Education, Design and Practice – Understanding skills in a Complex World

- Paper / Proposal Title:
  Technical Skills for Architects: a Pedagogy

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- Abstract:

  Pedagogy in the context of architectural technology refers to the teaching of specific skills; in most schools of architecture the teaching of these skills is known as Technical Studies. Historically, the teaching of Technical Studies had been conducted largely by specialists – typically structural or mechanical services engineers – however the authors consider that understanding engineering science and construction technology from a purely scientific context assumes that the student can digest information in abstract (i.e. as distinct from design) whereas the study of architecture, along with the varied backgrounds of architectural students, is not necessarily conducive to such an approach.

  What architecture has been required to do over the course of the 20th Century is to make sense of the vast and ever-growing number of specialist fields that contribute to its discipline. Since the Industrial Revolution, there has been a continual and exponential increase in scientific and technological advances that impact upon how architecture can be engineered. And whilst this knowledge has been available to specialists in publications dedicated to their fields, the authors consider that it was not being absorbed into publications for designers (and specifically for architects) in such a way that it might be readily digested; there was a lack of clarity and uniformity in the way that it has been described and presented. The authors believe that, as in other fields, the organization and presentation of information are critical to an understanding
of the subject, and that this understanding – that is in turn critical to how architects think about design in relation to science and technology – has been missing.

In their publications, the authors have therefore set about compiling a new knowledge database for architectural technology and have re-designed the teaching, learning and assessment of Technical Studies for the whole School of Architecture at the University of Westminster.

• Authors Biographies:

Pete Silver & Will McLean are two British architectural practitioners, educators, writers, and technical theorists who work together as a duo. They have taught at the Architectural Association, The Bartlett (University College London), and The University of Westminster, thus gaining a privileged position in the contemporary London architectural scene.

Will McLean is a Doctor of Philosophy and artist Bruce McLean's son. He trained at the Architectural Association under Will Alsop OBE RA and Professor John Frazer. McLean has worked on a series of projects with Bruce McLean, most notably Dalry Primary School in North Ayrshire completed in 2007 (www.primaryspace.net), and with US architect and artist Adam Kalkin, working on such projects as 'Quik Build' container housing. He has had a regular feature in Architectural Design magazine covering technical innovations - McLean's Nuggets, and is an Editor of Construction History - the International Journal of the Construction History Society.

Pete Silver trained at the Architectural Association under Professors John Frazer and the Cybernetician Gordon Pask, and became a researcher in the Land Use Research Unit at King's College London, gaining a unique insight into Professor Alice Coleman's ground-breaking, if controversial, work on post-war housing regeneration. Silver is a director of the Chartered Practice Architects (CPA) Ltd.

In 2001, Silver and McLean joined the School of Architecture and the Built environment at the University of Westminster where they jointly head the Technical Studies Department. They have co-authored four architecture books: Fabrication: the designer’s guide (Architectural Press, 2006), Introduction to Architectural Technology (Laurence King Publishing, 2nd ed. 2015 - available in 7 languages), Structural Engineering for Architects: A Handbook (Laurence King Publishing, co-authored with engineer Peter Evans, 2013 - available in 4 languages) and Air Structures (Laurence King Publishing).