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Energy Supply as an Information Infrastructure: A Reconceptualization of Governance by Infrastructure

Abstract

Hanseth et al. (1996) conceptualised Information Infrastructure (II) several decades ago (see special issues of JAIS 4/2014, 5/2009). This work stemmed from an interest in examining systems that are strongly interconnected, complex, and geographically dispersed, including university research networks, remote working, health care networks, public administration networks, and much else. Nowhere are these insights more relevant than in understanding the governance by transnational and interconnected energy supplies that are being merged with digital infrastructures. These systems involve growingly complex protocols, standards, and system architectures, amid increasing renewable energy (which varies according to weather and season) and new roles afforded to energy users as consumers and producers of energy. However, the study of energy supply as II has never been carried out (with a few notable exceptions: Hirsch, 2020; Hirsch & Ribes, 2021). Meanwhile, energy social research and transition research has increased manifold over the last years without acknowledging the foundational and important conceptual work in II. This presentation asks why this conceptual lack of development has happened and links it to the spreading of the work of Hughes on electrification, asking what possible impacts the knowledge gap has for understanding of governance by infrastructure. The paper shows how recent perspectives concerning ordinary practices in everyday life, critical infrastructure and security, multi-sited analysis, and Biography of Artefacts and Practices are directly compatible with II and reinforce its focus. It concludes by suggesting an agenda for studies of energy supply as II.

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