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PHOTOGRAPHER Xiaolan Wu

Panoramic aerial photography of the Qilin transportation hub in suburban Nanjing, where the three-dimensional technology recorded the constructed terrain and surface features in two dimensions. The distortion in the image makes the landscape unfamiliar to us, who can unexpectedly and strongly perceive the fragmented landscape at the urban fringe and its major cause of transportation infrastructure.

Can Topography Facilitate the Refinement of Landscape Design Methods?

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ABSTRACT

In the field of Landscape Architecture, Topography aims to study the complex and ongoing changing relationship between humans and the land through continuously updated and iterative tools and media. It maintains a balance between abstract concepts and concrete perceptions, which can both drive the development of science and technology in this field and hold on to openness to artistic expression. Thus, topographical design may be an effective way to help facilitate refining landscape design methods.

KEYWORDS

Landscape Architecture; Landscape; Topography; Design Methods; Artistic Expression; Perception

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Landscape is an ambiguous and multifaceted concept. It is not only the diverse world we see, but also a way to see the world. Therefore, the concept of landscape has always been entangled in the unity and opposition between subjectivity and objectivity^[1], individuals and society, making it difficult to extract professional and scientific landscape design methods that maintain sensitivity and openness to artistic expressions.

Terrain, as a fundamental element of landscapes, is also ambiguous. Although referring to the physical space where we live, it often goes unnoticed. Only when the terrain is distinctive enough and its scale is within the range of human perception, can it be directly sensed. Most of the time, we pay attention to the terrain depicted on maps or represented in models. These representations have been abstracted and imagined, expressing our understanding of the world and implying the distance between us and reality.

The perception, understanding, and manipulation of terrain are not only fundamental skills for landscape architects, but also key issues to be addressed in landscape engineering practice. From site surveys to landscape design and from small-scale sites to national territories, terrain is always the object of landscape design and a medium for manipulation. Developed from Geography, the traditional Topography overemphasizes the technical aspects, only reflecting the abstract characteristics of terrain but detaching from human's cultural perception. This has resulted in a single

interpretation of terrain and stereotyped practice in landscape design, where topographical design is always simplified into terrain grading.

In the era of Anthropocene, terrain is becoming more artificial, rather than natural. As the techniques for terrain mapping and manipulation are constantly evolving, more and more advantaged presentation of terrain and surface features reflects the complex and changing human-land relationship. It is imperative that we explore in-depth how the rich connotation of topography can facilitate refining landscape design, especially regarding the dual natures of terrain, both from scientific and perceptive aspects. This exploration opens up infinite possibilities for linking science and perception in relation to terrain. In this process, topographical studies will be promoted to break through the limits of scale and the boundaries of disciplines. Topographical design may also be one of the most comprehensive landscape design approaches to unifying scientific knowledge and artistic expressions. In realizing this goal, the core competitiveness of Landscape Architecture will undoubtedly be enhanced.

REFERENCE

- [1] Cosgrove, D. (2022). *Social Formation and Symbolic Landscape* (J. Li, Trans.) (pp. 13–23). The Commercial Press. (Original work published 1984)

地形学能否助力完善景观设计方法？

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摘要

在风景园林学科背景下，地形学试图通过不断更新迭代的工具媒介，研究复杂且持续演变的人地关系。这一尝试保持着地形抽象概念与具体感知之间的张力，既可推动专业科学技术的发展，又可保持对艺术表达的开放。因而，地形设计或可成为一种有效途径，助力完善景观设计方法。

关键词

风景园林学科；景观；地形学；设计方法；艺术表达；感知

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景观是个模糊多义的概念——它既是我们眼中的缤纷世界，也是一种观看世界的方式。故而，景观概念始终存在于主观与客观、个人与社会的对立统一^[1]，使我们难于从中提炼出既专业科学又对艺术表达保持敏感度和开放性的景观设计方法。

地形作为景观的基本要素之一，同样具有模糊性——它虽代表的是真实、具体的人类立足之地，却往往被忽视，只有那些处于人的感知范围内且富有特色的地形才会被直接感知。更多时候，我们关注到的是绘制在图纸上、制作于模型中的地形。这些经过想象加工的抽象图形图像代表着我们对世界的一种理解，也暗示着我们与真实世界的距离。

对地形的感知、理解和设计是景观设计从业者的基本能力，也是景观工程实践必须直面的核心问题。从场地调研到设计，从小尺度场地到国土空间，地形既是景观设计的对象，也是构建景观的媒介。从地理学发展而来的传统地形学（Topography），由于过于强调技术，只能反映出地形的抽象特征，而与人文感知日渐偏离。这造成了景观设计中地对地形的单一化解读和程式化操作，使地形设计往往被简化为竖向设计。

人类世背景下的地形是自然的，更是人工的。随着地形测绘和设计技术不断地更新迭代，愈发先进的地形、地物呈现方式展现出复杂且持续演变的人地关系。我们需要更深入地探讨地形的丰富内涵之于景观设

计的意义——尤其是关于地形所承载的科学感知的双面性，以及将二者联系在一起所激发的无限可能性。这将推动地形学的研究突破尺度的限制与学科的边界，地形设计或将成为最能完整地将专业科学与艺术表现力相结合的景观设计途径之一，并促进风景园林学科核心竞争力的提升。

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由全景航拍图展现的南京城郊麒麟枢纽地形、地物。三维技术记录的人造地形在二维表达中产生的形变令人感到陌生，却也意外地让我们强烈感知到城市边缘破碎化的景观，及其最大的影响因素——交通基础设施。