Can the architect be the virtual master mason?

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Abstract:

Ancient cultures used the same word for the architect and the builder: the ‘master mason’ when architects not only designed but managed the construction process. Architectural knowledge has been diverse and complex ranging from the imagination, design, and construction to performance of buildings and environments and much more. Architects therefore fulfil various roles in the design and construction process. With the development of architecture as a profession in the 19th century, a clear division between the design and building activities occurred. As projects get very complicated, more people from various disciplines are involved. The developments in the design and construction industries and the advances in digital technologies used including Building Information Modelling (BIM) have pervasive effects on the interactions around design, organizational structure and institutionalized roles. There has been little empirical study on the interfaces between professional roles focusing on the architect’s role and interactions in BIM-enabled environments. This research examines how individuals and teams collaborate in the practices of architecture and explores the possible future scenarios and implications. 40 interviews with pre-interview questionnaires were conducted in 12 different organizations in the UK and USA. Participants were mostly architects but others from diverse backgrounds were also involved. Preliminary findings indicate that architects are thinking more about how buildings are being constructed when they create 3D virtual BIM models as they are virtually building them which brings a lot of the details forward in the project and resolves a lot of the problems at the early stages. As more information is required to build the models, professionals have to communicate more often and collaborate in an efficient way when they work on a shared central file. Moreover, the interviewees argue that project teams are getting smaller but more highly proficient individuals skilled in a wide range of areas are needed. Architectural practice is not about communicating to others only but proving that the proposed design is buildable which entails different set of skills. Further questions arise regarding the pedagogies of architecture and whether the architect will become the virtual master mason sometime or never?

Key words: architect, BIM, construction, collaborate, master mason, virtual