

Antti Silvast and Chris Foulds (2022) *Sociology of Interdisciplinarity: The Dynamics of Energy Research*. Palgrave Macmillan, Cham, Switzerland. 125 pages. ISBN: 978-3-030-88454-3

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In “Sociology of Interdisciplinarity: The Dynamics of Energy Research”, Antti Silvast and Chris Foulds offer a timely and critical intervention into discussions surrounding interdisciplinary research. While interdisciplinarity is widely advocated as essential for tackling complex challenges like the energy transition, the authors argue that its practical execution, lived experiences, and sociological underpinnings are often insufficiently examined. This concise book makes a compelling case for the crucial, yet frequently underutilised, role of STS in providing the conceptual tools necessary to unpack the intricate dynamics of interdisciplinary collaborations, particularly within the energy field. As they state, STS has numerous conceptual tools available “to explain how and why different research and innovation actors do (not) collaborate ‘successfully’, and with what effects” (p. vii).

The book’s core contribution is the development of “A Sociology of Interdisciplinarity”, a framework explicitly detailed in the concluding chapter. The framework moves beyond descriptive accounts of barriers and challenges by employing an STS lens to analyse interdisciplinary research as a social activity. It comprises six key dimensions: (1) the impacts of funding structures on research practices and outcomes; (2) the role of distinct ‘epistemic cultures’ that shape knowledge production across and even within disciplines; (3) the function of ‘boundary objects’ (like models or concepts) in mediating between different social

and epistemic worlds; (4) the dynamics of disciplinary ‘appropriation’, where one field may adopt or misunderstand the tools and concepts of another; (5) the ‘interpretative flexibility’ inherent in key concepts and technologies within interdisciplinary settings; and (6) the persistent ‘importance of disciplines’ as organising principles and sources of identity. Silvast and Foulds utilise this framework to scrutinise the mundane practices, institutional contexts, and power relations that shape how interdisciplinary energy research unfolds on the ground.

The above framework is not presented in isolation but is grounded in three detailed empirical case studies. Chapter 2 examines the UK’s pursuit of “whole systems thinking” in energy research, focusing on the National Centre for Energy Systems Integration (CESI). It reveals the diverse expectations surrounding the role of Social Sciences and Humanities (SSH) within modelling-heavy projects, the heterogeneity of modelling approaches themselves (e.g., regarding energy demand), and the difficulties in translating research for policy contexts. Chapter 3 explores Norway’s Centres for Environment-Friendly Energy Research (FMEs), illustrating how national funding schemes and institutional setups influence the configuration of interdisciplinarity, the roles assigned to SSH, and the framing of goals like “environmental innovation”. Chapter 4 provides a valuable counterpoint by analysing a



largely monodisciplinary Finnish project focused on assigning a monetary price to electricity reliability. This case effectively underscores how the framework's dimensions - epistemic differences within engineering, the performative role of cost calculations as boundary objects, the translation between research and regulation, and the implicit marginalisation of non-economic social factors—are relevant even outside explicitly interdisciplinary mandates.

A key argument advanced by Silvast and Foulds is that much scholarship on interdisciplinarity often remains descriptive, cataloguing barriers without sufficiently theorising the underlying social processes. The book's primary strength lies in offering a necessary corrective through its novel and rigorous application of established STS concepts to the *practice* of interdisciplinarity itself. This STS-informed approach moves the discussion beyond generic challenges towards a more nuanced, sociologically informed critique by emphasising the *sociotechnical* construction of interdisciplinary knowledge. The authors convincingly demonstrate how research dynamics are shaped by factors such as funding scripts, distinct knowledge-making cultures, mediating boundary objects, disciplinary misunderstandings, and contested interpretations, even as disciplinary identities persist. This multi-scalar perspective, effectively linking micro-level interactions to macro-level institutional contexts, showcases the analytical purchase of these STS tools. Furthermore, the rich empirical chapters make these concepts tangible, powerfully illustrating the framework's utility in understanding the complexities of contemporary research collaborations.

While impactful, the book consciously presents its framework as *a* sociology, deliberately inviting further refinement and application rather than offering a definitive statement. This reflexive stance acknowledges certain inherent limitations that also point towards avenues for future inquiry. The empirical grounding in European energy research, while providing depth and

coherence, naturally raises questions about the framework's transferability. Applying it to different geographical contexts or research domains (such as biomedical science or the digital humanities) would necessitate careful adaptation and sensitivity to varying institutional and epistemic landscapes. Furthermore, the book excels in its critical analysis of current interdisciplinary dynamics, particularly the challenges encountered by SSH scholars within techno-centric projects. However, it offers fewer concrete prescriptions or detailed models for alternative, potentially more equitable or effective, modes of collaboration, focusing instead on enhancing sociological understanding and reflexivity. Building on this work, future research could fruitfully explore cases where SSH perspectives have successfully shaped interdisciplinary agendas from the outset, test the framework's robustness across diverse fields, and investigate how these sociological insights might be translated into more actionable strategies for designing and managing interdisciplinary research programs.

Nonetheless, "Sociology of Interdisciplinarity" represents a valuable and necessary contribution to STS, energy studies, and the broader study of research policy and practice. It is essential reading for STS scholars examining the social dimensions of knowledge production in contemporary, mission-oriented science. Researchers across all disciplines engaged in energy-related interdisciplinary projects will gain significant insights into the often-implicit dynamics shaping their collaborations. Furthermore, research managers, funders, evaluators, and policymakers seeking to foster more effective and equitable interdisciplinary research would do well to consider the sociological factors Silvast and Foulds bring to the fore. By demonstrating *how* interdisciplinary research is constructed, the book provides a crucial foundation for thinking more critically and reflexively about how to better realise its purported benefits for addressing grand societal challenges.