

Preface

Many research works in computational design field implement shape grammars or space syntax for morphological analysis; since my appointment to Graduate School of Culture Technology at KAIST in 2007, I strived to apply the abovementioned scientific and rule-based methodologies to cultural aspects. This effort led me to explore computational design field from the perspectives of a meme, a socio-cultural analogy to genes. While trying to comprehend the concept of a meme from the cultural aspects of design and the notion of a genetic algorithm, the term ‘cultural DNA’ naturally became a keyword of the attractive new area of research.

A motivational event was when I organized an international workshop in 2009 focusing on the analysis of Korean and Spanish patterns using shape grammars called, ‘Visual Exploration of Cultural Style in Design (VECSiD)’ and another cross-cultural workshop in 2012 at Sultan Qaboos University, Oman, called the ‘Cultural DNA for Islamic Art and Architecture Workshop’. After the great success of the two workshops, our research group started to apply extensively the concept of the ‘cultural DNA’ and the rigorous methodologies to the domain of the city morphology, industrial design from the perspectives of brand identity, and the bio-inspired designed artifacts. However, is there such a thing as a ‘cultural DNA’ common throughout various domains? How can the computer-assisted tools and methodologies play a role in probing the cultural DNA? What kinds of mechanisms and what kinds of procedures should they follow for the cultural DNA to be established as a new research field? To discuss the questions, I decided to organize a one-day workshop entitled, “The 1st Cultural DNA Workshop 2015” at KAIST in Daejeon, Korea.

This book consists of some selected papers presented as first drafts at the workshop. The papers include topics from three different perspectives: insightful analysis, intelligent synthesis and cutting edge tools to better understand cultural DNA. It is this diverse perspective toward cultural DNA that makes this book special and suggestive. I expect that the book will be suggestive especially for the designers trying to find the very essence, the archetype, and the building blocks of

our environment for the incorporation of social and cultural factors into their designs.

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I hope the series of the cultural DNA books continue to provide useful insights and thoughts.

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Tools for Decoding Culture-Embedded Forms

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