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The Social-Ecological Systems Framework: Potential for Analysing Gender and Social Change?

This brief focuses on the potential for the social-ecological systems (SES) framework to engage with concerns about gender and social change. It specifically considers how far feminist political ecology (FPE) can address its shortcomings.

Key points

- The SES framework enables interdisciplinary researchers to deploy pluralistic theoretical viewpoints to understand resilience of social and ecological systems.
- However, an instrumental use of the SES framework undermines its core potential for gender and social analysis.
- FPE's theoretical and methodological perspectives help consider the neglected issues of power, agency and gender.

What is the SES Framework?

The social-ecological systems framework (Ostrom 2009) has profoundly improved the capacity for researchers to integrate understandings about social change within approaches to managing natural resources (see box 1). A key application of the framework is in the analysis of resilience. In resilience theory, the capacity to tolerate shocks and to rebuild is seen as a property of coupled social and ecological systems (Resilience Alliance 2014). The elements of the SES framework are well-established, clearly delineated, and offer a promising vehicle for interdisciplinary collaboration and exchange (Keck and Sakdapolrak 2013:7)

However, it is important to remember that the framework is subject to ongoing development, that there are different interpretations of it, and that it inevitably has both advantages and limitations. This implies that there is value in critically reflecting on the framework and its evolving applications, and extending it where necessary. The SES framework is not a specific theory and cannot, in and of itself, guarantee 'good' research. Its usefulness and nuanced contributions to analysis depend on its intelligent deployment.

What opportunities does it offer?

The SES framework's orientation towards contextually-embedded multi-tier case study methodology opens up scope for rich learning across disciplines. The framework can meaningfully expand the space for social and gender analysis when it is utilised "*to pose better questions*" rather than to "predict policy outcomes" (Anderies et al. 2006:8) [emphasis ours].

Cutting-edge thinking about the SES framework builds on its capacity to engage with social change in order to ask questions about the trade-offs, costs, and changing vulnerabilities involved in reorganising for resilience at multiple levels. Realising this involves asking: "who decides what should be made resilient to what, for whom is it to be managed, and for what purpose?" (Anderies et al. 2006:5).

However, these questions are not satisfactorily addressed merely by the identification or inclusion of specific governance systems (tier 1) or variables (tier 2). A 'factorial' approach that focuses on constituent parts risks undermining the core potential of the framework, namely to develop improved understanding of the complexity of change (Anderies et al. 2006; Chaigneau 2013).

The Improved Capacity that Ostrom's SESF Offers to Understand Social Change

- People-orientated (Anthropocentric). Originated in social science, specifically political science, and orientated to collective choice, common property resources and NRM.
- Analyses dynamics in natural and social systems and interactions between them, including feed-backs.
- Multi-tier hierarchies of variables useful for explaining sustainable resource management. Able to analyze nested systems at different scales.
- Analysis-orientated. Offers a generic data organizing structure. Crucially, includes qualitative variables, such as 'information sharing'.
- Orientated to exploring the conditions useful for sustainable resource management.

(Drawing on Binder et al 2013:6-7)

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In other words, the intrinsic value of the SES framework lies in the opportunity it offers to learn about the complex interactions and relationships between ecological systems and dynamic social, political and economic relationships in specific cultural and historical contexts. As proponents of social resilience argue, "context, feedback and connectedness" (Keck and Sakdapolrak 2013:14) are the vital questions.

How far can it analyse gender and social change?

Despite the ground-breaking nature of the SES framework, there are clear tensions and limitations that are emerging with respect to social and gender analysis. Whilst some cutting-edge thinking engages closely with these critiques, all too often a more instrumental use of the SES framework tends to compound them (Foran et al. 2014).

1) 'Systems-thinking' does not capture social dynamics

The focus on system properties problematically neglects the intricacies of social difference or social power. The dynamics of gendered social relationships are fundamentally different to ecological dynamics, but so far the framework has been limited in its examination of gendered power relations within communities (Cote and Nightingale 2012, Turner 2013). Many researchers have been critical of the conceptual slide from ecological resilience, to social-ecological resilience, and even further to social resilience. The application of resilience thinking to society is often under-specified and highly contested (Keck and Sakdapolrak 2013:11). Where it has received more elaboration, social resilience has been seen as being largely about the persistence, adaption or transformation of local institutions with varying degrees of sophistication (ibid).

2) Community focus obscures agency

The orientation of the SES framework to the sustainable management of resources at the community level has led to an excessive emphasis on the efficient functioning of institutions: this dominance persists, even where some analytical attention is placed on issues of legitimacy and social inequality (Cote and Nightingale 2012: 479). However, "there can be trade-offs between equity and legitimacy where legitimacy emerges from the maintenance or enactment of highly hierarchical and exclusionary social relations" (ibid). This leads to a neglect of the interplay between social structures and the agency of social actors (Cote and Nightingale 2012:480, Keck and Sakdapolrak 2013:10,).

3) Policy perspective neglects politics

Reflection is needed about how both specific gender approaches and the SES framework impinge on processes of change. For instance, simplistic assumptions about women in development led to interventions in Ghana's marine fishery that have "created disharmony and mistrust" rather than promoting development (Walker 2001:160). More generally, gender stereotypes have persisted in research in development because of "the pressing need to generalise, which… …tends to run against insight and nuance" (Harrison and Watson 2012:943).

Proponents of the SES framework need to reflect on how "resilience thinking is a power-laden framework that creates certain windows of visibility on the process of change, whilst obscuring others" (Cote and Nightingale 2012: 484-485). These windows are not apolitical and resilience ideas "parallel neoliberal thinking about social responses and efficiencies" (Turner 2013:2). The popularity of resilience is not its "analytical traction" but in "infinite malleab[ility]" (Turner 2013:2; Brown 2013).

What does feminist political ecology offer?

Feminist political ecology (FPE) builds on and deepens political ecology's central concerns with power, politics and social justice (Rocheleau 2008, Foran et al 2014). As such it engages critically with the problems of normative commitments and systems thinking that feature prominently within the SES framework and resilience theorising (Turner 2013).
Here, we outline five key analytical advantages that FPE has in relation to the SES framework and resilience thinking.

1) Addressing power and agency

Whilst power and agency are weakly conceptualized within the SES framework FPE is directly orientated towards examining inequality and its "spatial and historical drivers" (Tschakert 2012:144). FPE asks questions about how gendered power relations are (re) negotiated: the concern is not just with distributional inequality but with the power relations that (re)shape that inequality.

Feminist Political Ecology

Feminist political ecology focuses on how *unequal* gender relations are (re) *negotiated* around opportunities and threats, including those offered by development organizations or climatic events, both *within and beyond* the household and the community.

2) Considering intersectionality

FPE does not separate out gender from other power relations, but embeds it within an intersectional analysis of other axes of social differentiation in specific historical contexts. A richer understanding of individual and collective agency is opened up by exploring the ways in which specific men and women, and their multiple roles and identities, intersect around particular resource interests or struggles. In this way, FPE foregrounds social actors, their capacities and practices rather than systems or functionalities (Keck and Sakdapolrak 2013:13). Moreover, this opens up the potential for going beyond the historical focus of gender on women to include analytical attention to men.

3) Going beyond below the community level

FPE crucially allows thinking about resource management to penetrate below the level of community institutions. Gendered household decision-making is central to resource management at community level (Padmanabhan 2011). Differential and gendered power relations within and between households are not simply an 'add on' in FPE, rather they are intrinsically and reciprocally connected to factors at higher levels of analysis.

4) Asking 'resilience of what for whom'?

Problematizing gendered power relations in FPE involves attention to the way in which different parties identify and frame problems, and what this implies for legitimate action and persuasive prescription of solutions (Padmanabhan 2011). In this way, FPE goes to the heart of asking 'resilience of what, for whom and at what cost?'

5) Integrating critical reflexivity

FPE enables researchers to approach the collection and interpretation of data with critical reflexivity (Jackson 2006). Too often data for SES analysis that is collected using participatory or survey methods is taken at face value. In contrast, FPE problematizes the politics of speech and asks questions, such as: how did the presence of others influence the meaning of what they said? In FPE, the data cannot 'speak for itself', rather the researcher has to make sense of it. This kind of sense-making is only rigorous when it explicitly reflects on the ways in which the research design and researcher influenced the construction of the data.

Moving Forwards?

There are many positives associated with the use of the SES framework but discussion is required about the extent to which the framework is intrinsically gendered or how effectively it can be adapted and deployed to accommodate a more critical gender analysis

The SES framework can, as it stands, offer a semi-standardised way of indexing some of the key variables in multi-tiered case studies, thus providing a structure that can be useful as part of comparative analysis, interdisciplinary collaborations and discussions and for synthesis across such studies. What it does not do is provide the methodological or theoretical orientation needed to examine gendered social power relations. Significantly, this cannot be achieved just by adding gender variables or by gendering existing variables in the SES framework (although both may be needed). Clearly, using the SES framework alone will not do sufficient analytical work for research in development organizations that seek to alleviate poverty and gender inequality. Resilience thinking is neither pro-poor (Béné et al 2012) nor feminist.

Insights from FPE could be used to enrich the SES framework. However, previous efforts to integrate political economy into the SES framework have faced significant difficulties. These challenges are likely to be more severe for integrating FPE into the SES framework. Moreover major dangers with using the framework, even in an adapted form, are that: its variables 'lead' the enquiry, that a checklist approach over-determines the collection of data, that analysis is instrumental, and that making sense of the analysis is de-prioritized.

Rather, what is needed is a more fundamental transformation in how it is used. To have value from a gender and social analytical viewpoint, the deployment of the SES framework needs to foster critical research, not foreclose it (Anderies et al 2006). To this end, Cote and Nightingale argue for a 'situated resilience approach' in analysis that "opens up issues around values,… equity and justice" in order to "formulate questions about which resilience outcomes are desirable, and whether and how they are privileged over others" (2012:480).

This would involve: stepping back from the notion of society as a 'system'; being clear that the framework needs to be populated with relevant theoretical content for the enquiry at hand; and refocusing on different ways of making sense of data.

Foran et al advise that 'analysts need to approach the tensions between conceptual frameworks as a source of creative, inter-disciplinary insight… … Informed, synergistic use of divergent frameworks constitutes a new ambition for research and practice'(2014:96) [emphasis ours]. The SES framework potentially offers a convenient 'skeleton' around which interdisciplinary researchers can deploy pluralistic theoretical viewpoints about society-environment interactions. As such, it would contribute to redefining questions about social resilience within social-ecological interactions as not merely technical questions but also as contested and political questions (Keck and Sakdapolrak 2013:14). In this sense, bringing FPE into conversation with the SES framework is at the cutting edge of resilience research.

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