Understanding Project Based Production through Socio-technical Modularity

This paper develops an approach for understanding Project Based Production. This form of production is characterized by unique deliverables, high complexity, high value, high risk, profound uncertainty and many stakeholders and is increasingly important in the postmodern society. Common to the practices of PBP and other production practices is the goal of balancing the dilemma between creativity and productivity.

In response to industrialized production, the concept of modularity gained popularity for addressing this dilemma by exploring product, process and organization structures. However, with the starting point in system theory and a strong bias towards industrial production, the predominant understanding of modularity faces difficulty in explaining practices of Project Based Production in both social – technical and dynamic – stable aspects.

Illustrated by a case, the paper addresses this gap, by offering a reinterpretation of the modularity concept from a socio-technical perspective in general and Actor Network Theory (ANT) in particular. By formulating modularity from an ANT perspective covering social, material and process aspects, the modularity of a socio-technical practice can be understood as an entanglement of product, process, organizational and institutional modularity. The paper concludes proposing central questions for the development of the concept of modularity for understanding, designing and managing of PBP.

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