

Title

The Governance of Change in Socio-technical and Innovation Systems: Some Pillars for Theory Building

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Abstract

More than twenty years of studies on 'socio-technical systems' and 'innovation systems' have yielded multiple academic approaches to study the way in which science and technology shape and are shaped by social, political and economic organization. The various stands of literature exhibit high diversity in crucial aspects about the role of agents and institutions in those systems, as well as about the dynamics that drive change. Unfortunately most of these approaches have not talked to each other because they belong to different disciplines. Strikingly, while most of the literature on the analysis of systems change centre around the nature and role of 'governance' of that change, the very concept of governance continues to be empirically and normatively indeterminate and ill-defined.

This paper aims at developing the building blocks for a theory on the governance of change of socio-technical and innovation systems (ST&I systems). In so doing, it fills a gap in the existing literature. Taking the starting point from a workable concept of governance of change with normative but especially with analytical dimensions, the paper identifies three pillars as building blocks for a theoretical explanation of the governance of change in these complex systems. These pillars focus on the opportunity structures & capable agents, governance instrumentation, and democratic legitimacy within the system. These pillars are the theoretical foundations from which a set of specific assumptions will be developed. This will form a consistent analytical framework to be applied in further empirical work.

Keywords

Governance, innovation systems, socio-technical systems, institutions, governance instruments, legitimacy.