Conversations on the Next Phase for Digital Techniques and Technologies in Landscape Architecture

text and interviews by
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Introduction

Today, the landscape architecture profession is uniquely positioned at the intersection of creative thinking and scientific knowledge, two ostensibly opposed realms. This has been enabled by the development of digital technologies, a critical medium to effectively, sophistically, and intelligently bridge the long-standing divide.

When computer-aided design began to emerge in the 1980s, the use of geographical information systems (GIS) was one of the domain’s first forays into digitising the landscape. Since then, a host of digital tools and a range of techniques have been developed by various disciplines and are ready for landscape architects to explore. These include digital measurements and survey methods, 3D representations and information modelling, parametric/algorithmic design and analysis, dynamic and responsive simulations, and even digital-based teaching and learning of landscape architecture.

The use of these digital tools and techniques can be simplified and expressed as “digital landscape architecture”. While some worry it will strip the profession of its creative nature, digital landscape architecture is not focused on replacing everything we know with sterile digital platforms and formats. Nor is the focus on the realistic representation of designed landscapes. Rather, digital landscape architecture seeks to understand how we can use tools and techniques to leverage ourselves, allowing us to put more of our creative time and energy into designing and building increasingly complex landscapes. Once we let the software, algorithms, and machines do the mundane heavy lifting, we can be free to explore more creative options previously thought impossible.

To understand what this new digital future holds for us as landscape architects, we interviewed four digital landscape architectural scholars (three from Korea and one from Singapore) who are championing the use of technology in the field of landscape architecture in academia and practice. This article is a consolidation of their responses to questions on the efficacy and challenges of digital landscape architecture, cumulating in key takeaways on how we can move towards hybridising the organic nature of our work with a digital counterpart to create “bionic landscapes”. Such landscapes are informed, shaped, and evaluated based on data and algorithms prior to construction and then monitored, maintained, and changed over time using embedded technology within the completed project.

We asked our respondents seven questions in our bid to identify the challenges and the potential of digital landscape architecture. While the responses varied slightly, we found interesting similarities, as highlighted in the concluding paragraphs.