

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

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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 processes. Committees are profoundly influential in research on matters of policy, personnel, funding, and more. As such, committee members serve as gatekeepers. We suggest that committee work provides a vehicle that can challenge the status quo in the Earth and space sciences. We, the Coastal and Ocean STEM Equity Alliance, propose a “regenerative gatekeeping” framework that integrates belonging, accessibility, justice, equity, diversity, and inclusion, and that recasts gatekeepers as stewards rather than sentinels. Adopting new language will move us closer to the intentionality, accountability (Anderson, [2021](#)), and clarity required to transform the STEM research enterprise. In so doing the STEM research community, which is among the least diverse, would both honor and be the beneficiary of diverse identities and perspectives. 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

We suggest that the potential of gatekeepers to foster changes can be enhanced through the lens of belonging, access, diversity, equity and inclusion. In the future, gatekeepers will diversify in the United States (U.S.) given national socio-demographic trends, but to date population changes have not been matched by comparable changes in Earth and space science. The rapid change in the U.S. population gives the context for regenerative gatekeeping, and situates it as challenging yet critical.

“[B]y 2044, more than half of all Americans are projected to belong to a minority group (any group other than non-Hispanic White alone) ([US Census 2015](#)).”

In the U.S., Hispanic/Latino is the [fastest growing](#) and largest ethnic group ([US Census 2015](#)); however, participation in geoscience appears to lag. Over the last four decades the Hispanic/Latino population has [rapidly increased](#) from ~6% to 19%, yet attainment of geoscience undergraduate degrees by this group has increased only from 3% to 10% (Beane et

al., (2021). The observation that [Latinos are not attending college](#) in the same proportions as Whites may contribute to the gap, although other factors are at play. Understanding the multiple factors that promote student academic success for Latinos and for other groups with diverse backgrounds in Earth and space sciences is essential to transforming the STEM research enterprise. We propose that regenerative gatekeeping is a vehicle for widespread action beyond under-represented groups and individuals and specific types of higher education institutions such as [minority serving institutions](#) (MSIs).

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 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. 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. 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

Committees play essential roles in all facets of research – e.g., setting priorities, planning experiments, recruiting students, reviewing proposals, and vetting participants - and arguably they have the power to counteract the institutional inertia that tends to maintain the status quo. The gatekeeper role that committee members play deserves special attention in the Earth and space sciences because of the persistent lack of diversity as evidenced by Ph.D. attainment (Bernard and Cooperdock, 2018) and undergraduate degree attainment (Beane et al., 2021). We propose regenerative gatekeeping as a mechanism for transforming the research enterprise by dismantling the many existing barriers (Berhe et al., 2021). We add “regenerative” in the same vein as 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](#). Regeneration speaks to renewal, maximizing opportunities, thriving, and thus to advancement beyond the current state.

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).

We suggest that 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. Much as we can be unaware of our own biases, we can also fail to recognize the many ways that our daily committee work plays a gatekeeping function that maintains the status quo. Acknowledging gatekeeper bias, for example in hiring, shows that bias transfers into areas beyond the individual level into the workplace and how decisions and programs are designed and implemented.

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 to propose that a more adequate view is of as 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 Andrew Mellon-funded 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 Mellon-funded 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 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.

Case Studies

We find two 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.

What Can You Do to Achieve Regenerative Gatekeeping?

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: When was this policy originally adopted and has it been reviewed? Why do we use this set of metrics when evaluating “merit” such as in applications for scholarships? Can the infrastructure planning process be more inclusive to offer options for bathroom designation(s), or for space(s) for nursing or affinity group(s) (Anderson, [2021](#))? Do we exclude certain categories of institutions or groups of people from participating in a particular line of inquiry or when applying for institutional funding? Do particular service burdens fall disproportionately on historically excluded community members? How might authentic conversations around privilege create openings for more advocates/champions in Earth and space sciences?

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](#), 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.

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