刊首语



城市景观的设计与图析

"析理以辞,解体用图",古人的这句话充分说明 了文字和图纸在表述和分析方面的巨大差异。地图是表 达和存储空间信息的有效工具。中国具有悠久的地图绘 制历史,马王堆汉墓帛书古舆图中就描绘了地形、水系 和城镇,西晋时期裴秀的"制图六体"对地图绘制的距 离、高程、比例等方面进行了一系列的准则构建,南宋 后城市舆图的数量和精确度有了明显的增加,甚至出现 了《平江图》和《靖江府城图》这样较为精确描绘城市 形态的地图,但似乎直到清末,大量出现的依然是带有 浓厚绘画方式,看上去不那么"准确"的城市舆图。

与此形成对照的是,文艺复兴时期,古罗马托勒密 世界地图的再次发现,西欧一扫中世纪的地图绘制方式, 逐渐形成由长度、比例和坐标体系描述空间秩序的规范做 法,加之布鲁奈烈斯基对透视几何学的探索,使得几何制 图学、平立剖面逐渐成为城市景观认知和再现的工具。

可以用 2 张城市地图直接感受到这 2 种表达方式的 巨大差异。一张是民国时期以现代投影和测绘技术绘制 的《宁波市全图》;另一张为《宁波府城厢水陆舆图》, 它是清末民初的城市传统舆图。2 张图绘制时间差别不 大,前者"如实"地表达了宁波城市街巷、水系和城外 的农田,后者却显得有些"随心所欲",将原本梨形的 城市轮廓画得更为有机,城市方位改为正南北,放大了 街巷尤其是河流的宽度,并以三维方式绘制了城墙、瓮 城和标志性的鼓楼等建筑。

毫无疑问,《宁波府城厢水陆舆图》更像是绘图者 对城市意向的表达,城市如同是坐落在水网之中的有 机组合,较为规则的子城和轴线源于悠久深厚的营城传 统,而有机变化的罗城和街巷则是对地区水网环境的呼 应,那些貌似随意的调整,正是出于其对宁波城市的结 构性认知,隐含着绘图者对城市形态感知和景观评价。

现代城市地图以"客观中立"的方式,将城市空间 特征简化为某些特定的物理属性尤其是几何尺寸,表现 出某个特定瞬间的城市形态,它们很大程度上成为解读 城市形态的基本工具。Bernard Tschumi 曾经感叹"传统 的建筑语言局限了思维,通常建筑师使用的再现方式: 平面、剖面、轴侧与透视变成了建筑学的牢笼和限制, 将建筑学演变为一种金字塔式的思考,任何跨越这种限 制提供其他建筑解读的企图都要求质疑这样的语言传 统"。现代城市地图对城市景观研究的促进和限制也与 此类似。

风景园林界大概在 20 世纪 90 年代开始理解地理学 界对现代地图在测绘、投射和绘制方面的批判。James Corner 对此评论道,由于风景园林行业尚不了解地图绘 制技术在表现客体世界过程中的高度选择性,以至于将 地图当作规划设计工作的客观事实基础,那些在地图上 被优先表现的元素直接影响设计方案,而那些被排除的 元素则被忽视。

城市景观作为复杂系统,具有多层级性和多样性的特点,非常有必要揭示其在不同尺度下呈现的空间等级秩序和结构逻辑,以实现系统性的完整认知并指引设计。传统城市舆图所表现出的空间视角的多元性、绘图者的空间参与性、非空间元素的描述性和形态发育的过程性等特征,逐渐引起城市研究者的重视。同时,现代城市地图也通过分层、分类、叠加、拼贴等方式,将不同的空间信息加以筛选和组合,以达到分析和表达的目的。正如James Corner 在"The Agency of Mapping: Speculation, Critique and Invention"一文中谈到,通过绘图设置(图框、指北针、坐标系、比例尺、度量衡、投影方法)、信息要素提取(事物、部分、数据)、要素关系绘制(几何空间、分类系谱)3种手段构建起一个设计与分析的工具——图析(mapping),它将"感知/测量"与"设计/发明"这2个环节有效地连接在一起。

本期专栏稿件呈现了城市景观的大量精彩图析—— 从欧洲大陆的意大利威尼斯、荷兰鹿特丹、西班牙特内 里费岛和加泰罗尼亚中部巴格斯地区;到亚洲大陆的中 国大湾区、武汉、深圳、浙南传统村落和韩国釜山地区; 还有美国的底特律。研究者背景较为多元,分别来自中 国、荷兰、德国、韩国、西班牙、澳大利亚、智利、南 非。研究对象的广泛性证明了图析的适用性,而研究者 背景的多元化也说明,即使因为文化与个人生活、从业 经验不同会带来空间视角和空间参与的差异性,但通过 图析所得的研究成果却具有领域内的专业共识。



本期专题组稿人:郭巍 2022年10月10日

PREFACE

Mapping and Design of Urban Landscape

According to an ancient Chinese saying, "theories should be discussed with words and a specific space object should be analyzed with drawings". This remark shows clearly the huge difference between texts and drawings in description and analysis. Map is an effective tool to pass on and store space information. China has a long history of cartography. On the silk maps unearthed from Mawangdui Han tombs, the landforms, river systems, cities and towns are depicted. The "six basic principles for cartography" summarized by Pei Xiu in the Western Jin Dynasty provided a series of standards for the distance, elevation and scale of a map. The number and precision of city maps tremendously increased after the Southern Song Dynasty, and even maps that could precisely describe the urban morphology emerged, such as *Map of Pingjiang City* and *Map of Jingjiang Prefectural City*. However, until the late Qing Dynasty, less "accurate" city maps with strong painting features seemingly constituted the majority.

By contrast, the mapping method of the medieval times was completely abandoned in the renaissance period due to the rediscovery of the Roman Ptolemy's world map. Gradually, a standard mapping mode was formed in Western Europe, which used the length, scale and coordinate system to describe the spatial order. In addition, Brunelleschi's research regarding perspective geometry popularized the geometric cartography and plan, section, and elevation drawings as tools to cognize and reproduce urban landscapes.

The wide variations between texts and drawings can be directly revealed by two city maps. One is the *Completed Map of Ningbo City*, which was drawn by means of modern projection and mapping technology in the Republic of China era. Another one is the *Land and Water Map of Ningbo Prefectural City*, a traditional urban map in the late Qing Dynasty and the early Republic of China. The two maps were made at similar times. The former faithfully presents the streets and rivers inside the Ningbo city and farmlands outside the city. However, the latter arbitrarily alters the pear-shaped city outline into a more organic one and the city position into a north-south direction, and widens the streets and especially the rivers. Moreover, the city walls, small towns outside the city gate, and landmark buildings such as the Drum Tower in the latter map are three-dimensional.

It is beyond doubt that the *Land and Water Map of Ningbo Prefectural City* is more an intentional expression of the city by the drafter. The whole city is like an organic combination located in the water network. Regular small cities and axes are originated from the time-honored and rich tradition of inner cities, while the organically changing outer cities and streets respond to the regional water network environment. The apparently random adjustments are actually based on the structural cognition of the Ningbo city, and reflect the drafter's perception of the city morphology and assessments of the city landscape.

Modern city maps simplify urban spatial characteristics into some specific physical properties, especially geometric dimensions in a more objective and neutral way, so as to display the city morphology at a particular instant in time. They have been widely applied as a basic tool to describe the city morphology. Bernard Tschumi once said, "The traditional architectural language confines the thoughts, and the plan, section, axial and perspective reproduction methods frequently used by the architects become a cage that limits the architecture. As a result, the architecture is forced to evolve into a pyramid thinking pattern, and any attempts to transcend this limitation and provide other architectural interpretations are considered questioning the traditional architectural language". Modern city maps also promote and inhibit the development of city landscape research in a similar way.

The landscape architecture society started to comment on the criticisms of surveying, projection and drawing of modern maps from the geography society since around the 1990s. James Corner remarks that because the landscape architecture society has little knowledge about the high selectivity of the mapping technology in the process of representing the object world, it takes the map as the fact foundation of plan and design work. Consequently, elements preferentially expressed on the map directly influence the design, and the excluded elements are ignored.

As a complicated system, the urban landscape is characterized by multiple levels and diversity. It is crucial to unveil the spatial hierarchical order and structural logic of complex landscape systems at different scales, in order to achieve systematic and integrated cognition, and to guide the design. Importance has gradually been attached to the diversity of spatial perspectives, the spatial participation of drafters, the descriptive effect of non-spatial elements, the process of morphological development, and other features of traditional city maps. In the meantime, modern city maps screen and combine different spatial information through layering, classification, superposition, collage, etc., so as to achieve the purpose of analysis and expression. As James Corner mentioned in The Agency of Mapping: Speculation, Critique and Invention, a design and analysis tool called mapping was constructed through mapping settings (map frame, compass, coordinate system, scale, measure, projection method), information element extraction (objects, segments, data), and element relation drawing (geometric space, hierarchical classification). This tool effectively combines the perception/measurement and design/invention functions.

In this column, the manuscripts involve abundant marvelous analyses of urban landscape maps, covering Venice of Italy, Rotterdam of the Netherlands, Tenerife of Spain and Bages of Central Catalonia on the European continent, the Greater Bay Area of China, Wuhan, Shenzhen, traditional villages in South Zhejiang and Busan of South Korea on the Asian continent, and Detroit of the USA. The researchers are from multiple backgrounds, including China, Netherlands, Germany, South Korea, Spain, Australia, Chile, and South Africa. The breadth of the research objects proves the applicability of map analyses. The diversified backgrounds of researchers also demonstrate that the research results of mapping can be adopted as consensuses in professional fields despite of the difference in space perspectives and space participation arising from various cultures, personal life and working experiences.

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