种以绘画为核心的传统建筑学基础教育，于20世纪20年代起被中国建筑学的先驱们从美国宾夕法尼亚大学（后文简称“宾大”）引入国内（以东北大学为典型代表）并逐步影响到全国建筑院校的教学工作<sup>[2]</sup>，并继而为环境艺术、景观设计等相关设计学科所借鉴。然而，对景观设计学来说，直接借用以建筑学为母体的基础课程是否合

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### 摘要

以绘画为核心的传统建筑学教育深深影响了环境艺术、景观设计等新兴设计学科的基础课程的教学方式。然而，对景观设计学来说，直接借鉴以建筑学为母体的基础课程是否合适？是否还有其他方法可用于引领景观学科的基础教学？在本文中，笔者以自身在中国美术学院建筑艺术学院景观设计系进行的以场地为核心的景观基础课程教学实验为例，介绍了通过场地初识、熟悉、探索和演变4个步骤进行场地设计的方法，希望为中国当前的景观设计教育与实践提供借鉴。在该课程中，笔者尤其强调从多重感知角度体验景观，并注重探究事物本质以及事物之间的联系与共性。

### 关键词

景观设计学；场地；体验；身体；教学法

### ABSTRACT

Traditional design education and training in China, including Environmental Art and Landscape Architecture, is essentially grafted from methods of architectural painting. The time has come to re-examine and reflect that is it appropriate to borrow teaching methods directly from Architecture and are there other methods that are developed from the intrinsic qualities of Landscape Architecture and can be used for disciplinary teaching? This article introduces a set of methods of terrain-based field investigation and site documentation, including outlining, mapping, representation, and intervention, which were developed by the author for a design studio in the Department of Landscape Architecture, School of Architecture at the China Academy of Art. The perception of landscape through multiple senses and the exploration on the unseen causes of appearance, as well as the relationships and connections within the terrain, are emphasized in such training.

### KEY WORDS

Landscape Architecture; Terrain; Experience; Body; Pedagogy

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1. 在户外场地中测量
  2. 在室内讲评作业
1. Field mapping
  2. Student assignment review in the classroom

适？是否还有其他方法可用于引领景观学科的基础教学？

在过去7年里，笔者在中国美术学院建筑艺术学院景观设计系进行了一场以场地为核心的本科生景观基础课程教学实验。该课程是基于笔者于2004~2007年间在宾大学习的经验，并结合本学院的具体情况进行调整后的结果。其将教学课堂从室内转移到户外，通过带领同学们在真实的场地中行走、观察和测绘，培养他们形成看待自然景观的新视角，探讨记录景观的新“语言”。在这个为期10周的课程中，所有任务都以场地为核心展开（图1，2）。该课程意在强调：在探察场地时，不仅要运用视觉，还需调动其他感知器官进行体验；绘制内容要从对事物表象的描绘转向对事物本质（即形式背后的作用力）的探讨，并注重表达事物之间的联系与共性。

本文将从对景观性质的解读开始，追溯在真实场地进行景观教学的学理，并通过场地初识、熟悉、探索和演变4个连续步骤来讨论场地的感知及设计方法。

## 2 课程构思基础：景观的三种特性

在现代科学技术如此发达的条件下，即使不去现场，我们也可以获得场地的各种信息和数据。然而，宾大景观系前系主任詹姆斯·科纳在其于1992年发表的《再现与景观》一文中指出：“景观是一种在感官层面和现象学语境下有着极其丰富内涵的媒介……没有任何东西可以替代或等同于身体在这些场所中获得的直接体验，更不用说只是

## 1 Introduction

In November 2015, at a seminar on design methodologies at Southeast University, Gu Daqing, professor of The Chinese University of Hong Kong, said: “The architectural education I received at Southeast University from the late 1970s to the early 1980s was purely concentrated on the painting method. We spent a lot of time on learning drawing and rendering techniques in the first year, but had no idea how could these techniques be used in architectural design.”<sup>[1]</sup> The traditional teaching methods of Chinese Architecture based on painting was introduced by Chinese architectural pioneers at universities (such as Northeastern University) who graduated from the University of Pennsylvania (UPenn hereafter) from the 1920s to the 1930s<sup>[2]</sup>. These methods had further been grafted and adopted in the education of other design disciplines including Landscape Architecture and Environmental Art. Today, it becomes important to ask whether Landscape Architecture should develop its own methods for essential capability education and training?

Over the past seven years, the author has developed a terrain-based Landscape Architecture course for field investigation and site documentation at the Department of Landscape Architecture, School of Architecture, China Academy of Art. This course was stemmed from the author’s experience as a student at the UPenn from 2004 to 2007 and altered to the current curriculum of the Department. Unlike knowledge imparting through indoor classrooms, this course teaches students to walk, observe, and survey in real landscapes, and to explore the landscape through new methods of recording and representation of a given terrain (Fig. 1, 2). During the 10-week studio, students were expected to use all their senses — sight, smell, and sound — to notice and represent relationships and connections between things in the landscape, be it seen or unseen.

The paper interprets the intrinsic characteristics of Landscape Architecture and highlights the importance of perception to landscape design, and then introduces a set of methods of authentic terrain-based field investigation and site documentation, including outlining, mapping, representation, and intervention.

## 2 Three Characteristics of Landscape

Site data is readily available without ever leaving a computer. Why then is going to a site in person needed? In the 1992 essay “Representation and Landscape,” James Corner



一幅图画。”他强调，景观所特有的空间性、时间性和物质性这三种特征使景观设计不同于其他可复制的艺术形式<sup>[3]</sup>。

## 2.1 景观的空间性

“景观无所不在”<sup>[3]</sup>。景观的空间体验强调身体在空间里的穿行、穿越和漫游所带来的感知体验，而非空间所呈现的视觉形态。科纳认为，景观不是单一空间里的风景画，其空间性依赖于作为主体的人在场地的长久“居住”<sup>[4]</sup>。感知现象学家莫里斯·梅洛-庞蒂也指出，感知和体验来自于身体在空间和环境中的运动<sup>[5]</sup>。

## 2.2 景观的时间性

景观会随着时间的推移而不断演变。正如一处景观不能在空间上被剥离为某一单一的视觉维度，它也不能在时间上被冻结为一个单一的时刻。对场地和场所的了解是通过对各种碎片化事件的长期积累而获得的<sup>[3]</sup>。这种时间性意味着景观不仅需要被反复阅读，还要在不同的时间、天气条件和事件背景下进行阅读。

## 2.3 景观的物质性

景观的复杂性在于其是由多种材料元素组成的实体媒介。正如同科纳所强调的，“物质指的是用于组成事物的原始的、粗野的原料……物质必然会具有物质性，而这种性质只有通过通过对事物的触觉和身体的感知才能被更好地理解。”<sup>[3]</sup>

因此，通过在真实的场地中采用看、听、闻、触摸等方式（如亲手抓到树枝、树叶或闻到泥土的气味）在身体感知与构成场所的材质之间建立关联至关重要。景观设计学不仅注重视觉上的“观看”，更加强调整作为主体的人亲自在场地内运用更多其他感知方式来解读场地。如何设计多种教学方法以唤起身体在场所中的漫游、穿越等体验，并在实际课程中付诸实践，是景观设计教育者亟需思考的问题。

## 3 课程教学内容：4个操作步骤

景观的空间性、时间性和物质性特征要求只有主体通过在真实的场地中反复行走、阅读、分析，才能更好地感知和体验场地。因此，

wrote, “landscape is a kind of medium which has extremely rich connotation in the sense level and phenomenology context... nothing can replace or equate to the direct experience that the body obtains in these places, let alone only a picture.” For Corner, a landscape is defined by three characteristics: spatiality, timeliness, and materiality. These characteristics make landscape design different from other forms of replicable art<sup>[3]</sup>.

### 2.1 The Spatiality of Landscape

Landscape is everywhere<sup>[3]</sup>. The spatial experience of a landscape reflects personal sensory experience of one's body, rather than the visual form what it presents. This is in line with Corner's position that the landscape is not just a painting from a single view, but a space deeply shaped by humans' long-time living-upon activities<sup>[4]</sup>. Similarly, perceptual phenomenologist Maurice Merleau-Ponty has noted that perception and experience comes from the body movement in space and environment<sup>[5]</sup>.

### 2.2 The Timeliness of Landscape

Landscapes evolve over time. Just as a landscape cannot be spatially stripped into a single visual dimension, nor being in time. Knowledge of sites and places is obtained through long-term accumulation of various fragmented events<sup>[3]</sup>. This timeliness means that landscapes need to be read repeatedly, and in different times, weather conditions, and movements.

### 2.3 The Materiality of Landscape

The complexity of the landscape comes from its composition as a physical medium composed of a variety of material elements. Corner emphasized, “matter is the raw, brutish stuff from which things are made... materiality is the quality of being material and is best understood through the tactile and bodily perception of things.”<sup>[3]</sup>

Establishing a connection between physical perception and materiality through seeing, hearing, smelling, and touching real landscapes is the key to reading a landscape. For example, students are often asked to touch trees or leaves or to smell soils to have an impressive perception of the tangible details on the site — visual “viewing” is an important but not the only way to reading sites. Landscape Architecture educators need to create teaching methods that encourage multiple senses and experiences of landscape terrains through pedagogical innovation.

## 3 A Four-Stage Landscape Design Studio

Repeatedly walking, reading, and reflection could help us perceive and experience landscape at a body scale. Through four

3. 梅家坞场地地形图，图中数字表示10个小组分别所在的位置。
4. 俯瞰整个场地
3. Topographic map of Meijiawu. The numbers show the location of each group.
4. Overlook of the site

笔者提出了场地初识、熟悉、探索和演变4个连续性步骤，将场地信息转化为支撑设计的要素的可能性。

课程项目场地位于杭州市梅家坞地区，由两座分别高30m和70m的茶山和中间的一条泄洪沟构成，东西向跨度约300m左右。场地内既有自然林地，也有人工建造的茶田和村庄（图3，4）。我们把全班30位同学分成10组，每组3位同学，以个人和小组合作相结合的方式进行场地教学。

### 3.1 场地初识

场地初识强调人初次到达场地后的直觉与印象，产生于开始思考之前，且只有一次。人类对自然的认知始于行旅，所以我们将行走视为初次接触未知场地的重要方式之一。然而，基于设计学科的“行走”与通常意义上的游览景点、游山玩水有着根本性的差异。

在本课程中，场地初识阶段的训练分为两个部分：第一部分围绕文字描述、速写与拍照三个基于不同媒介的任务来展开；第二部分则是利用第一部分的成果进行拼贴和编辑。

第一部分的第一个任务是让每个学生用一小段文字概述其初到场地的个人感受、所看到的场景与当时的心情等。这种描述能清晰地反映出每个人兴趣爱好与关注重点的差异。第二个任务强调运动与连续性，学生们需要在场地上找到一条自己感兴趣的路径，在3分钟内以

continuous stages of outlining, mapping, representation, and intervention, the studio exposes possibilities by quarrying site information to inform design interventions.

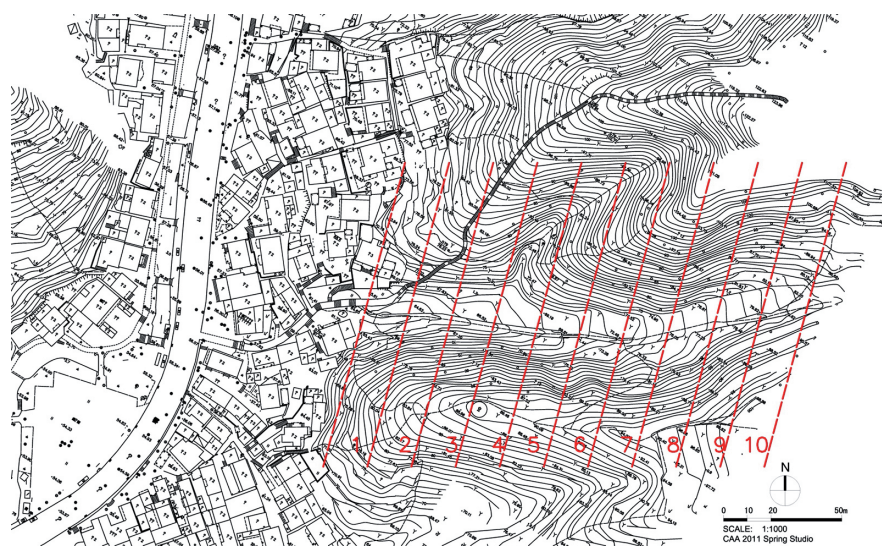
The course site was in Meijiawu, Hangzhou. The site consists of two 30- and 70-meter-high tea growing hills and an east-west spillway spanning 300 meters in the middle. The site also contains natural woodlands and constructed tea fields and villages (Fig. 3, 4). The class of 30 students was divided into 10 groups, with three students in each group. The course was conducted in combination with individual and group work.

### 3.1 Site Outlining

Site outlining responds to initial intuition and impression of a given terrain. As one of the significant ways to connect with the unknown or unseen, walking in design disciplines means something fundamentally different from sighting or touring.

The studio divides this outlining stage into two parts: the first includes three tasks of text description, sketching, and photography; the second is to collage what is found or recorded in the first part.

The first task requires each student to outline their personal response to the site using text, which immediately reflects differences in the interest and focus of each person. The second task, emphasizing motion and continuity, asks students to find a path on the site, and to draw ten continuous A5-sized sketches about ten evenly spaced nodes using charcoal bars. The sketches



同样的间距连续画10张A5大小的速写（图5），且只能使用木炭条，而非常用的细铅笔。这种对画笔、纸张和时间的限定能够引导学生快速捕捉场地的总体形象，使其免于拘泥细节。第三个任务是用拍照的方式记录场地。拍摄任务被分成两个步骤，第一步是为场地的天空（上）、中间区域（中）与地面（下）各拍摄一张实况照片并重复10组，通过30张照片来记录场地的真实情况（图6）；第二步是对场地内感兴趣的特征进行连续拍摄，例如场地的边界、场地内的植被状态、石头与水的关系等（图7）。

虽然第一部分的文字、速写和拍照与通常意义上的“场地踏勘”具有一定的相似性，但基于第一部分的素材进行的第二部分训练则使得该课程大大区别于传统课程，是一种从绘画转向设计学的基础训练。第二部分要求学生以拍摄的地表照片为基本素材，拼贴成一张110cm×15cm的带状图片。学生需围绕一个特定的主题切入场地，如“边界”或“光线”，进行从彩色照片到黑白照片再到尺规描线和3D建模（即从具体到抽象）的编辑训练（图8，9）。这是一个逐步凝练的过程，可以训练学生对场地的某一类“特征”进行系统提炼和分析，最后获得“形式”。这个过程的核心是在自然表象与内在原因之间建立联系，使学生把看到的自然现象、特征与其背后的影响因素（如天气因素、人工干预或经济利益驱动）进行关联思考。因此，提炼的过程并非如照相般完整地表达所有元素，而是有目的地取舍，对提取出的某一物体的形式以及形成这种形式的内在和外力因素进行分析、思考。

should be drawn within three minutes (Fig. 5). The limitation on drawing tools, paper, and time helps students quickly capture the overall atmosphere of the site while freeing them from the site details. The third task is to record the site through photography, which requires students to take one realistic photo of the sky (upper), eye level (central), and ground (bottom) and to repeat this for 10 groups of pictures, resulting in 30 total site photos (Fig. 6); students are then asked to continuously take photos of interesting characteristic and subjects in the site, including measured aspects like boundaries of the site, and material qualities like vegetations on the site, or the relationship between stones and water (Fig. 7).

The text, sketches, and photographs in the first part have some similarities with the usual site reconnaissance, but the second part of the training based on the materials of the first part is why the studio is significantly different from the traditional one. This basic training is necessary for students to switch from painting to design.

For the second part of the exercise, the students are required to collage a series of rectangular strip pictures at 110 cm × 15 cm using the photographs taken in the first part. Students are expected to work on specific topics, such as boundaries or light. As part of this activity, students are expected to translate their thinking into abstract forms through color

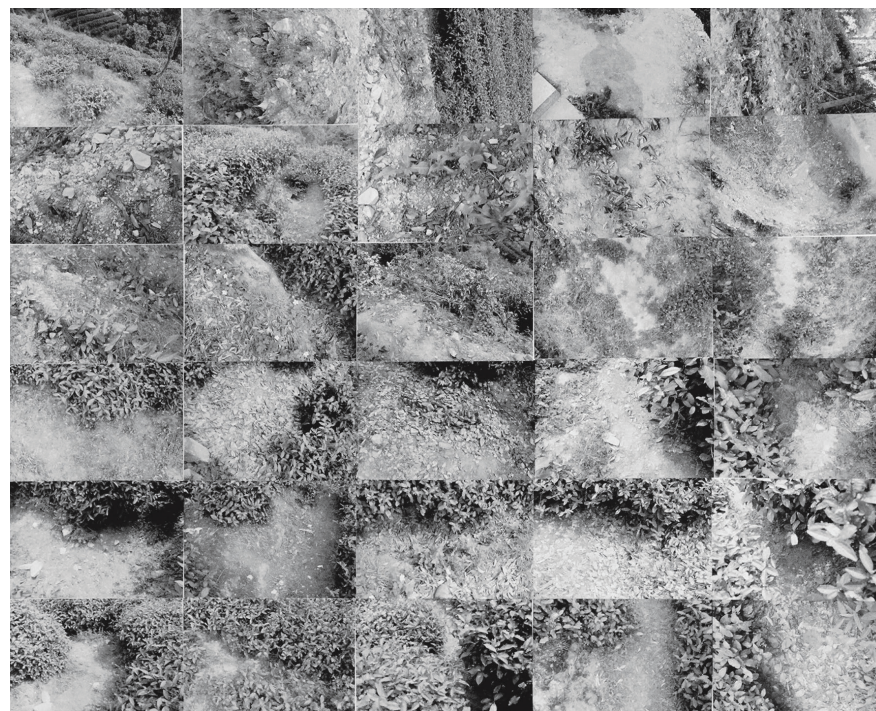
5. 连续速写
  6. 连续拍摄
  7. 连续地表拍摄
  8. 尺规线描
  9. 长条3D模型
5. Continelous sketches
  6. Continelous photographs
  7. Continelous photographs of the ground
  8. A ruler-and-compass drawing
  9. 3D strips



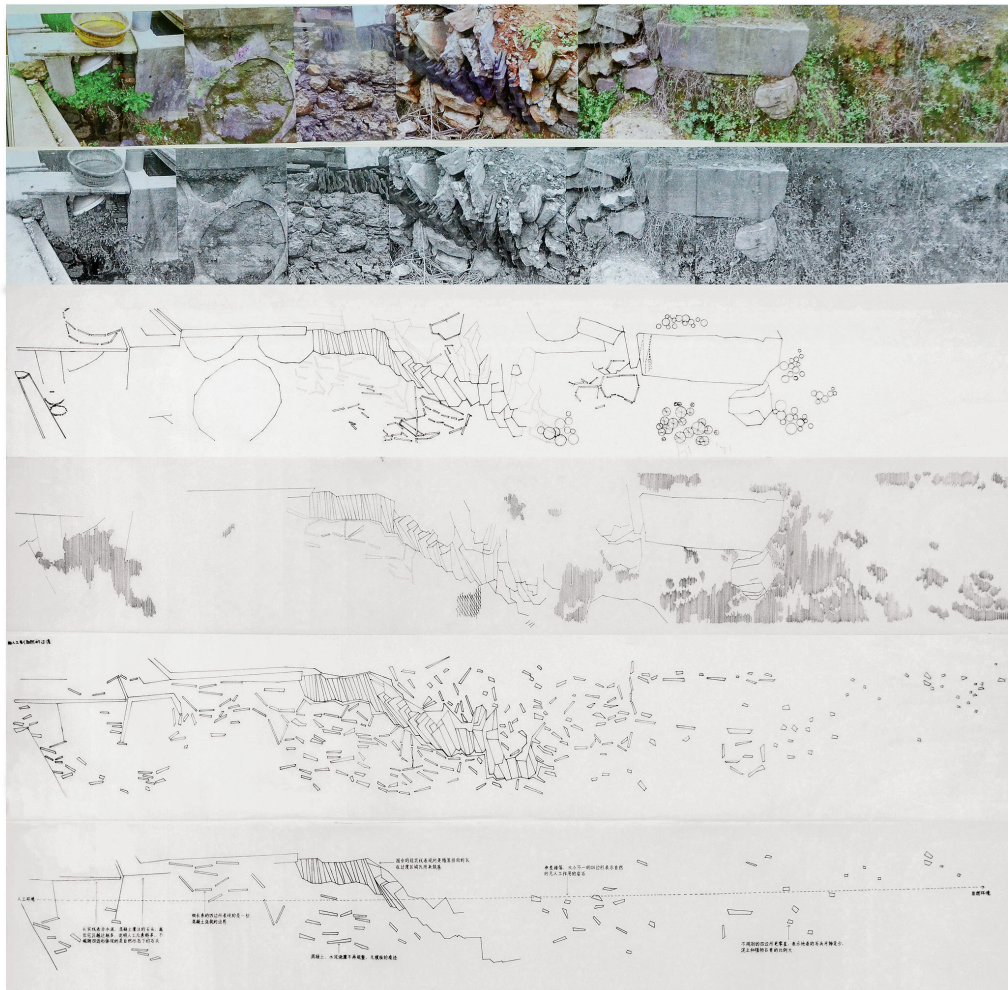
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6 © 董佳



7 © 董妮



田瑾

### 3.2 场地熟悉

场地初识的成果是线性的路径感受,或是主体自身凭直觉对场地的部分了解,其中涉及的场地区域与范围并不全面,我们还需要一种覆盖性的方法来全范围地熟悉和了解场地。

因此,课程第二步要求学生采用三角测量法通过丈量来熟悉场地。不同于基于现代测绘仪器的测量方法,这种方法要求学生使用绳子、尺子、铅笔和圆规等传统工具进行测绘,强调主体亲自穿越场地,将身体体验与场地特质相结合,同时通过在测量过程中发现的地理、人文元素加深对场地地方性与文化性的认识。<sup>[6]</sup>

现场工作可以分为两个步骤:一是三角测量,即三个学生一组,两个人测,一个人绘,完成分配区域约4 000m<sup>2</sup>的三角网络测绘;二是在基于三角测量形成的尺规线描图上,用线、点等抽象语言对场地信息进行记录和分析。

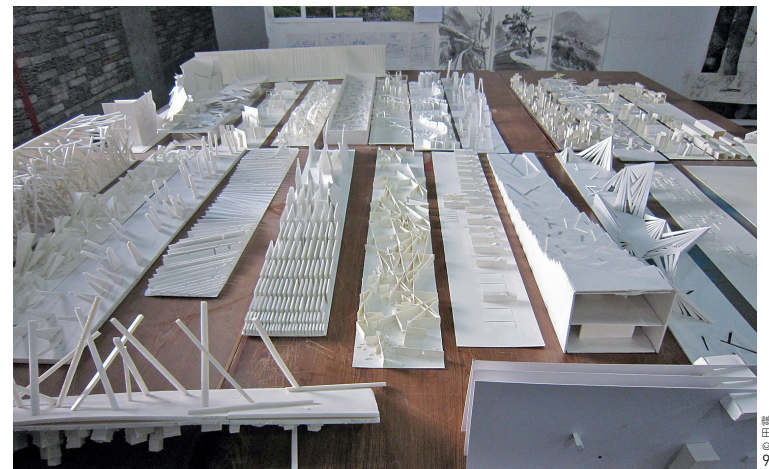
strips, black and white images, ruler and compass drawings, and 3D strips (Fig. 8, 9). During this process of refinement, images of the site are translated into site characteristics that are extracted and analyzed, and reconfigured into new imaged forms. The process is to link representation and unseen causes to inspire students to associate natural processes with material forces such as weather, human interventions, and economy. Therefore, the process is not intended to display all site elements with photographs but to examine sites and the internal and external factors that generate forms.

### 3.2 Site Mapping

Site outlining provides a partial understanding of the site derived from one person's intuition, and only parts of site are included. Thus, a more complete site reading to cover the entire site is still needed.

In the stage of site mapping, students are expected to familiarize themselves with the site through triangulation. Unlike measuring methods that rely on digital instruments, this form of mapping requires students to survey and map using only traditional tools like rope, ruler, pencil, or compass. This method combines personal experiences of moving across the site with measured site characteristics. Together, this deepens students' understanding of the terrain's identity and culture by detecting geographic and humanistic information.<sup>[6]</sup>

The on-site mapping work can be divided into two steps. The first is triangulation where covers a terrain about 4,000 m<sup>2</sup> and each group is expected to conduct on-site surveying (by two students) and drawing (by one student). The second is recording and analyzing the site information using point-and-line graphic language derived from the ruler-and-compass drawings in the first step.

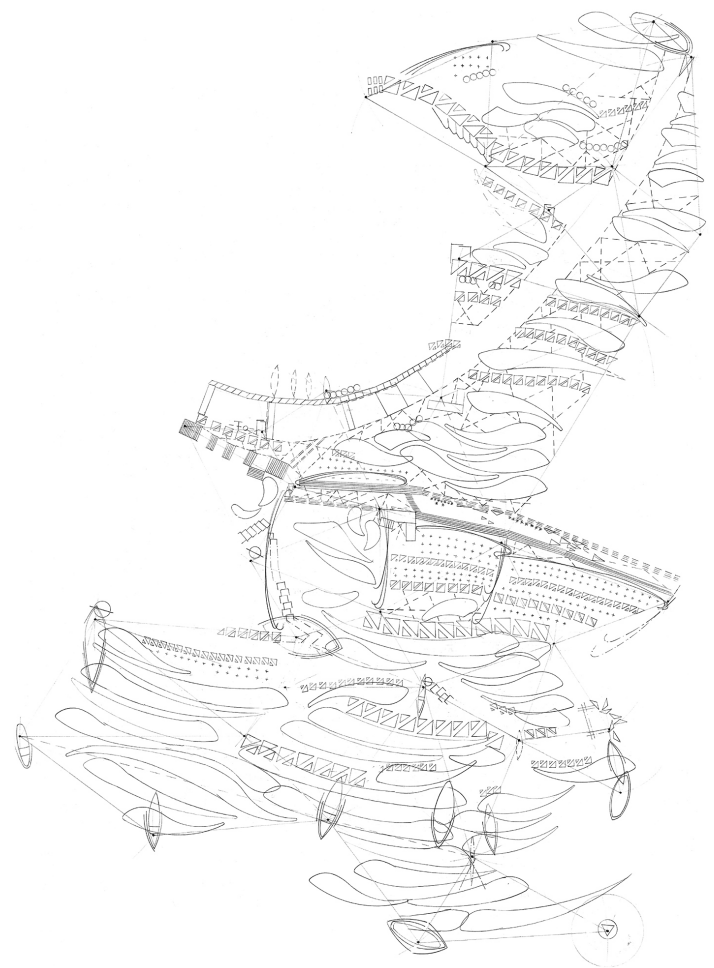
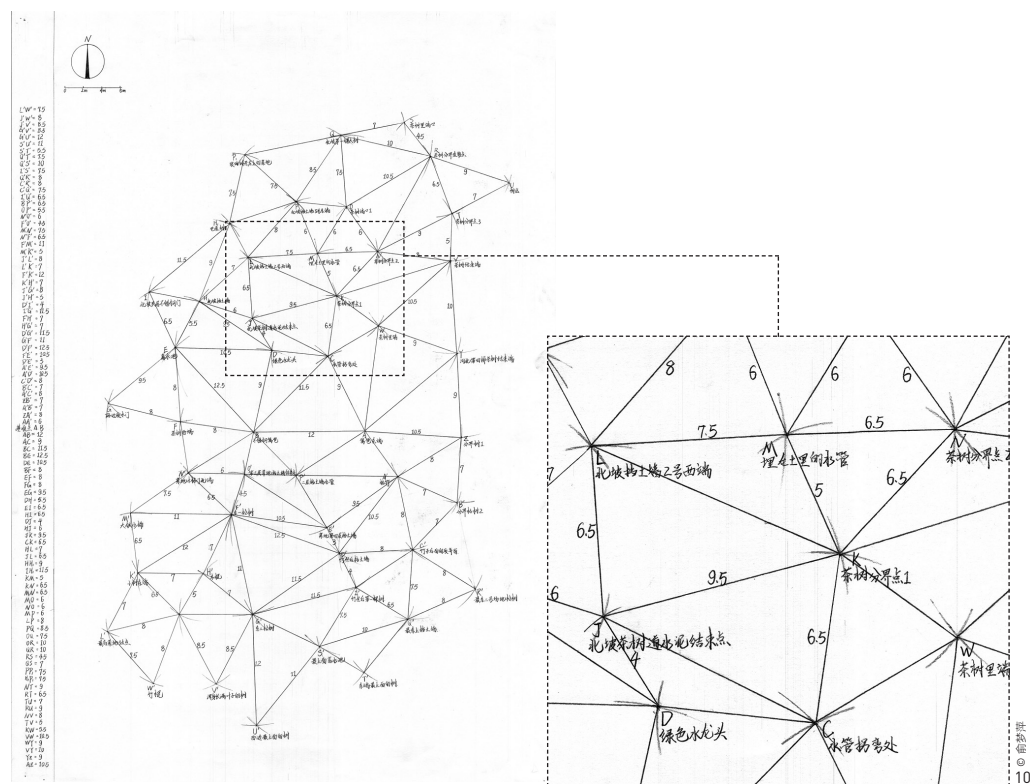


田瑾

三角网络测绘需要先建立第一个三角形，再以此类推覆盖整个场地。具体步骤为：首先选取场地内两个重要的特征元素（如一棵大树和一块石头），分别记为A、B点，将其连接作为基准线，并测量标记在纸上；然后找到第三个点，分别测量其到A、B点的距离，并用圆规在纸上作弧找到交点，由此得到第一个三角形。整个测量过程的关键在于记录每段测量数据和命名目标点。通过亲自行走和丈量，学生可以反复感受距离和尺度，在不同的地形与空间元素中体会身体与场地的接触。场地上重要的景观特征都可以被标记为目标点，如大石头、大树、道路开口等；尽管在测绘过程中出现了如“大歪树”“瓦片挡土墙”“大石头（山坡入口）”等未经充分考虑的命名，但也反映了学生对场地的直观感知（图10）。

这种三角测量不仅仅是为了获取数据的简单地形图测绘，还是一种加深自然认知的途径<sup>[7]</sup>。学生们用不同的点和线抽象地表示场地植被、地表材质、空间品质等信息，并通过尺规绘图将这些信息逐层添加到经三角测量形成的网络骨架上（图11）。这种编辑过程并非仅关注物体形态的传统对景写生，而是基于设计学的对场地信息的再现，将激发学生对场地现象背后的关联进行思考。例如场地内不同位置的同一树种的长势是否存在差异？影响树木生长的光照、土壤等因素在场地内的分布是否也存在差异？如此一来，树种等场地信息被转化为了“点像/线像”语言，成为用于揭示场地内在联系的媒介。这一阶段所探讨的元素不仅包括阳光、空气、土壤等自然因素，还包括事件、

Once the first triangle in the triangular network is established correctly, the entire site can be surveyed in a similar fashion. The specific steps include: selecting two prominent elements on the site (such as a tree and a stone) and recording them as points A and B. These two points are then connected to form a base line that is then measured and marked on the paper. The third point is selected and its distance to point A and B are measured, in order to find the intersection by drawing arcs to obtain the first triangle. The key to the entire mapping process is to record each piece of measurement data and to name target points. Through in-person walking and measuring, students can better understand the distance and scale, and can experience the contact between the body and the different landforms and materials on the site. Important landscape features such as large stones, big trees, and crossings can be marked as target points. Some labeled names reflect students' intuitive perception of the



10. 三角测量图
11. 线描尺规平面图
12. 南美洲最南端横跨大西洋和太平洋的剖面 (1793)
13. 峡谷剖面 (1905)

10. A triangular network
11. A ruler-and-compass site plan
12. Chimborazo Map (1793) which shows the section of the south end of the South America crossing the Atlantic Ocean and the Pacific Ocean
13. Valley Section (1905)

生产、经济、人工干涉等社会因素。正如宾大建筑历史理论家戴维·莱瑟巴罗所述：“再现的目的就是去发现那些之前人们没有注意到的联系和共性。”<sup>[8]</sup>

### 3.3 场地探索

无论是以点、线为路径的游戏，还是全面的三角测量，都是对场地中各种植被、材料、地形和空间的认知与熟悉的过程，但景观设计学不仅仅关注表象，还旨在探讨地上与地下的联系，并探索场地内部的运作规律。

课程的第三步引入“剖切”的方法，从地上到地下、从小场地到大区域来对场地进行探索。需要特别指出的是，建筑学的剖切与景观设计学的剖切存在显著差异——建筑学的剖切往往只针对建筑物本身，反映的是静态的内容，其与外界的联系却未能得到充分表达；而在景观设计学中，对场地与外界联系的表达是不可或缺的。这种联系可以跨越各种尺度，从场地到区域、城市乃至全球，也可以包括场地上的各种自然景观元素，与其发生关联的人，以及影响场地的各种政治、经济、文化和社会因素。从1793年亚历山大·冯·洪堡绘制的第一张景观剖面图（图12），到1905年帕特里克·格迪斯将“人、工作和场所”联系起来的峡谷剖面图（图13），再到20世纪60年代，伊恩·麦克哈格在《设计结合自然》中利用沙丘的动态变化来

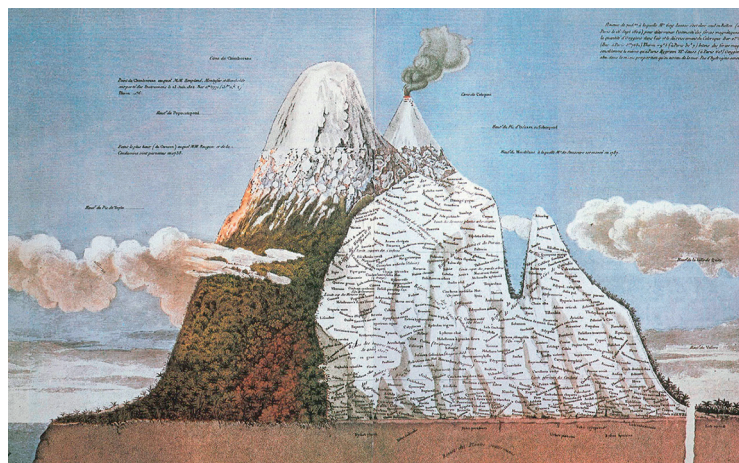
site, such as “big crooked tree,” “tile earth-retaining wall,” and “big stone (hillside entrance)” (Fig. 10).

This stage results in simple landform mapping and provides data acquisition and deepened relationship with nature<sup>[7]</sup>. Using dots and lines for site vegetation, materials, and other information, students abstract their mapping by adding layer-by-layer information with rulers and compasses (Fig. 11). Different from traditional landscape painting methods that simply concentrate on portraying physical forms, this site information overlaying process follows a rigorous fashion and is rooted in scientific design deduction. It encourages students to think about relationships between the spatial distribution and the hidden causes of the terrain. By asking questions like would the growth of same tree species planted at different spots of the site vary, and, would the distribution of light, soil, air, and other factors vary on the site, site information is translated into a point-and-line graphic to reveal the inner workings of the site. Besides, this exploration also involves social, cultural, and economic factors. David Leatherbarrow, architectural historian and thinker from UPenn, has written that the “aim of the representation, then, is to discover relationships and affinities that were previously unsuspected.”<sup>[8]</sup>

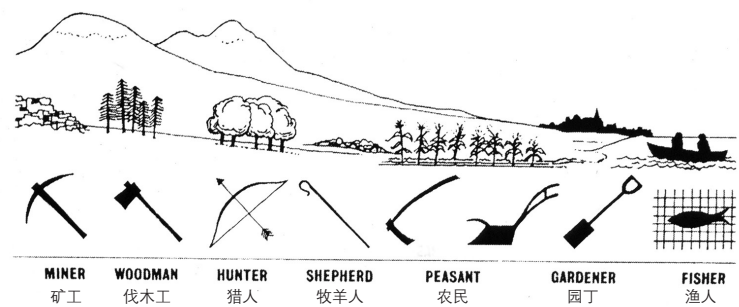
### 3.3 Site Representation

The abstraction of the site into points and lines communicates the variety of vegetation, material, landform, and space on the surfaces of the site. But, Landscape Architecture is also expected to explore the relationship between ground and subterranean, as well as the hidden logics.

For the third phase, the section is introduced as a means of exploring the site from the ground to the subterranean, from the site itself to its nested settings at a broader terrain scale. Unlike the architectural section, the landscape section considers how the site is linked to its larger context and how the site reflects temporal processes. It covers a range of varied scales, from a single tree to a city to the global. In addition to natural landscape elements, the landscape section is also associated with political, economic, cultural, and social factors. Alexander von Humboldt painted the first landscape section in 1793 (Fig. 12) and Patrick Geddes drew the Valley Section in 1905 that linked people, work, and place (Fig. 13). In the 1960s, Ian McHarg used the dynamic changes of sand dunes to study regional landscape systems in *Design with Nature*<sup>[9]</sup>. These explorations connecting the ground with the underground and switching static focus to dynamic study, all



12 © Alexander von Humboldt



13 © Patrick Geddes

研究区域景观系统<sup>[9]</sup>——这些把地上与地下相联系、从静止状态转向动态过程的探索，都反映了对事物特征及其运作规律的探索。例如，把可见的地面植被、表面材质等与地下的不可见的树根系统、土壤层变化等联系起来，并对场地各种可见与不可见的外力进行关联和猜想。

此外，课程还要求学生们根据场地特征确定并绘制5个具有代表性的纵剖面（包括位置与剖切方向）（图14）。这些垂直于横截面的纵剖面不必等距分布，但必须反映出场地景观的多样性。随后，按照三角测量网络框架的绘制原理，将各种额外信息以抽象“点像/线像”语言的形式逐层叠加到剖切面框架上。

### 3.4 场地演变

场地演变是整个训练的最后一步，也是对前面三个步骤的总结。经过场地初识、熟悉和探索三个阶段后，学生已经在场地中往返了三四十趟，并在不同的时间与天气条件下感受了景观。他们会将这种对场地鲜活的认识下意识地融入自己的设计，并根据场地自身的自然与人文特征提出独特的设计概念。<sup>[10]</sup>

设计以“路径”为题，要求学生根据自己之前的学习体验和对场地的了解、观察与发现来设计一条路径，并聚焦于塑造使用者穿越场地时的空间体验，以及他们观看、触摸与感受场地的方式（图15）。

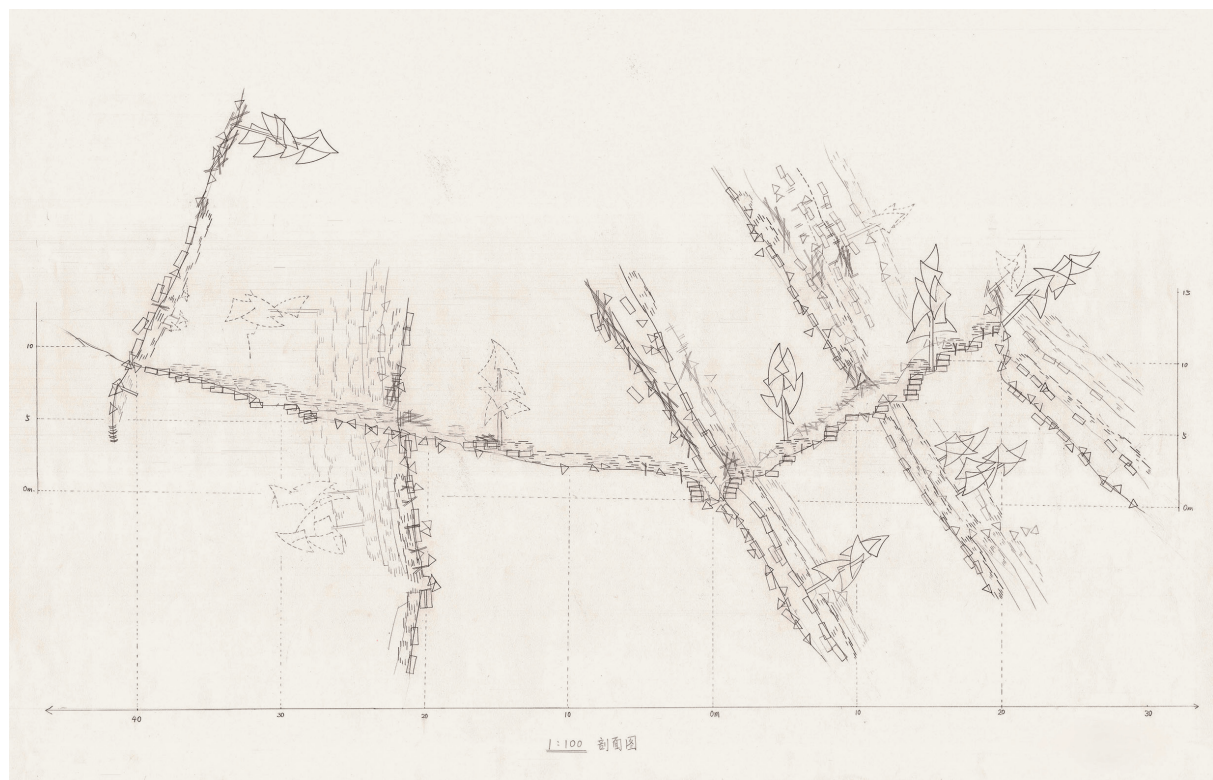
在此基础上，学生们要进一步考虑人、场地、生活与生产、事件等因素的关联性，并据此提出一个适用于更大范围的设计策略，将场

reflect the intrinsic quality and working mechanism of landscape elements. For example, students are encouraged to explore the dynamic changes between the visible vegetation with the underground root system or soil layers.

In addition to a large cross section, the studio requires students to draw five longitudinal sections that intersect with the cross section (Fig. 14). Students are required to determine the five longitudinal sections (including their position and direction) based on site characteristics. The longitudinal sections do not need to be spaced evenly, but must reflect the diversity of the site. Like the triangulation drawing, the sectional information should be overlaid layer-by-layer to form an abstract point-and-line graphic languages.

### 3.4 Site Intervention

In the final stage of the entire training, site intervention drawings summarize the previous three stages. Through site outlining, mapping, and representation, the students have completed upwards of thirty trips around the site and have experienced the landscape at different times of day and in different weather conditions. The students integrate their site understanding to propose design concepts in accordance with the terrain's characteristics.<sup>[10]</sup>



- 14. 线描尺规剖面图
- 15. 路径设计
- 14. A ruler-and-compass section
- 15. Path design

地路径与区域路径系统连接起来。这种系统性的思考可以把景观设计学科与相关领域知识相衔接，使学生以动态思维考虑设计的介入对场地和区域的影响。在这一过程中，跨学科知识可能会成为支撑设计的重要资源。

#### 4 结语

通过上述课程训练，学生们可以掌握运用视觉以外的感知器官进行场地体验，并加强对事物表象和本质之间的关系和事物之间共性的理解和表达，以及从场地到地方、区域和全球的跨尺度思考能力。

需要特别指出的是，尽管本文详细介绍了4个步骤和一些具体的方法，但正如宾大景观设计系阿努·马瑟教授所述：“宾大景观最大的成就不在于任何具体的立场、方法，而在于其树立了一种信念，即景观设计学是一种开放性、动态性的探究。”<sup>[11]</sup>这些方法的本质是设定了一种创造性的平台条件，其意义在于提供了一种操作框架，而非直接的结果。尽管这种方法源于宾大，但其必须结合中国的教育环境和时代背景，根据中国场地的实际问题发展出因地制宜的教学方法，从而推导出更具针对性的设计结果。LAF

The design requires students to design a path based on their experience and understanding, observation, and discovery of the site, and focus on shaping the spatial experience of path users crossing the site through views, touch, and feel (Fig. 15).

Students are asked to further consider the relationship between people, site, life and production, events, and other factors, and put forward a design strategy suitable for a wider range of local and regional uses. It promotes a systematic thinking that helps students grasp interdisciplinary knowledge to inform and support landscape design.

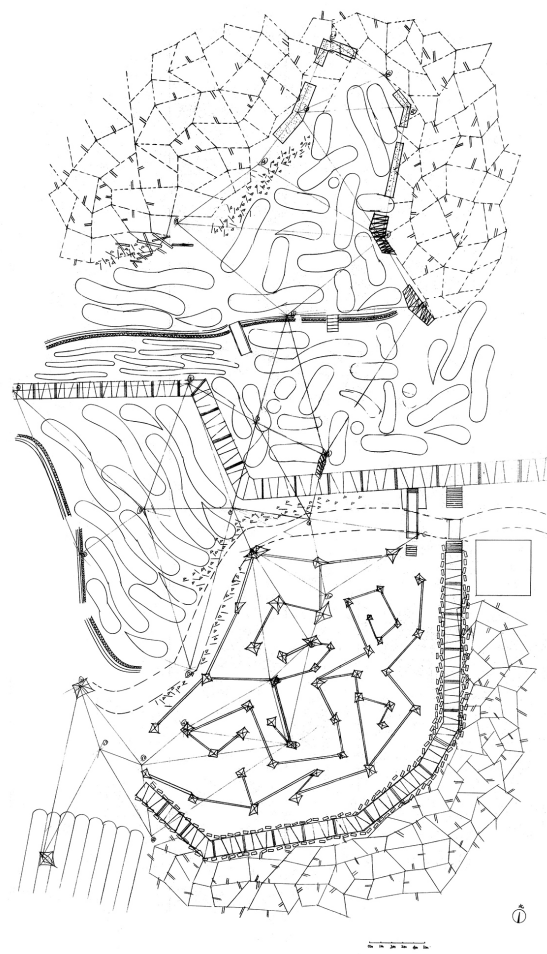
#### 4 Conclusion

Through such stages, students learn to experience site with multiple sensory methods beyond viewing, and are trained to focus on giving expression to common landscape relationships by translating their thinking across varied scales.

The article describes a set of methods of terrain-based field investigation and site documentation adopted from UPenn. What UPenn Prof. Anuradha Mathur stated about this approach was that “the greatest achievement of the program was not in any concrete position, method, or formulation, but a belief in landscape architecture as open and dynamic inquiry.”<sup>[11]</sup> The approach introduced in this article opens up a creative platform grounded in process rather than result. Chinese Landscape Architecture education should continue to adopt this method and test it with actual sites in China. LAF



15-1



15-2

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