Advances in Ecological Research Special Issue: Pluralism in ecosystem governance

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Special issue invitation

There is a growing acknowledgement that ecosystem governance is predicated upon human values (e.g. Jacobs et al., 2020), that the inclusion of stakeholders and rights-holders in decision-making is essential, and that expert knowledge and evidence is socially embedded and therefore not value-neutral, all of which invites dialogues on pluralism. Pluralism is sometimes used as a general term, and sometimes used to reference a specific type of diversity in various fields (e.g. philosophy, political theory, law, religion studies). We define pluralism in its broadest sense, and in line with complexity and systems thinking: Pluralism directly addresses diversity of some aspect of the natural environment or human culture. By using the term 'pluralism,' we acknowledge that this diversity is positive and important in the context of dynamic social-ecological systems (Kassam, 2010).

This Special Issue will facilitate an exposition of pluralism in ecosystem governance research, especially as it relates to translational ecology, i.e. linking ecological knowledge to decision-making and action-taking. We take an inclusive approach to interpreting pluralism and will target contributions that view pluralism from different perspectives; for example, diverse perceptions of the nature of ecosystems, diverse types of knowledge about ecosystems and their governance, and diverse values. Articles will highlight benefits and challenges of pluralism in the context of ecosystem governance, synthesizing past studies and literature and including scholars' own reflections on working with pluralism. Articles will be selected to represent diversity in discipline, geography, region, scale, governance arrangements, and authorship. Here we provide an introduction to the concepts of pluralism, ecosystem governance, and translational ecology, drawing from various fields, in the hope of inspiring scholarly contributions.

Perspectives on pluralism

Philosopher R. Bruce Hull has defined environmental pluralism as a view in which the world is "infinitely complex, fluid, and negotiated, frustrating any attempt to impose a master narrative as an overarching, organizing frame" (Hull, 2009). He puts forward the view that environmental pluralism is a prerequisite to contemporary environmental problem-solving.

> *The challenges to our survival and sustainability are enormously complex. A diversity of solutions representing a plurality of values and implemented through collaboration with open and regular testing of outcomes for feedback and correction seems essential. Environmental pluralism seeks to build a broad political base, encourage experimentation, and strive for the higher ground where many, but not all, of the preferred outcomes of multiple stakeholders exist. It strives to overcome the polarization and paralysis symptomatic of contemporary environmental decision making* (Hull, 2009).

Beyond personal values and worldviews, pluralism can also refer to ideological diversity and a "commitment to the disagreement that necessarily accompanies ideological diversity" (Brush, 2020, pp. 161). Brush (2020) suggests that the complexity and multidimensionality of environmental challenges require intellectually and ideologically diverse responses, and that this is clearly a benefit rather than a liability. This view is counter to calls by major environmental philosophers for a universal environmental philosophy or ethic (Brush, 2020), which may not be possible because of cultural differences (Cocks, 2017). Further, without accounting for culture, what may be called pluralism might ignore the worldviews of most of the world's people. This idea has been fortified in recent years by contributions from decolonization theory.

> *Decolonial theory is concerned with confronting, challenging, and undoing the dominative and assimilative force of colonialism as a historical and contemporary process, and the cultural and epistemological Eurocentrism that underwrites it* (De Lissovoy, 2010).

By incorporating decolonial views into our explication of pluralism, we mean to acknowledge that the context and perspectives introduced thus far reside in the context of Western academic thought and the colonial, exclusivist, and elitist structures embedded within it (De Lissovoy, 2010; McDowell & Hernández 2010). We aim to advance a view of pluralism that will not itself constitute a barrier to entry for anyone who wishes to engage in a dialogue about ecosystem governance.

Legal pluralism is a rich field in its own right. Legal pluralism supports the ideas that: 1) there may be more than one legal system in a particular territory, and 2) that non-state rules may serve as a source of law, in addition to state rules (Ralf Becerra, 2019). Scholars of legal pluralism have advanced the idea that non-state institutions play key roles in policymaking, implementation and other aspects of governance (Richardson 2008). This is an area of key relevance since ecosystem governance usually relies on institutions at multiple levels and scales (Cash et al., 2006).

Ecosystem governance

By 'ecosystem,' we refer generally to Tansley's (1935) definition that refers to "…the whole system…including not only the organism-complex, but also the whole complex of physical factors forming what we call the environment of the biome – the habitat factors in the widest sense. Though the organisms may claim our primary interest, when we are trying to think fundamentally we cannot separate them from their special environment, with which they form one physical system" (as quoted in Gignoux et al., 2011). The term 'ecosystem governance' implies that an ecosystem is shaped by the decisions humans make about their activities within that system, which determine how the biosphere, hydrosphere, and geosphere are sustained, extracted, conserved and managed, and how these decisions are made. In this context, governance is not strictly about formal institutions; rather, it includes all actors who make decisions, benefit from, or are otherwise involved in this ecosystem.

Ecosystem governance is closely related with other types of governance: ecosystem services governance, collaborative ecosystem governance and ecosystem-based governance, etc., and thus we feel it important to define and situate 'ecosystem' governance within these related conceptualizations. We define ecosystem governance, accordingly, as the integrated and holistic governance of ecosystems that includes formal and informal institutions, collaboration and cooperation across different levels of government, and nongovernmental and individual action. It acknowledges and addresses the integration of the social system with the ecosystem, and issues of scale, complexity, and uncertainty. It is adaptive (using experimentation and learning to responsively change) and collaborative (recognizing that governments alone are not sufficient for governance and thus convening additional actors) (Berkes, 2007; Cosens, 2010; Garmestani and Benson, 2013; Gunderson et al., 2016; Karkkainen 2002). To be

successful, ecosystem governance should operate in a transparent and equitable manner, with the goal of improving the long-term well-being of people (Adhikari and Baral, 2018; Olsen et al., 2009). We align our definition with the assertion of Keune et al. that "to unambiguously define governance is a challenge…to define it too narrowly would be a pity…ecosystem governance is open for discussion" (p. 213-214). Further, we distinguish between governance and management, focusing on governance as the institutional (formal and informal) processes and structures that create a vision and direction for management (the actions and day-to-day decisions taken) (Cosens, 2013; Olsen et al., 2009).

The translational ecology approach

Translational ecology (TE) emphasizes linking ecological science to evidence-based decision making. This approach resonates with pluralistic ecosystem governance as TE uses cross-disciplinary research to address "the sociological, ecological, and political contexts of an environmental problem," "is characterized by extended commitment to real-world outcomes," and declares as its goal that successful TE science will "inform and improve decision making for environmental management and conservation" (Enquist et al., 2017, pp. 541). This approach requires "deliberate engagement with end-users and an understanding of the social and cultural contexts in which a research project functions" (Wall, McNie & Garfin, 2017, pp. 551). TE acknowledges that while much usable science exists, much of it does not get used because of implementation challenges (Wright et al., 2020). Wright and colleagues (2020) suggest that while decision science can help to account for the uncertainty inherent in ecological systems, it is nonetheless challenging to account for the depth of complexity and uncertainty of socio-political systems.

While pluralism is not a new idea, recent, ongoing trends – calls for broadening participation in ecosystem governance (e.g. Biggs et al., 2012), the rise of transdisciplinary environmental research (e.g. Brandt et al., 2013), and sustainability crises such as climate change-related extreme weather events and the Covid-19 pandemic -- have prompted renewed urgency in understanding how institutions and people diverse in their needs, views, interests, and behaviors can effectively govern ecosystems to promote ecological sustainability and human well-being. With an understanding that we are interpreting pluralism in ecosystem governance broadly, we seek diverse contributions that advance this conversation in novel, unconventional, and perhaps even transformative ways.

Call for papers

Please join co-editors Dr. Jennifer Holzer (Brock University, Canada), Dr. Julia Baird (Brock University, Canada) and Dr. Gordon Hickey (McGill University, Canada) in developing this "Book Series" special issue of the peer-reviewed journal *Advances in Ecological Research. Advances in Ecological Research* is a monograph journal (like a book), where each issue is devoted to a theme. Issues are comprised of longer articles (~9,000 words) in an effort to recruit articles that are synthetic and cross-disciplinary. We seek papers that propose novel syntheses of information, rather than as a means of delivering primary information (although new results are accepted). This can -- and we hope it will -- inspire novel, cross-disciplinary and cross-sector collaborations. The journal encourages "evidence-supported speculation"; scholarly views looking to the future. The journal highly encourages the use of figures (there is no charge for colour reproduction). We encourage potential authors from a range of institutions, backgrounds, and geographies, specifically from indigenous communities and the Global South. Please note that since contributions and readership from diverse fields are anticipated, it is critical that all terminology be clearly defined and writing be as simple as possible. There are no submission fees associated with this journal.

If interested in submitting a paper to this special issue (or if you have other inquiries), please email a title and abstract (300 word maximum) for consideration to Dr. Jennifer Holzer (jholzer@brocku.ca). Deadline for abstract submissions is by November 30, 2020. Manuscripts are anticipated to be due by October 1, 2021 with an anticipated publication of the special issue in early 2022.

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