Framing the Dialogue for Systemic Equity Reform in STEM Faculty Careers

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ASPIRE Institutional Change Initiative

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Executive Summary

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This report is from the **Envisioning and Enacting an Inclusive & Diverse STEM Professoriate (EEIDSP)** Conference Series hosted by the Association of Public and Land-grant universities (APLU) and supported by the National Science Foundation (#2041007). The purpose of the conference series was to develop a community-built agenda on how to address systemic issues that create barriers to successful careers for diverse science, technology, engineering and math (STEM) faculty. For each session, we invited a diverse range of stakeholders to focus on systemic issues in three key topical areas: (1) Aligning the Recruitment and Hiring of Diverse STEM Faculty (March 4, 2021), (2) Equitable STEM Faculty Evaluation and Reviews of Research (June 3, 2021), and (3) Inclusive Leadership to Support Diverse & Inclusive STEM Faculty (September 16, 2021). Throughout the sessions it became apparent that further dialogues across the STEM ecosystem were needed to develop an emergent consensus on how the system needs to change before a coherent agenda could be proposed. In this report, we showcase the key findings, from these convenings, informed by both our discussions and literature to generate a framing of dialogue and early action towards systemic, equitable change in STEM faculty careers.

The need for a systemic conversation

Current national efforts to create equitable change in STEM faculty careers have primarily focused on institutional transformation, or attending to multiple, interlocking dimensions of how colleges and universities prepare future scholars. Yet, diversity within the STEM professoriate has remained relatively stagnant, and still fails to reflect the diversity of the US labor force. This may be because the training, selection, and evaluation of STEM faculty spans much more than a single institution, as do the barriers and disparities that impact their review and success. Faculty are responsible for publishing research in scholarly venues, seeking grant funding from external organizations and agencies, and securing productive

collaborations. Thus, institutional transformation projects alone cannot sufficiently cover the entire terrain of how faculty preparation and evaluation shape career trajectories. Systemic change requires that we address disparities across the multiple areas of STEM academic training that exist within, between, and outside of higher education institutions. To address these disparities, a broader consensus must be developed across the many elements of the system through facilitated and action-oriented dialogue. In this report, we highlight key areas in the broader system in which stakeholders must bear collective responsibility for identifying and disrupting inequities across interconnected settings, namely (1) academic publishers and journals, (2) disciplinary societies and professional organizations, (3) funding agencies and philanthropic organizations, (4) other external entities such as state and federal legislatures, accreditors, and non-profit organizations and membership associations, and finally (5) institutions of higher education.

Highlights from the Report

The report includes three big ideas we believe are essential for a national dialogue on systemic reform for equity in STEM faculty careers:

1. Tracing, Addressing, and Dismantling Systemic Inequities in STEM Faculty Careers
2. Tracking in STEM Faculty Careers
3. Broadening the Bar: Redefining What Counts in Hiring and Evaluation

In Tracing, we explore how the theories of racialized and gendered organizations reveal how organizations structure faculty work in ways that result in barriers for minoritized faculty groups. We ask, how might these perspectives shift our thinking, and reveal novel avenues for addressing (short-term) and dismantling (long-term) barriers that create inequitable terrains of opportunity for minoritized faculty? We consider how higher education faculty and administrators, as well as funders, publishers, and peer reviewers might address these barriers both in the short-term and long-term. This section provides grounding concepts and common language that can help focus our collective dialogues.

In Tracking, we provide insight into the pernicious equity threat of gatekeeping practices to the professoriate, and how it becomes increasingly difficult for candidates who do not obtain the most purportedly prestigious terminal degrees, appointments, and credentials to access and thrive within research universities. To dismantle these tracks, we outline a broad agenda for reflection, discussion, and action that touches multiple change agents, namely colleges and universities, state legislatures, state systems, and funding agencies.

In Broadening the Bar, we describe the enduring challenge of inconsistently recognizing the myriad of research, teaching, and service contributions that minoritized faculty make. This primarily happens in evaluation spaces such as hiring and promotion and tenure. We introduce and encourage an approach focused on institutional, disciplinary, and national systems into the discourse of what counts in evaluation settings.

We conclude the report by advancing how all interested stakeholders can mobilize their efforts collectively across groups to actualize systemic change. By mobilizing coalitions to bring together stakeholders from across the STEM faculty career ecosystem, we can move beyond disseminating promising individual institutional transformation practices to creating the type of true systemic change needed to broaden representation and equity in academic STEM settings and careers.

Introduction

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Despite decades of federally funded activities to increase the diversity of science, technology, engineering, and mathematics (STEM) faculty in the United States, the national STEM faculty has not grown significantly more diverse and still fails to represent the composition of the US labor force. In the 2019 *Women, Minorities, and Persons with Disabilities in Science and Engineering* briefing, the National Science Foundation's (NSF) National Center for Science and Engineering Statistics (NCSES) reports that women hold 38.5% of STEM faculty positions, while representing roughly 48% percent of the U.S. labor force. Racially minoritized[1] scholars (Black/African American, Hispanic/Latino and American Indian/Alaska Native) hold 8.9% of STEM faculty positions, despite representing roughly 33% of the US labor force. It is clear from these data that there is a continued need to strengthen the representation and success of postsecondary faculty who experience minoritization in STEM fields.

A diverse STEM faculty contributes a wider variety of perspectives to public discourse, knowledge, and innovation; enhances the learning environment for all STEM students; and, helps public institutions better serve their communities (National Academies, 2007). We have yet to fully realize these benefits, despite institutional efforts to install best practices in key areas such as faculty hiring, promotion and tenure, and retention (for a summary of these promising practices, see the NSF INCLUDES Aspire Alliance's (NSF# 1834518, 1834522, 1834510, 1834513, 1834526, 1834521) *Leveraging Promising Practices: Improving the Recruitment, Hiring, and Retention of Diverse & Inclusive Faculty* report). Through their work with the Aspire Alliance Institutional Change (IChange) Network to advance policy and practice change on their campuses towards greater diversity and inclusion among STEM faculty, APLU members and other involved campuses have articulated that the greatest challenge has been shifting the deeply-held mindsets and values of the professoriate (learn more about the IChange Network and access available institutional transformation resources). Best practices alone will not transform

1 We deliberately use the term "racially minoritized" and "minoritized" because terms such as "racial minorities" and "underrepresented minorities" ignore the role policies, practices, and structures of institutions of higher education play in perpetuating their limited representation (Chase et al., 2014)

the STEM professoriate; we argue that instead we need to bolster these through a focus on systemic change.

As interest in systemic change grows, some have asked: just what does systemic change mean? And how might a focus on systemic change broaden participation in STEM faculty careers? Prior national efforts suggest that systemic change refers to attending to multiple levels of institutional activity to drive change (Hurtado et al., 2017). After years of funding programs focused on helping individuals better navigate institutions, federal agencies like NSF and the National Institutes of Health (NIH) have moved toward funding more robust institutional projects to address the conditions impacting individuals' persistence and success. For example, improving undergraduate STEM education not only requires curricular changes, but other adjustments within the institution such as faculty professional development to enhance instructor pedagogy, and funding structures to promote program sustainability. This shift from focusing on individual change to institutional change characterizes programs like the Improving Undergraduate STEM Education (IUSE) and Alliances for Graduate Education and the Professoriate (AGEP) at NSF, and Building Infrastructure Leading to Diversity (BUILD) at NIH.

Applying this logic to STEM faculty careers, efforts to improve equity in faculty hiring would require corresponding changes to promotion and tenure processes to ensure fairer evaluations and bolster retention of minoritized faculty. But this narrow conception of systemic change falls short of resolving disparities in other key areas that impact faculty outside of their institutions. Even with more inclusive campus practices, there are durable disparities in scholarly productivity driven by narrow definitions of research in the publication process (Mitchneck, 2020), inequities in grant acquisition linked to social identity and topic choice (Ginther et al., 2011; Hoppe et al., 2019), and unequal distribution of service at multiple levels (O'Meara et al., 2017). Said another way, institutional transformation is a different, albeit related project to systemic change. Institutional transformation cannot sufficiently account for the entire terrain of how faculty preparation and evaluation shape career trajectories, and may in fact be hindered by deeper system-wide assumptions, values, and organizational processes that counteract and undermine potentially transformational strategies and approaches at an institution. Therefore, attending only to the role of individual institutions to diversify the professoriate is insufficient in driving change.

Systemic change at the appropriate scale and scope requires that we address multiple interconnected aspects of STEM academic training that exist within, between, and outside of higher education institutions. Multiple stakeholders must bear collective responsibility for identifying and disrupting disparities across interlocking settings,

namely (1) academic publishers and journals, (2) disciplinary societies and professional organizations, (3) funding agencies and philanthropic organizations, (4) other external entities such as state and federal legislators, accreditors, and non-profit organizations and membership associations, and finally (5) institutions of higher education. This approach also requires us to recognize our varied roles and entry points within these different contexts. For instance, campus faculty are responsible for graduate admissions and faculty hiring, but also serve as leaders in journals and disciplinary associations, complete rotations as program officers at federal funding agencies, and may hold courtesy appointments in non-profit organizations. Campus administrators also serve as leaders in various associations and national committees like the National Academies of Sciences, Engineering, and Medicine. This is an opportunity for individuals in the academic community to consider where they have influence within these interlocking sectors and carry the guiding principle that systemic change will drive more robust progress in redressing racial and gender disparities in scientific training and academic career preparation.

Current attempts at solidifying a national agenda for systemic change are stymied by the presence of various and often conflicting working theories of why equity in STEM faculty careers is hard to achieve, and the resulting inconsistent identification of the most important sites and strategies for intervention. In order to advance systemic change, stakeholders across the ecosystem need to engage in reflective dialogue about the deeply held assumptions and basic operating principles that undergird the STEM faculty career and academic training system. Ideally, these reflective dialogues would examine how various organizations express their values and priorities through organizational practices and hierarchies and the resulting patterns of organizational role and reward assignments to different groups, the ways minoritized individuals are ushered through their educational pathways and the resulting opportunities and challenges that result, as well as how academic STEM as a whole defines and values excellence. These conversations have the potential to shift consensus within various organizational and disciplinary communities, allowing for the better identification and implementation of solutions towards greater equity. These conversations need to iterate between wrestling with new, and possibly difficult, viewpoints on our system *and* thinking in concrete terms about how new or currently promising practices can serve as a vehicle for embedding new ways of operating into the system. Thus, this report proposes thinking along both lines, introducing concepts to wrestle with and concrete suggestions for change to consider.

About the EEIDSP Conference Series

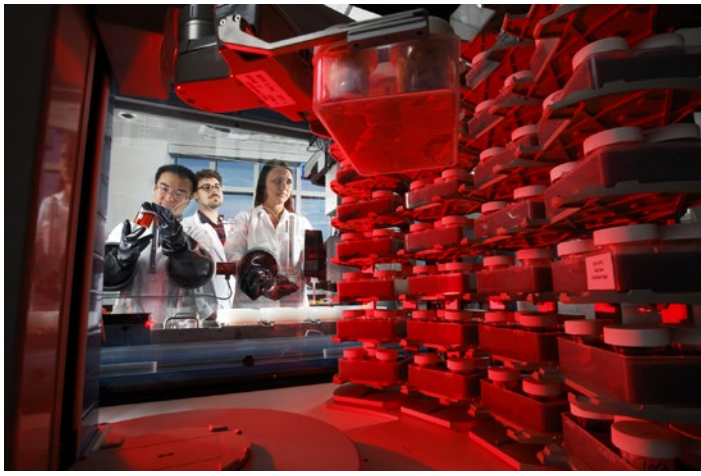
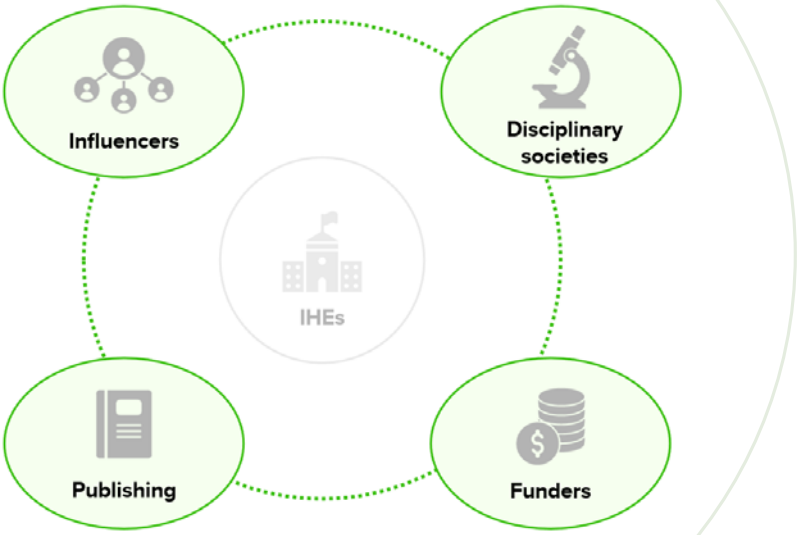


PHOTO COURTESY OF UNIVERSITY OF NEBRASKA-LINCOLN

In 2021, APLU launched a three-part conference series, entitled **Envisioning and Enacting an Inclusive & Diverse STEM Professoriate (EEIDSP)**, funded by NSF (#2041007). The project was motivated by the belief that individual preparation programs and campus change projects would not be enough to instigate national change in STEM faculty careers. Thus, we brought together leaders, scholars, and change agents to assemble a community-built agenda on how to move forward in addressing systemic issues that prevent meaningful participation in STEM fields. Recognizing that our community tends to default to solitary campus change, rather than systems-level change, we leveraged design-thinking and visual-thinking to catalyze discussion on what an equitable system ought to look and feel like. Each session focused on a different topical area: (1) Aligning the Recruitment and Hiring of Diverse STEM Faculty (March 4, 2021), (2) Equitable STEM Faculty Evaluation and Reviews of Research (June 3, 2021), and (3) Inclusive Leadership to Support Diverse & Inclusive STEM Faculty (September 16, 2021).

One tension that we grappled with in the early stages of design and implementation is that some participants envisioned the series as an opportunity to share best practices, rather than as a think tank focused on ideation and agenda-setting. We employed a few different strategies to shift the conversational focus towards how we as community members operate in intersecting spaces. First, we deliberately invited a range of stakeholders across groups outside of postsecondary institutions (a full list of participants can be found at the end of this report). For the faculty and administrators we did invite, we reminded them that they were invited based on their roles in different settings and that we wanted to prioritize those experiences. During the series, we primarily grouped participants by topical areas rather than by campus or institutional type to discourage discussion on campus-level issues. We also had to think carefully about how to craft our questions, prompts, and graphics to sustain the focus on systemic change. For instance, **Figure 1** highlights how institutions of higher education are but one part of a larger ecosystem that requires transformation. For more information on the specifics of each convening and activities, please refer to the report *Design Thinking in the EEIDSP Conference Series*. This companion report includes images of the visual design tools used as well as reflections from the Planning and Steering committee members and collaborators following each convening.

Figure 1



A key takeaway from our conversations across all three convenings was participants' repeated desire that *more* people be involved in these conversations. They identified a need for similar conversations to happen within their campus units and university contexts, within their disciplinary societies and disciplinary publication review processes, at the funding agencies where they serve as reviewers, and among national organizations like APLU, the National Academies for Science, Engineering and Medicine, and other convening bodies. To support that work, we are making available the digital collaboration tools and facilitation guides developed for each convening through the EEIDSP Dialogue Toolkit. This report serves as a key companion to these facilitation tools, documenting the emergent learning from our cross-community dialogue as well as the theoretical and empirical literature that informed the design and analysis of those conversations.

Framing the Dialogue

This **Framing the Dialogue for Systemic Equity Reform in STEM Faculty Careers** report synthesizes what we generated and learned across the three sessions to explore a community-built agenda for systemic change in STEM faculty careers toward greater equity and inclusion, framed and deepened by extant theoretical and empirical literature about organizational practices, faculty careers, and STEM workforce development. We identified three topical areas that we consider foundational to the dialogue for advancing systemic equity for STEM faculty:

PHOTO COURTESY OF UNIVERSITY OF MINNESOTA

1. Tracing, Addressing, and Dismantling Systemic Inequities in STEM Faculty Careers
2. Tracking in STEM Faculty Careers
3. Broadening the Bar: Redefining What Counts in Hiring and Evaluation

The first two topical areas focus on the contexts of faculty work that affect the trajectories of individual faculty in their STEM careers *and* how those trajectories are understood by institutional and disciplinary peers and organizations. The final section focuses on the content of faculty work and how we might better recognize the increasing need for multiple models of faculty excellence. We see these as being the foundational pillars of national dialogue and argue that attempts to advance equity that do not consider these pillars will be limited in their impact.

Each topical area is broken down into four sections: Problem, Solutions & Stakeholders, Key Tensions, and Future Practice and Research. We begin each section by first describing the problem and the threat to equity in STEM faculty careers. Next, we highlight potential solutions and identify where those solutions are located within specific stakeholder groups. Given this report's focus on systemic change, there is no single audience for this report. Rather, we highlight how different aspects of our community may engage in problem-identification and solving to address larger, interconnected challenges within the STEM academic ecosystem. We then review key tensions in implementation solutions with the hope of equipping change leaders with a preview of the challenges that might emerge within dialogue and action in their settings. Each section also includes possibilities for future practice and research. We conclude the report with a section on how to best mobilize change agents across groups to actualize a common vision for systemic change.

Tracing, Addressing, and Dismantling Systemic Inequities in STEM Faculty Careers

Problem

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Systemic change requires us to address disparities across the entire system of academic training in STEM fields. Research literature has documented how aspiring faculty face barriers beginning with graduate admissions and few, if any, like-mentors. These kinds of barriers persist, resulting in outcome disparities over the course of academic careers in the form of publications (Mitchneck, 2020), grant acquisition (Ginther et al., 2011; Hoppe et al., 2019), and inequitable service loads (O'Meara, 2021; O'Meara et al., 2017). While it may feel more comfortable to attribute these disparities to "bad faith" actors, the influence of individual bad actors cannot explain how these disparities persist across a variety of university contexts. Participants in the series flagged how difficult it seemed to change their colleagues' perceptions of what should be most valued when assessing current and future colleagues' contributions to the academy. Participants noted how university missions should make it easy to value and reward many different kinds of scholarship and faculty role-taking, yet, there seems to be a stronger set of values that influence these decisions. As we proceeded through the series, based on dialogue with our participants and steering committee, we identified and defined five underlying cultural norms or assumptions that may be hindering our progress towards dismantling disparities:

- **CREDENTIALING.** Because we need some way of filtering candidates (defined broadly—for jobs, for funding opportunities, for journal acceptance, etc) and assessing the quality of candidates, using institutional pedigree, lab pedigree, and research output are valid, effective, efficient, and fair ways to do so.
- **NARROW DEFINITION OF VALUABLE SCHOLARSHIP.** The discipline and the department are the best arbiters of what is valuable scholarship within their discipline.

- **RESEARCH IS THE COIN OF THE REALM.** Research success (both publishing and obtaining funding) is the most important currency as compared to teaching and service.
- **IDEALIZED WORKER.** The idealized worker is singularly devoted to their work with no outside obligations (e.g. parental responsibilities), is brilliant at all times, expert in their discipline, infallible, self-sufficient in obtaining funding, a prolific producer of scholarship and the next generation of researchers/scholars, and a pioneer in uncovering truth.
- **WE HAVE BUILT A MERITOCRATIC SYSTEM.** The best, most impactful scholars will be rewarded and promoted based on their contributions to both university missions and scientific advancement.

We argue that to create systemic change, we must recognize that these inequity-sustaining assumptions and norms in many ways are derived from how fully functioning organizations - regardless of the outlooks and values of individual personnel - are designed and incentivized to sustain racial and gender disparities over time. In this section, we trace the possible origins of these operating assumptions across the STEM ecosystem to empower change leaders to better identify and discuss how they function in their local domains. The theories of gendered organizations (Acker, 1990) and racialized organizations (Ray, 2019) help us to see how organizations, structured to survive and sustain in broader society, enact norms, values, policies, and procedures that may marginalize minoritized groups and reveal how we might identify, address and ultimately dismantle these problems. Our use of "identify", "address" and "dismantle" are intentional: dismantling organizational routines requires a prolonged, sustained approach, including deep dialogue to identify where they emerge and create barriers for equity, whereas addressing these routines is a temporary stopgap measure to ensure that minoritized scholars are fairly valued and evaluated in the interim. Identifying is a natural first step to addressing and/or dismantling that requires self-assessment and curiosity about the varied experiences and outcomes impacting minoritized faculty.

From a racialized organizations standpoint (Ray, 2019), many postsecondary institutions, funding agencies, and academic publishers are considered racial structures that maintain connections between cultural schemas and social resources. Cultural schemas are bundles of largely shared practices, beliefs, and norms that define organizations and their pursuit of resources (e.g., financial, reputational, temporal, etc.) These schemas are sustained by rituals (e.g., "it's always been done that way"), and by tethering such practices to desired resources. Thus, racial structures emerge when the connection between schemas and resources lead to consistent outcomes by race. These structures are reinforced over time by creating cycles that attribute adverse outcomes to individuals rather than organizational schemas, cementing

reward structures, allocation of resources, and other practices into organizational practice. This is why it is often so difficult for leaders and faculty to see and counteract racialized disparities caused by racialized schemas.

Participants in the series highlighted how candidate degrees (i.e. Ivy League) become a stand-in for the quality or potential of a candidate, described the pattern of constraints for obtaining extramural funding for Minority-Serving Institutions (MSIs), and discussed the challenges of choice presented to faculty who must read between the lines to determine which work will be most valuable to themselves and rewarded by their organizations. These are all examples of how racialized organizations structure faculty careers. Often, these are the effects of credentialing (i.e., overreliance on reputational markers as evidence of quality) in hiring and funding success. Both hiring and funding rely heavily on notions of meritocracy, or a system in which merit (e.g., test performance, credentials, etc.) fairly determines who has access to various resources and privileges (Guiner, 2015). Yet concerningly, the standards of merit have been largely based on an anachronistic and narrow set of career milestones, support structures, and advantages to those who have held the longest access and greatest privilege in higher education. Campuses can begin by examining and then acknowledging when and how the current standards of merit differentially impact communities with less access and privilege within higher education.

Yet concerningly, the standards of merit have been largely based on an anachronistic and narrow set of career milestones, support structures, and advantages to those who have held the longest access and greatest privilege in higher education. Campuses can begin by examining and then acknowledging when and how the current standards of merit differentially impact communities with less access and privilege within higher education.

When hiring and funding patterns have historically reflected preferences for certain credentials such as institutional prestige (Clauset et al., 2015) and topic choice (Hoppe et al., 2019), these become legitimized through organizational routines and cemented into practice. When subsets of minoritized faculty display different types of credentials, they do not align with the historical and current racial structures, potentially leading to assessments that "they will not get tenure;" "their work is not fundable;" or, "there is no history of conducting that science." Thus, it becomes all the more necessary to broaden the bar of what constitutes scientific excellence and recognize that talent exists across numerous configurations of credentialed areas.

Participants in the series also repeatedly pointed to the challenges women and faculty of color face in balancing personal and professional responsibilities—including caregiving, in being assigned caretaking responsibilities within the university such as advising, diversity, equity, and inclusion work, and the lack of value placed on innovation in teaching and community engagement. The theory of gendered organizations

focuses on how the relationship between employee and organization is defined by conceptualizations of positions, workers, and gender that permeate organizations. Like the theory of racialized organizations, theories of gendered organizations and inequality regimes argue that gender, race, and class effects in institutions are not neutral or accidental (Acker, 2006); instead, they structure processes by determining valuable work, levers for control, acceptable emotions and action, and standardized evaluative processes (Acker, 1990). According to Acker, gender-structuring processes emerge when organizations infuse, often unintentionally, historically-held societal gender roles defining who works and who cares for the family and community into definitions of excellence. The resulting "ideal" worker is able to devote themselves entirely to the job and has another person—typically a partner or spouse—who takes care of everything else, including personal needs, children, and other family needs. The ideal worker "model" may then create and reinforce gendered divisions of roles, valued traits, and power within the organization itself.

The ongoing COVID-19 pandemic has revealed the pervasiveness of the ideal worker model as university faculty and staff have had to navigate their academic jobs with care for their bodies, communities, and families (Gonzales & Griffin, 2020). In general, the ideal faculty worker has no outside concerns beyond their contributions to knowledge production, and faculty work is structured on this premise. Evidence of this existed far before the pandemic, where research has marked disparities in the impact of having children on women and men's faculty careers, with men becoming more productive, successful, and satisfied after having children, and women becoming less due to the increase in women's caretaking responsibilities outside of work (Ward & Wolf-Wendel, 2012). It is not surprising that during the pandemic, academic women have taken on the greatest burdens of caretaking, with the greatest impact on their academic contributions (Herman & Neal-McFalle, 2020).

Beyond the challenges the ideal worker model places on balancing work and non-work responsibilities, the model also structures the contributions that are valued within faculty work. Ideal faculty workers at research universities are expected to contribute primarily to research and other prestige or resource generating activities, prioritizing productivity over connection, community, and collegiality. This places women and men of color in a bind, where meeting the gendered and racialized expectations of community and care-taking work from leaders, peers, and students conflict with the individualized ideals of academic success. While women and men of color faculty are most likely to feel these binds, all faculty may feel the pressure of ratcheting expectations as "publish-or-perish" remains the central evaluative framework at research universities despite multiplying pressures from university leaders, legislatures, students, and communities to serve multiple, unrewarded agendas.

Solutions and Stakeholders

Both theories of racialized and gendered organizations can reveal how organizations structure faculty work, creating tensions for minoritized faculty groups to successfully navigate. After tracing disparities back to these root areas, we ask, how might these perspectives shift our thinking and reveal potential avenues for addressing (short-term) and dismantling (long-term) barriers for minoritized faculty using a collective approach at multiple angles? We see this as a critical question for institutions of higher education, funding agencies, and academic publishers.

Faculty and Administrators

For colleges and universities, viewing organizations as racialized and gendered reminds us that we cannot simply focus on increasing representational diversity without also examining resources and credentialing. Introducing this angle is important because there are only so many minoritized faculty who have the types of credentials that align with prevailing norms due to the racialized and gendered nature of other organizations in the STEM ecosystem. While we make progress across the system, faculty and administrators in the interim must recognize how this landscape impacts the materials they evaluate. White-Lewis (2020) recommends an "integrative" evaluation logic that accounts for how marginalized faculty must navigate inequitable career terrains and still have just as strong files compared to faculty who do not. Applying this approach is similar to holistic admissions review, where reviewers interrogate how the presence or lack of opportunities reflect larger systemic barriers and shape the accomplishments documented within the CV itself. One example of how this broadening might proceed are the review processes of applications for research time on the Hubble and James Webb Space Telescopes, which included a rigorous blinding of applicants' credentials and resulted in the most diverse group of scientists engaging in innovative astronomical research documented to date (Greenfieldboyce, 2022).

Funders, Publishers, and Peer Reviewers

The funding and publication processes are also impacted by gendered and racialized organizational practices. Both areas are considered essential to peer review by their functions of designating what scholarly activities are worthy of resources and visibility within the field. Yet ownership and responsibility for the outcomes of these processes is diffuse, complicating change. These activities are managed by staff working at private foundations, federal agencies, publishers, or disciplinary societies with their own organizational practices, but decisions are informed by a network of disciplinary experts distributed at colleges, universities, and research centers across the globe. There is ample evidence of inequitable outcomes of these processes, raising a clear concern for the impact of these decisions on the careers of faculty

of color. The complex interaction between formal organizations and distributed networks of experts make addressing and dismantling systemic inequities more difficult because there may be no single site of intervention, and instead, cooperative and collaborative approaches are required. That said, both funders and publishers have also made strides to address these in evaluation: funding agencies like NIH and NSF have released statements recognizing historic disparities and have erected plans to empower minoritized faculty, and many academic publishers have installed measures to make reviews more equitable. However, it may be the case that these efforts fail to dismantle these structures by minimally stretching core activities, priorities, and resources, and erecting new temporary initiatives without examination of how standard operations still marginalize minoritized groups.

We suggest dialogues to transform publishing and funding operations to dismantle racialized and gendered impacts. This will require: persistent attention to the unequal distribution of resources across *all* areas, and not just those focused on racial and gender equity; authentically coupling DEI-related priorities with actions that drive actual policy changes; acknowledging how institution-based constraints on faculty time and effort may differentially affect traditional measures of prior track record and disciplinary impact; and creating a coalitional approach to change that involves all key actors in this work.

Key Tensions

There are a few tensions in both addressing and dismantling disparities across stakeholder groups. First, analyzing organizational structures, policies, and practices in this way to uncover areas to address and dismantle may be difficult for those not trained in organizational theory and analysis. In the convenings, we were able to call upon the scholarly expertise of sociologists and other social scientists to support their colleagues in this work, and we set aside time to explicitly engage this analysis. We encourage organizations interested in completing this work within their own contexts to leverage the expertise of social scientists who can bring their scholarly expertise to bear on these challenges.

Secondly, there is broadening support for many interventions that address disparities, yet far fewer efforts toward dismantling. Some examples of addressing interventions include the increasing use of statements regarding contributions to DEI in hiring and promotion and tenure processes, and broadening participation initiatives at different funding agencies. While such efforts have led to positive increases in terms of representation, these do not fundamentally shift the deeply held assumptions and cultural norms that are infused within organizational functions and influence decisions about who does what work and what work is most valuable. To move towards dismantling these harmful elements, we need solutions that break apart

schemas from resources, or that restructure the gendered and racialized assignment of tasks and responsibilities. We recommend moving beyond interim interventions while building our collective awareness of how these assumptions operate.

The robust dialogue among our participants about key decision and evaluation points in faculty careers - namely hiring and promotion and tenure - revealed the various perspectives, sometimes conflicting, that our broader community will need to engage and navigate to develop consensus on how and why to create systemic change to minimize these assumptions. Proposing significant changes in how we think about the nature of our organizations, definitions of excellence, and the role of faculty in shaping the disciplinary landscape across all their responsibilities may be anxiety provoking, especially in an era where many institutions and organizations are operating in constrained environments for advancing equity and inclusion. We encourage organizational leaders to remain steadfast in their commitments to explore and develop new consensus around systemic change, and to work with their peers to imagine new ways to define faculty work and celebrate excellence.

Future Practice and Research

More research is needed to advance efforts to address systemic inequities and dismantle them in practice. Currently, there is little research that empirically investigates how systemic inequities accumulate and compound over the course of careers. Though there is abundant evidence within career stages (e.g., problems facing junior faculty, mid-career faculty, etc.), few studies braid these areas together to show how these inequities persist longitudinally and compound across career stages. To this end, we see a unique opportunity to design better data systems at the national level that allow us to longitudinally track career progression and potential inequities across career transitions.

Any such effort should also elucidate and define how areas of disadvantage may operate differently across different disciplines. For instance, topic choice may be a more pressing concern in disciplines where there is a deeper history of engagement with racial disparities. This barrier may be less prominent in less applied STEM fields such as physics and math. Thus, any effort to trace and dismantle disparities should be discipline and sub-area specific, given that norms around academic rigor and quality vary by field. Given the cross-system nature of disciplinary communities, this further reinforces the need for systemic dialogue and change, rather than placing the burden solely on individual faculty or departments, who may not be able to influence the thinking in their entire field(s) of study.

Tracking in STEM Faculty Careers

Problem

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Tracking refers to a system wherein educators—whether deliberately or unintentionally—sort students into courses of varying rigor by perceived talent, driving what opportunities they have access to over the course of their educational trajectory. Although tracking research has roots in K-12 education, it is being increasingly used to study how students are sorted in higher education (Stich, 2020). There is mounting evidence that tracking happens in faculty careers too, such that where somebody begins their career largely determines their future prospects. When presented with various candidate profiles in our first session, participants struggled with seeing the value that candidates with non-traditional career trajectories might bring to their research universities. While some forms of backgrounds (i.e., industry experience) were readily accepted and translated into value to the university broadly, a theoretical candidate with strong teaching experience at a primarily undergraduate institution who also used innovative, but less tested, research methods generated strong debate about her hireability and potential success. Our participants' struggle mirrors a study of faculty hiring networks showing that hiring prioritizes institutional prestige to the advantage of graduates from a small number of prestigious institutions (Clauset et al., 2015). This is further compounded by search committees that rely on a narrow set of indicators that reward graduates of programs with expansive research infrastructure, faculty with large grants and up-to-date equipment, and strong networks.

But tracking is not solely a matter of institutional prestige. Tracks are reinforced when candidates exhibit what many perceive as non-traditional pathways to research university faculty positions by working: 1) in a non-academic career, 2) as a contingent faculty member, or 3) as a full-time, tenure track faculty member at an institutional type that prioritizes teaching over research. Thus, it becomes more difficult for candidates who do not take a singular route of a prestigious terminal degree program and prestigious postdoctoral appointment to access and thrive within research universities (see our report *Strengthening Pathways to Faculty Careers in STEM: Recommendations for Systemic Change to Support Underrepresented Groups* for a mapping of various pathways into the professoriate). This is a pernicious equity threat given the documented gatekeeping practices in graduate admissions at prestigious institutions (Posselt, 2016), the devaluation

of degrees conferred by institutional types such as Regional Comprehensives and Minority Serving Institutions (MSIs) that graduate significant numbers of minoritized students in STEM (Hrabowski & Henderson, 2021), and the persistent informality and network-based hiring of postdoctoral scholars.

The issue of dwindling access to faculty roles at research universities also threatens the overall vitality of the profession. While some might suggest that research universities should be discerning in who they hire, tracking suggests that structural barriers prevent a wide array of worthy scholars from ever being considered, regardless of their intellect, true scholarly promise, or work ethic. A system where certain institutions feel out of reach for large swaths of minoritized scholars contributes to increased departures, as evidenced by growing numbers of "quit-lit" pieces in academic fields of study (Kendal & Waterhouse-Watson, 2021). Moreover, many who stay in academia with the aim of tenure-track faculty employment at a research university choose to establish their broader field credentials while working at other institutional types temporarily. However, this view of some positions purely as stepping stones negatively impacts those departments and institutions used as waystations. The results are often increased service loads and decreased course offering for remaining faculty, and students are served by a rotating carousel of faculty appointments (Lopez & Morgan, 2021).

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These dynamics affect the academic profession as a whole. Cementing early departure intentions (pre-tenure) and geographic volatility into the profession adds an additional layer of complexity to a vocation already facing challenges such as reduced pay compared to non-academic careers and a lack of standards and boundaries that negatively impact mental health. This constellation of challenges increasingly makes faculty careers less attractive to the minoritized groups universities are anxious to hire, and draining for those already in their ranks. These compounding impacts on the academic profession as a whole require systemic solutions across multiple groups to enhance equity within the academic STEM workforce.

Solutions and Stakeholders

Tracking in the academic profession has severe consequences for both individuals and institutions and must be addressed to meaningfully broaden participation in STEM faculty careers. Over the last fifty years, we have seen how the standards for success within academia have become both more intensive and narrower in focus. This is due to a variety of factors, including the increasing pressure on faculty at research universities to secure extramural funding and the increasing number of PhDs awarded worldwide with a simultaneous reduction in tenure-track faculty

lines. With these national and global trends affecting the professoriate broadly, standards in academic hiring could increasingly narrow to a small set of indicators of promise and make academic careers at many research universities feel out of reach for large segments of the academic workforce, particularly individuals who are not fitting into the gendered and racialized schemas discussed above. Thus, we envision a broad agenda that touches multiple change agents to address this problem, namely colleges and universities, state legislatures, state systems, and funding agencies.

Faculty and Administrators

There are multiple areas in which faculty and administrators can address tracking within their academic units. Though recent efforts advocate for broader definitions of scholarly activity to make hiring more equitable, what this work fails to consider is that many faculty search committees view hiring through the lens of risk: there are only so many searches per year that are further divided by segmented subfields with strong pressures to avoid failed searches (White-Lewis, 2021). Without additional faculty lines, the perceived risk of implementing more inclusive criteria may prevent individual units from broadening their consideration of candidates from different educational backgrounds. Although inclusive hiring training is beginning to address perceptions of risk, academic leaders must also be partners in reducing risk at multiple ends, through strategies such as cluster hiring and advocating for greater funding of faculty lines. The latter complements other equity imperatives such as reducing reliance on part-time instruction. Thus, academic leaders can capitalize on that momentum when lobbying state legislatures, arguing that increased funding for faculty lines would not only enhance curricular instruction and increase contact with students but also improve faculty and scholarly diversity, three important issues to the public.

There are additional opportunities to take current advances in research and practices and bring them closer to achieving systemic change. For instance, "grow your own" pipeline programs have shown some promising results, but many departments may not have the necessary infrastructure to commit to this practice on their own. State systems are ideal spaces to create wider avenues for postdoctoral scholar-to-faculty conversions that cut across multiple institutions rather than single departments. One example comes from the University System of Maryland's AGEP PROMISE Academy Alliance (APAA), funded by NSF, focused on forging relationships across five system schools to create wider, more flexible postdoctoral conversion pathways. Postdoctoral scholars are exposed to different institutional types within the system that prepare them for faculty careers across settings. This is just one of many promising models for consortia of institutions to interrupt traditional tracking mechanisms, and further advance systemic change.

Funders

There is a role for funding agencies to help broaden participation in STEM faculty careers. One established practice that can be systematized are transition grants, such as NIH's K01, K22, and K99/R00, and NSF's Postdoctoral Research Fellowship in Biology. These historically are for helping researchers achieve independent research careers, but we encourage funding agencies to expand these opportunities to create more equitable avenues and onramps in the interim as we work to dismantle evaluation criteria and organizational schema that solidify tracks. Additional funding mechanisms could bolster the careers of marginalized groups in part-time faculty roles or industry careers who desire academic research careers.

Key Tensions

The solutions generated through the EEIDSP convenings are not without challenge. For instance, several participants raised concerns regarding time; as in, faculty search committees are but one of several service requests asked of faculty even without more inclusive practices needed to dismantle tracks. One potential solution is to commit to more active, year-long hiring practices wherein departments distribute hiring activities and candidate touch points throughout the academic year. Some examples include outreach at conferences, professional associations, and affinity groups, soliciting speaking engagements and seminars with scholars in the field, and developing partnerships with other departments and industry workplaces to identify talent. This could operate similarly to how funding agencies have recurring seminars for interested grantees. Active recruitment also demonstrates "departmental readiness," an assessment of how prepared departments are to sustain inclusive climates for minoritized faculty to thrive (Culpepper et al., 2021).

Future Practice and Research

More empirical evidence is needed to evince tracking and its impact on equity within the academic profession. Many have observed that the standards to get a tenure-track academic position are far more onerous today than previous generations, but we need to systematically collect data to substantiate this claim and conduct more network analyses to study the impact of how an individual's entry point shapes their future academic prospects. Another area that merits greater attention in practice is the role of funding agencies and state systems in facilitating transitions. We also need to understand how transition grants have impacted academic careers, and the degree to which state systems and other consortia can break down tracks and silos via sustained commitments to postdoctoral training.

Broadening the Bar: Redefining What Counts in Hiring and Evaluation

Problem

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In our second convening, we asked participants to engage with what we called the faculty evaluation terrain. During this dialogue, participants noted the various ways that our collective bucketing, defining, measuring, and evaluating faculty work has become increasingly narrowed even as calls increase for faculty to better engage students, communities, and innovative, cross-disciplinary, and/or community-impacting scholarship. Across the dialogue, echoing conversations held by the National Academies and other spaces, participants felt there was an over-reliance on quantity rather than quality across the research, teaching, and service domains. A key challenge in this space is that while institutions may set policy that serves as an overall framework, decision-making settings are highly localized to the department or college. O'Meara (2020) characterizes these settings in academic careers as "discretionary spaces," meaning that faculty have the freedom to make many types of decisions within a bounded context. Without system checks and conscious decision-making, faculty can reinforce practices and policies that disadvantage minoritized groups. This is perhaps no more readily apparent than in faculty evaluative settings, particularly hiring and promotion and tenure decisions, where policy frameworks may broadly shape what can be considered, but often individual or small group preferences, biases, and perspectives are prioritized. What faculty consider rigorous scholarship has been contested for decades, from Ernest Boyer's *Scholarship Reconsidered* originally published in 1990 until present day.

What counts is especially challenging regarding faculty's service and mentoring activities. Today, many colleges and universities are asking their faculty to commit more time to mentoring students, but this work often falls on minoritized groups who already have historically mentored students at greater rates. Many of these scholars find that their contributions to the department's DEI mission are not considered or weighed heavily in their promotion and tenure decisions, despite being a touted goal by institutions of higher education. Even grants from prestigious funding organizations that focus on mentoring, broadening participation, and improving student learning in the sciences are often considered less valuable in evaluative spaces compared to grants focused on basic science or scientific discovery.

Faculty are constantly having to negotiate tensions between their individual choices (agency) and institutional procedures and reward systems, what Victor Ray (2019) refers to as racialized agency. For example, faculty who know they will be mostly evaluated and rewarded on their research activities may be disincentivized to prioritize activities that support marginalized students; yet, many scholars with minoritized identities are called more frequently to engage in support activities, despite their low value in evaluation processes. Without this context in mind, faculty evaluators in hiring and promotion and tenure spaces may consider these issues as individual wrong choices, rather than the result of untenable tensions in competing demands placed on individuals that require systemic change. This is most evident in efforts to get faculty to "say no," which continue to place the burden on individuals to make the "right" choices about how to spend their time. A system's level approach reintroduces institutional procedures as an equal and opposite force of individual agency, which may reimagine the "say no" discourse as "ask less," "compensate equitably," or "reward equally all mission-supportive work." We aim to introduce and encourage an approach focused on institutional, disciplinary, and national systems into the discourse of what counts in evaluation settings.

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Solutions and Stakeholders

We see the issue of what counts and what is measured in evaluative spaces as a systemic issue. How do we "broaden the bar" (Carter et al., 2021) and recognize all the work that minoritized scholars are doing to transform their disciplines, yet is rarely acknowledged or rewarded in critical career junctures? How might multiple stakeholders positively contribute toward which activities count in these settings? This is an issue not only for institutions of higher education, but also academic publishers and journals, funding agencies and grant review committees, and external organizations such as the Carnegie Classification of Institutions of Higher Education team and organizations that conduct rankings.

Faculty and Administrators

One way colleges and universities can positively contribute toward what counts is embedding what they purportedly value into the positions themselves. Participants in the series felt that position descriptions could easily be modified to better align with institutional missions and values, though some questioned how much we could really close the gap between articulated values and the values enacted during hiring and promotion and tenure processes. Using data gathered prior to the COVID-19 pandemic, White-Lewis (2021) identified several means by which departments can prioritize research and teaching focused on DEI through the

formation of their hiring priorities – the process in which academic units identify the research and teaching areas for future faculty searches. The recent emphasis on DEI in faculty hiring does not need to be a pandemic-era fad but could become a sustained commitment to scholarship, often conducted by minoritized scholars, that contributes to public university missions of global citizenship, equity and inclusion, and serving communities.

Institutional transformation research reminds us that corresponding changes are required in other evaluative settings post hiring, and in areas other than scholarly activity. During our conversation focused on faculty hiring, participants noted that it was difficult to change what mattered in hiring if we did not also consider how we would reward and retain faculty based on these proposed changes. There are programmatic efforts to reconfigure how service activities are counted and weighed. One example comes from UCLA Life Sciences division's Mentor Professor program, which aims to increase faculty diversity by significantly restructuring how mentoring contributions are evaluated in the hiring process. Once hired, faculty are supported by their dean and department chair to focus on service that aligns with their mentoring scope, and have their service counted in review. This formalizes what counts into the position rather than leaving it up to idiosyncratic faculty evaluations. Another example comes from The National Academies of Sciences, Engineering, and Medicine's (NASEM) National Dialogues on Transforming STEM Teaching Evaluation in Higher Education, which highlights the most recent advances in developing better methods for evaluating teaching to and help quality teaching matter more in evaluation.

Publishers and Funders

Academic journals and funding bodies play an important role in what counts, as they confer legitimacy to new areas and methods of research; this recognition and inclusion is needed to help dismantle narrow views of scholarship over time. This may take the form of encouraging editorial board members and reviewers to take semi-regular training on more expansive notions of scholarship or research methodologies, or other means to shape how reviewers are considering novelty, interdisciplinarity, and field impact in their reviews. Academic publishing outlets can also become more transparent by showing trends in topical areas they are accepting for publication. Though outside of STEM, The Review of Higher Education recently released an Annual Report for 2020–2021, which uncovers multiple aspects of the review process, and shares important trends in topical areas of manuscripts submitted and accepted. This kind of reflection and transparency is vital, as journals and funding agencies, by virtue of their decision-making processes, impact what

scholarship is considered rigorous and valuable in their respective fields. *Higher Education Associations, Disciplinary Societies, and Other Organizations*

There are organizations outside of higher education institutions that exert considerable influence on institutional decision-making. These can include organizations that confer designations, rankings and rating programs, and membership associations. One example of a designation program is the Carnegie Community Engagement Classification at the New England Resource Center for Higher Education (NERCHE) in 2005. By evaluating and awarding a designation related to community engagement, this program has created an incentive for institutions to develop more rigorous self-assessment procedures in a core mission area. Ranking systems incentivize institutional behavior in similar ways by relying on metrics such as student-to-faculty ratios, admission and graduation rates, and peer surveys of program prestige. Institutions adjust their behavior to better position themselves within the ranking hierarchy. When institutions seek a particular designation or ranking, this often results in pressures placed on faculty within the institution to prioritize activity that serves these goals.

Relatedly, higher education associations such as APLU and disciplinary societies can use awards and recognition to highlight exemplary members, provide catalytic funding to seed pilot work with their members, and coordinate institutional cohorts. Multi-institutional cohorts, such as the Aspire IChange Network, facilitate learning across contexts and can provide cover for institutions attempting transformation change. Any or all of these organizations should consider a designation program for recognizing institutions that make important strides in broadening the bar for what counts in faculty evaluation, including potential impacts on teaching, community-engaged scholarship, the development of talent from minoritized backgrounds, and work towards dismantling tracking programs.

Key Tensions

Incentivizing broader, more inclusive forms of research, teaching, and service engagement is necessary to recognize the multitude of contributions made by scholars underrepresented in the academy (Carter et al., 2021; NASEM, 2020). But one significant challenge is that there are inconsistent mechanisms for measuring community-based activities or general efforts to "broaden the bar" for evaluation. For example, what should the Carnegie team, ranking processes, or other designation programs consider when determining formulas? Without careful consideration, even these organizations can fall victim to the dilemma of what counts in their own methodologies. Another concern is how institutions might measure community impact as it relates to engaged scholarship and/or teaching. Traditionally impact is considered the difference upon a material, process, or community, which suggests

that measures were taken prior to the intervention and after to assess change. This may be difficult when there is little to no prior precedence or history of institutional involvement in said communities. One possibility may be soliciting letters or testimonials from community members or finding other ways for communities to weigh in on community impact.

Future Practice and Research

In order to move forward on what counts in practice, we must use the latest research to understand how organizational contexts impact our decision-making. This includes, as one participant suggested, examining how intermediary organizations (such as networks, associations, coalitions, or consortia) can support systemic transformation towards broadening the bar for evaluation by coming to agreement on innovative metrics within a particular discipline across multiple institutions. Other research is already being conducted to look into "nudging" interventions that help shape evaluative decisions on DEI contributions and into job scope interventions designed to help explicitly outline the responsibilities of faculty towards specific institutional goals and reduce the risk for faculty making the wrong choices within an institutional context. In line with these studies, future work must consider the importance of optimizing the contexts in which decisions are made to drive more equitable evaluation practices and policies.

Conclusion: Bridging Systemic Efforts Across Institutions & Organizations

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In this report, we presented three areas that must be addressed to develop an ecosystem-wide program for systemic change: systemic inequities in academic careers, tracking, and broadening the bar of what counts. But one important question remains: where does the work begin? Systemic change has not been fully realized in the context of academic careers, or higher education more broadly, because it requires broad participation and coordination of multiple, sometimes disparate, groups. One challenge is that there is not a single unit in which the conversation or work begins. This may be why institutional transformation projects have become more common because institutions are more readily identifiable units, and the ground is more fertile within a discourse of best campus practices. If we are interested in bringing together state governing boards, publishers, funding agencies, colleges and universities, and external organizations then what is the unit of change?

The answer to this question may begin with consortia-based projects that have emerged, such as NIH's Building Infrastructure Leading to Diversity (BUILD), NSF's Alliance for Graduate Education and the Professoriate (AGEP) funded programs, the Faculty Advancement Network (FAN), or the NSF INCLUDES program. The institutions participating in these funding programs typically share a connecting factor that unites their work, such as institutional type and research infrastructure in the case of BUILD and FAN, and oftentimes regional proximity in the case of AGEP. Though these are consortia of institutions, we envision that academic publishers, funders, disciplinary societies, and state actors can be brought together by weaving those connecting factors with others such as discipline or subfield. For example, regionally proximal institutions underneath a common state system can home in on a specific discipline or subfield to determine which academic publishers, funders, and disciplinary societies to constitute a collaborative system. Connecting stakeholders through multiple means may create a manageable system to identify, address, and dismantle root causes of systemic inequities that negatively impact minoritized scholars. We recommend that faculty, administrators, funding agencies, disciplinary societies, state actors, and external organizations recognize their place within the STEM faculty career pathways ecosystem and work together to form collaborations to establish first steps and stretch goals to address these challenges.

To be clear, we are not discouraging systemic change projects from sharing best practices. Once the unit of systemic change is identified, there is value in sharing what practices have worked and might work for others. These systemic change collaborations can also be places to share data and create inter-system and cross-system recruitment practices to deliver more holistic career training that prepare scholars across a range of institutional types. However, these conversations cannot be divorced from aspects outside of higher education that impact how faculty are trained and evaluated. The challenges we face are not isolated to one career stage or institution. Racialized and gendered organizations create disparities across wide swaths of STEM faculty, which intensify standards that generate tracks that make it increasingly difficult to access and thrive within research universities. Moreover, these become reinforced through inequitable evaluation practices over the course of careers, and the contributions of minoritized scholars receive less recognition, which feeds back into the cycle of racialized and gendered organizations and tracking. Unless we approach these challenges through a systemic lens, we will continue to view them in silos, unaffected by other pieces within the larger ecosystem on which they depend to operate.

We recommend that faculty, administrators, funding agencies, disciplinary societies, state actors, and external organizations recognize their place within the STEM faculty career pathways ecosystem and work together to form collaborations to establish first steps and stretch goals to address these challenges.

The opportunity to address systemic change in STEM faculty careers could not be riper. Our field's collective focus on institutional transformation has helped drive more equitable policies and practices, which create more fertile ground and momentum for cross-institutional collaborations. We are also at a critical moment in our nation's history, and organizations and funding agencies are responding accordingly by putting diversity, equity, and inclusion at the forefront. This is an excellent opportunity for APLU members to respond to this moment by identifying and dismantling these interconnected, deeply harmful structures and norms to create lasting, genuine change rather than short-term fixes. The time for systemic change is now.

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Over the course of our dialogues, participants proposed bold visions of the future state of higher education generally and the STEM professoriate specifically. These included exhortations to APLU institutions to be more willing to take risks and innovate in service to our common missions; to develop cultures where full participation is valued, and minoritized faculty were valued for more than their contribution to representational diversity; and, to redesign higher education as an advancement, growth, and learning mechanism, rather than a sorting and judging mechanism. Participants asked institutions to envision a space where faculty could pursue their passions and respond to timely societal needs with less concern that new directions may not yield (quickly enough)

the most valued products or markers of legitimacy. In an era where the benefits of collaboration, team science, and collective action are increasingly being recognized, what would it look like if academia could move away from its prioritization of individual achievement and independence?

APLU members are particularly well-positioned to lead the enactment of this vision nationally due to their robust research infrastructures and portfolios, geographic diversity, and commitments to inclusive excellence. Increasing equity within the academic scientific community will drive the kinds of changes and innovations that are desired by society in such a critical national moment, and will allow APLU members to serve their students, staff, and communities even more robustly than they do now.

Participants asked institutions to envision a space where faculty could pursue their passions and respond to timely societal needs with less concern that new directions may not yield (quickly enough) the most valued products or markers of legitimacy. In an era where the benefits of collaboration, team science, and collective action are increasingly being recognized, what would it look like if academia could move away from its prioritization of individual achievement and independence?

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