Enabling Mass Customization in Construction – Making the long tail work - DTU Orbit (28/10/2019)

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The chapter discusses the development of construction management practices the past 50 years outlining the academic and practical context for the adoption of Mass Customization in Construction. Theoretically, the chapter builds on two fundamental insights: The Pareto principle and the Thomas theorem - a fundamental sociological principle. The Pareto principle is applied using the concept “The long tail”. Based on “the long tail” the three different production paradigms of Mass Production, Mass Customization, and Individual Customization are identified. It is argued that construction in the 1950s and 1960s was driven by a “Mass Production” paradigm that gradually from the beginning of the 1970s was replaced by an “Individual Customization” paradigm in which construction became a matter of tailoring unique buildings to each customer. It is identified how these two different paradigms have been driven by two partial articulated myths. In the 1960s buildings were viewed as standardized while they from the 1980s onwards have been viewed as unique. Based on the Thomas theorem it is argued that these myths have had a substantial impact on the way we build. Consequently, today’s predominant view of buildings – as unique – implies that: 1) the nature of the construction processes is chaotic, 2) the buildings are realized through onsite project work rather than through offsite production; and 3) project management is the fundamental management principle. The chapter further identifies how attempts to develop new construction practices like Lean implicitly reproduce this myth. The result is that construction research the past 25 years has been constructing the long tail in a way that hinders radical development of the construction industry. The chapter concludes that if we allow ourselves to view buildings as both unique but also as standardized we can create a new platform for developing the construction industry – a Mass Customization paradigm.

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