

# MISQ Archivist

## The Sustainability of Polycentric Information Commons

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### Abstract

Research on various distributed online information systems—including blogging, crowdsourcing, media sharing, online communities, online reviews, open source software development, social media, wikis, peer-to-peer file sharing, and two-sided electronic markets—shows that the level of user engagement and overall activity in most systems eventually decline substantially. Here, we draw on Hardin’s theory of the tragedy of the commons and Ostrom’s theory of polycentric governance to introduce a unifying theory of polycentric information commons that explains these phenomena. Further, our theory illuminates how polycentric governance principles, as manifested in system rules and infrastructure features, counterbalance various sustainability threats arising from unrestricted participation. By integrating previous research findings and offering new insights into information and governance practices, the theory, practically applied, can enhance the likelihood of sustained participation across diverse, decentralized online information systems. We conclude by discussing how researchers can use the theory in empirical investigations and how they can engage in theoretical elaborations.

**Keywords:** Theory development, tragedy of the commons, polycentricity, governance, decentralized online information systems, collective action threats