Rethinking Committee Work in the Research Enterprise: The Case of Regenerative Gatekeeping

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Abstract

Committees profoundly influence the science, technology, engineering, and mathematics (STEM) research enterprise. However, the potential power of gatekeeping in committee work has received little attention in Earth and space sciences. We suggest "regenerative gatekeeping" to challenge institutional inertia. By embracing values of belonging, accessibility, justice, diversity, equity, and inclusion in committee work, we imagine new possibilities that are aspirational and enabling. Two examples, a hiring committee process and a seminar series innovation, highlight the need to self-assess policies and practices, ask critical questions, and engage in generative conflict. Rethinking committee work can activate distributed mechanisms needed to promote change.

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Key Points

- Committee work influences the STEM research enterprise.
- Committee members play roles as gatekeepers that maintain the status quo and foster institutional inertia or can become *agents of change*.
- "Regenerative gatekeeping" provides a framework for promoting belonging, access, justice, equity, diversity, and inclusion.

Plain Language Summary

The science, technology, engineering, and mathematics or STEM research enterprise is shaped by the myriad committees that support it, and the committee members making decisions about policies, funding, and personnel effectively serve as gatekeepers. Centering belonging, access, justice, equity, diversity, and inclusion in day-to-day committee work can empower many more STEM community members to act as agents of change. We describe a new approach to committee service we refer to as "regenerative gatekeeping" with the aim of broadening participation and improving the climate of geosciences.

Abstract

Committees touch nearly every facet in the science, technology, engineering, and mathematics (STEM) research enterprise. However, the role of gatekeeping through committee work has received little attention in Earth and space sciences. We propose a novel concept called, "regenerative gatekeeping" to challenge institutional inertia, cultivate belonging, accessibility, justice, diversity, equity, and inclusion in committee work. Three examples, a hiring committee process, a seminar series innovation, and an awards committee, highlight the need to self-assess policies and practices, ask critical questions and engage in generative conflict. Rethinking committee work can activate distributed mechanisms needed to promote change.

COMMENTARY

The STEM research enterprise is slow to change (Morris, 2021; Behl et al., 2021), and as suggested by Marín-Spiotta et al. (2020), change will require reexamination of current policies, programs, and processes. Committees influence policies, personnel, funding, and as such, committee members serve as "gatekeepers," which deserves special attention in the Earth and space sciences. When members and/or entire committees work without interrogation of their

values, ideas and perspectives, exclusionary practices and behaviors persist. Committees in the STEM enterprise have different goals and charters, and engage in the act of gatekeeping. Naturally the scope of the gatekeeping role varies widely because committee duties vary widely, and they are embedded in larger institutional and social systems.

We, the Coastal and Ocean STEM Equity Alliance (COSEA), propose a "regenerative gatekeeping" framework that integrates belonging, accessibility, justice, equity, diversity, and inclusion, and recasts gatekeepers as stewards rather than sentinels. We would like to imagine gatekeeping as more than a system that controls or limits access but rather as a process that cultivates "stewards of innovation" or "agents of change." As implied by its definition, regeneration alludes to frameworks that foster renewal, dismantling barriers (Berhe et al., 2021) and maximizing opportunities, and advance beyond the current state. Regenerative gatekeeping has three components: self-assessing committees and their policies and practices, asking critical questions, and engaging in generative conflict. By "regenerative gatekeeping," we join others who propose recent qualifiers in other arenas in the United States, e.g., *restorative* justice, *transformative* resilience, *transformative* justice, *generative* conflict (Anderson, 2021), and *emergent* strategy/*emergent* design. This new framework will move us closer to the intentionality, accountability (Anderson, 2021), and clarity required to transform the STEM research enterprise. Given the foundational nature of committee service to the STEM research enterprise, we believe that embracing this new framework holds great untapped potential.

The Pressing Need

Much as we can be unaware of our own biases, we can also fail to recognize the many ways in which our work on various committees plays a gatekeeping function that maintains the status quo in the geosciences. Implemented with care and diligence, gatekeepers can play a transformative role in fostering institutional and systemic changes in the geosciences. Regenerative gatekeeping could be a vehicle for widespread action to advance diversity, equity and inclusion in geosciences; this requires consideration of both under-represented groups and individuals and specific types of higher education institutions such as minority serving institutions (MSIs). Within academia, scholars have recently argued that geosciences face a persistent lack of race and ethnic diversity as evidenced by Ph.D. attainment (Bernard and Cooperdock, 2018) and undergraduate degree attainment (Beane et al., 2021) including at faculty levels. These two studies make use of institutional data sets that continue to grow, but that have historically been difficult to access. Indeed, recent grassroots efforts to mine similar data from the NSF showcase the potential power that committees have to better understand the need for change (Chen et al 2022). We are encouraged by this progress and call on individuals and committees to evaluate what data (if any) are collected, how data are used (e.g., self-assessment, evaluation, audits) and to engage all stakeholders in the process of fostering change. Change will not happen overnight; but we must start the process. Through widespread action progress is possible at multiple levels and scales.

The need to rethink gatekeeping is also evident from the current state of what is often referred to as diversity, equity, and inclusion (DEI) work. The past 20 years has seen the growth in DEI goals and programs with key roles played either by early career researchers and/or people from historically excluded communities. When DEI work is done on a "voluntary" basis, it arguably constitutes a form of cultural taxation (Padilla, 1994) especially when done by individuals based on having diverse socio-demographic traits. Moreover, the value ascribed to DEI work varies widely with some institutions considering it meritorious, while others consider it a distraction from research productivity (Madden et al 2020). Therefore, in addition to the possibility that such work is viewed negatively within a given institution, vulnerable members of our scientific community might also be at risk for challenging the existing order. Risks may include but are not limited to tenure denial, promotion denial or promotion delay. Hence, an important opportunity is to leverage the privilege of colleagues who may be willing to act as advocates or as champions for advancing DEI priorities. A benefit of shared effort is wider visibility of a team committed to breaking down barriers for everyone (e.g., through diverse and inclusive leadership, Cf. Pierce et al., 2020). We suggest that universal values of trust and reciprocity when establishing partnerships will signal something larger than lone agitators, while also deepening collegial relationships, what we think of as a "culture shift" in a direction that engenders regeneration.

Our proposal: Regenerative Gatekeeping

Academic research provides relevant context for our proposition. Some argue that diversity in the workforce is beneficial in the business sector (Herring, 2009; Kochan et al., 2003), and specifically in effective problem solving (Hong and Page Scott, 2004). Existing academic literature about gatekeeping as a scholarly term has early roots in sociology (Broadhead and Rist, 1976) and journalism (White, 1950; Janowitz, 1975). Recent years have witnessed a substantial expansion in the scope of gatekeeping research from the labor market (e.g., Faulconbridge, 2009) to language translation in medical discourse (e.g., Davidson, 2000). Recent research has sought to expand the origins and definitions of gatekeeping as a well-established scholarly concept to move common assumptions from social fields to networks (Deluliis, 2015).

The perspectives of social scientists are essential to help us think differently about ourselves and our roles in STEM committee work. For example, through an understanding of how innovations arise, and how humans interact, we might discover new avenues for regenerative gatekeeping. An example where social science research might shed light is with the gatekeeper bias in hiring, when "...employment decision is based on the decision maker's perceived preferences of the existing employers or co-workers with whom the new employee would be working."

Additionally, by thinking of gatekeepers in positive and holistic ways, we can imagine new definitions for this term that can help make the Earth and space sciences more welcoming, inclusive, and accepting of who we are and what we have to offer. Recent social science research

by Sovacool et al., (2020) describes varied functions for the concept of "intermediary gatekeepers," including applicable roles for STEM committees: policy implementation, networking, brokering, visioning, and standards development. Another view is offered by Beronda Montgomery who challenges the entire concept of gatekeepers as a traditional approach and proposes a more expansive groundskeepers (Montgomery, 2020) that pay attention to how individuals are situated within the whole ecosystem of an organization, similar to how we think about how to cultivate a plant. Finally, yet importantly, a 2021 effort looks at how to make humane indicators of excellence in academia or what they coin a values-aligned academia. In a white paper, this multi-institution effort offers provocative entry points like "[c]reate better and more consistent ways to track what is now often invisible labor to ensure equity." In doing so, research, teaching, and service are presented as interconnected domains resulting in complicating mainstream faculty narratives, making it difficult to evaluate "merit" using the existing metrics. Achieving diversity goals and ensuring regenerative gatekeeping within our work environments and in our research communities will require finding ways to acknowledge invisible labor and support values-based metrics.

We acknowledge limitations for regenerative gatekeeping. Will the interest by one person or entire committees generate change? Only time will tell, but we think it is worth trying. The regenerative gatekeeping we advocate is situated in context of the climate in the geosciences recently described as an "obstacle course" (Berhe et al., 2021). A related and specific piece from this obstacle course context is the cost of "invisible labor" for instance by trainees, graduate students and postdoctoral scientists, and others based on their diverse backgrounds. Last but not least, if the priorities in your committee or organization do not center diversity and inclusion then the regenerative gatekeeping framework proposed will likely face challenges.

What Can You Do to Achieve Regenerative Gatekeeping?

Our call for individuals to initiate this widespread regenerative gatekeeping work acknowledges that language can be inspiring. The goal is a healthy and supportive community in Earth and space sciences and recent progress reveals that many individuals are keen to help. The groundswell of interest is clear from contributions ranging from: strategies for individual and collective actions (Behl et al., 2021) to cultivate a more welcoming climate in the coastal, ocean, and marine sciences; to acknowledging the value of discussion groups (Ormand et al., 2021); to fostering the coproduction of research with local communities, such as the concept of "equitable exchanges" (Harris et al., 2021); and to documenting the altruistic motivations of young people poised to join our community (Carter et al., 2021). Of course, there is more, much more to be done in terms of racial/ethnic identity (Dutt, 2020), disabilities and access to the field (Atchison et al., 2019), and gender identity (Ranganathan et al., 2021), to name a few. Despite progress on gender parity, for example, women in Earth and space science still face many barriers. Dismantling these barriers would allow women to "thrive and not just survive" (Hastings, 2021). Steps in this direction include the Earth Science Women's Network, Geosciencewomen.org, and

the Society for Women in Marine Science. Analogous community-driven groups with a focus on race/ethnicity include Black in Marine Science, GeoLatinas, Geoscience Alliance, and Asian Americans and Pacific Islanders in Geoscience. We join this wave by offering what we hope is empowering language that gives new meaning to much of our day-to-day work. Ultimately, we hope to invite many more members of our Earth and space science community to rethink committee work.

Case Studies

The following cases offer real life examples of regenerative gatekeeping in action in Earth and space sciences. These are work in progress and like anything that is changing over time and space, these cases are evolving and ongoing. Drawing from three case studies, committees can change the way that leadership views the impact of committee work, and to the way committees' function in relation to diversity and inclusion both in theory and in practice. In particular, this framework consists of one or more of the following: 1) self-assessing policies and practices, 2) asking critical questions and 3) engaging in generative conflict. In implementing these changes, this reframing of committees is something that should be done within the committees themselves, and within the whole academic community and the entire STEM enterprise.

We find three recent efforts in Earth and space science exemplify how regenerative gatekeeping can be applied in the STEM research enterprise. The first case is a mature example from a large public institution, Oregon State University's Search Advocate Program. This program aims to remove bias during the faculty search process through a workshop series that promotes what we consider regenerative principles in the hiring process. The theoretical foundation for the program draws from current research about implicit bias and diversity, information about the changing legal landscape in hiring, and an overview of inclusive employment principles. The novelty of the program is that it trains Search Advocates to function as external search committee members that can probe assumptions, norms, and practices that an internal member might not question. We see this as regenerative gatekeeping. The second example, rooted in research on the power of role models in STEM and more broadly (Gibson, 2004), and maximizing their impact (Gladstone and Cimpian, 2021), comes from Keisling et al., (2020) who describe graduate students taking over seminar planning responsibilities at the University of Massachusetts at Amherst to invite more diverse speakers. By rethinking gatekeeping, this example highlights the power of challenging the status quo maintained by senior faculty. The new arrangement yielded a parallel seminar track embraced by the administration, and an opportunity for senior faculty to become champions to diverse early career researchers. The third example emerges from a large membership based professional society and the recommendation of "canvassing committees" by experienced members acting in an honors and awards committee (Holmes et al. 2020). A canvassing committee is a successful approach to search for potential awardees mainly to increase the number of nominations, rather than what the selection committee is charged with,

which is to identify the most-deserving candidates. Some organizations have moved beyond voluntary committees into hiring staff to formalize these roles.

Key Questions for Committees

The regenerative gatekeeping framework requires us to ask critical questions, and think about how widely distributed actions might support transformation. A few questions to consider in committee work might include: Has the committee integrated diversity and inclusion definitions, goals and/or actions? Can committees offer secure (or safe) spaces for affinity groups (Anderson, 2021) or accessibility services? Do particular committee service burdens fall disproportionately on historically excluded community members? What kinds of data are needed for accountability and understanding about outcomes and processes? Do our metrics assess qualities that lead to success and what constitutes evidence? What qualities are not being considered (e.g., grit, resilience, evidence of leadership, inclusive diversity excellence, lived experience, ways of knowing)? Do our metrics reflect our values? What are our key values? Do values reflect diversity and inclusion? These examples are not exhaustive and each committee can customize a set of questions that best reflect their shared goals. We also recommend sharing resources among groups to proliferate learning and growth on these topics.

Conflict of Interest Statement

The authors declare no conflicts of interest relevant to this contribution.

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