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Gender Equity in the Sciences: Forging a “Third Space”

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We’re coming to the end of the college graduation season, and many of us are still thinking about the brilliant and hopeful young women who have passed through our lives and are now moving on. Their life chances have been --- and will be --- deeply intertwined with our own, and as we think about creating gender equity in the spaces we inhabit, we are also talking about them and all that depends on our success.

We need to end the “chilly climate” that keeps appearing in qualitative studies of women in the academy, and in STEM faculties in particular. It discourages and hurts women and seems most intractable in the informal social networks that are the least amenable to any direct and formal change. In structured settings --- department meetings and committees, academic conferences, and even in the laboratory --- women in STEM fields say things are improving for them, and the statistics bear this out. Between 1973 and 2006, the proportion of women in science and engineering academic jobs rose from 9 percent to 33 percent, and the number of underrepresented minorities rose from 4 percent to 8 percent.²

But these improvements are not coming quickly enough for the number of women to reach anything like a critical mass. There are too many holes in the pipeline to tenure and the rank of full professor. We are still an “occupational minority.”³ Many of us end up feeling like “tokens,” participants in a kind of diversity that brings heavy burdens of its own including intense psychological pressure and too much committee work. And even then, when we are “inside,” many of us feel like outsiders, frozen out in ways that have everything to do with our professional and personal well-being and success.

When we ask male STEM faculty members about these issues, as one focus group did at Syracuse in 2009, at least some say they want to help. “Engage me in the process,” one of them said. “Help me to learn more about myself so that I can be aware of my behaviors; both what I’m doing well and other things I can improve.” Another said he wanted to be “more proactive and not just reporting on the set of issues that women face...we need to digest them into action plans.”

¹ Delivered as the invited keynote speech at The College of New Jersey Advancement Program (TAP) Symposium, May 20, 2011.

² Falci, C., McQuillan J., Watanabe M, & Holmes, M.A. (2011). Disconnected in the ivory tower: an exploratory study of gender and race differences in STEM faculty networks. Manuscript under review at *Social Problems*.

³ Taylor, C. J. (2010). Occupational sex composition and the gendered availability of work place support. *Gender & Society* 24(2), 189-212, cited in Falci, et al.

As Nancy Steffen-Fluhr, director of the Murray Center for Women in Technology at the New Jersey Institute of Technology, has written, making such a plan requires us "to step out of our square on the matrix and see the big picture in which our individual lives are embedded."⁴

A Look at the Numbers

One critical piece of "the big picture," of course, is the numbers, and even with recent progress they still remain small in many STEM departments and fields. Although women are 57 percent of all college students, we are just 26 percent of all full professors. Once we earn our Ph.D.'s our numbers shrink with every step up the faculty ladder. In chemistry, as the National Academies have reported, within the last decade, women earned 32 percent of the Ph.D.'s but made up only 18 percent of the applicants for tenure-track positions at Research I institutions. In the field of biology, women earned 45 percent of the Ph.D.'s but made up only 24 percent of the tenure-track applicants.⁵

Our efforts to hire women faculty in 12 STEM departments at Syracuse, which has recently received an ADVANCE grant, reflect these trends. On average, women are 15 percent of the faculty in the natural science departments and 11 percent in engineering and computer science.⁶ Although the deans of our L.C. Smith College of Engineering and Computer Science and our School of Information Studies are now both women and the dean of the College of Arts and Sciences is an African American male scientist, the vast majority of our colleagues on the STEM faculty are still white men – and they will be critical in our institutional transformation efforts.

We are making progress of the kind we hope to continue. In Arts and Sciences, four of our 11 hires in science this year have been women. These include two women in biology, where one holds a named chair in neuroscience, one woman in physics and one in psychology/neuroscience. We have also hired two men, one in biology and one in math, who are the spouses of STEM women. In Engineering, three of the 7 new faculty are women, one of whom has a male Engineering faculty spouse. Other women are still in negotiations or have declined offers, so the figures I've just cited are not a full reflection of the efforts of our search committees.

Getting the numbers up requires a variety of recruitment strategies, from the subtle to the specific. At SU, the provost has empowered the deans to make diversity a top priority, assuring them "I would either have their back and/or be willing to take the heat in making hiring decisions and insisting on diversity." Since he is working with a very diverse set of deans with their own experiences and commitments, this emphasis is received gladly. At the same time, we are

⁴ Steffen-Fluhr, N. More than the sum of its parts: advancing women at NJIT through collaborative research networks. NSF ADVANCE Project

⁵ Laster, J. (2010). Time crunch for female scientists: they do more housework than men. *The Chronicle of Higher Education*, 19 Jan 2010, online at http://chronicle.com/article/Female-Scientists-Do-More/63641/?sid=at&utm_source=at&utm_medium=en accessed 1 February 2010

⁶ Syracuse University (2009). The inclusive connective corridor: social networks and the ADVANCEment of women STEM faculty. Proposal Number 1008643 to the National Science Foundation.

working to broaden the understandings and the engagement of the male colleagues who will typically run the searches and have the national networks for recruitment.

As the ADVANCE work at the University of Michigan suggests, there are effective ways to do this, including a series of workshops for men (and women) on faculty recruitment for diversity and excellence. These can range from broad, fundamental questions such as why we need to recruit a diverse faculty in order to attain excellence, to an examination of the obstacles involved, and smaller but critical items such as how to write a recruitment letter.

But most important, as they have shown at Michigan, is the education required for all of us about the influence of non-conscious schemas, the stereotypes that influence our judgments of others' likely performance and our expectations about how we, in turn, will be judged. Both men and women share these schemas about gender, and both whites and people of color hold them about race and ethnicity, even though we are often not aware of them.⁷ Schemas tend to guide our thinking and judgments more often in situations that are ambiguous, full of stress or time pressure, or when the groups who are being judged lack a critical mass⁸ --- precisely the conditions that many women in STEM job searches face.

Studies show that these schemas affect our evaluation of resumes, CVs, job credentials, fellowship applications, and letters of recommendation.⁹ An examination of letters of recommendation for successful medical school faculty, for example, shows that letters for women are shorter and contain more "doubt raisers," including hedges --- "It's amazing how much she's accomplished," faint praise, and irrelevancies such as "It appears her health is stable," and "She is close to my wife." Letters for men are longer and contain more references to the CV, publications, patients, and colleagues.¹⁰

The education of search committee chairs and department chairs is critical to recruiting women and underrepresented minorities, and we have started this work at Syracuse. We have a few more people who "get it" but much, much more work needs to be done and is underway. This includes efforts to tap into professional networks to bring women to the surface in ways we have not previously done. These women have always been there, but their excellence and potential has not been seen or appreciated. And as junior women get tenure and positions where they have a voice, they are both role models and a reminder to faculty and administrators that women can and do succeed. Such reminders help to begin the work of changing all of our implicit gender schemas, setting the stage for more inclusive recruitments to come.

⁷ Valian, V. (1998). *Why So Slow? The Advancement of Women*. (280) Cambridge: MIT Press. See Michigan ADVANCE.

⁸ Fiske, S.T. (2002) What we know about bias and intergroup conflict, the problem of the century. *Current Directions in Psychological Science*, 11, 123-128 and Dovidio, J.F. & Gaertner, S.L. (2000). "Aversive racism and selection decisions: 1989 and 1999." *Psychological Science*, 11, 315-319, see Michigan ADVANCE.

⁹ Goldin & Rouse (2000). *The American Economic Review*, 90, 4, 715-741; Steinpreis, R.E., Anders, K.A. & Ritzke, D. (1999). The impact of gender on the review of the curricula vitae of job applicants and tenure candidates: A national empirical study. *Sex Roles*, 41, 7/8, 509-528.

¹⁰ Trix, F. & Psenka, C. (2003). "Exploring the color of glass: letter of recommendation for female and male medical faculty. *Discourse & Society*, Vol 14 (2): 191-220, see Michigan ADVANCE.

What is needed is institutional --- not piecemeal --- transformation. As Michigan's STRIDE Committee (Strategies and Tactics for Recruiting to Improve Diversity and Excellence) has recognized, there are four critical areas: recruitment, retention, climate, and the development of the leadership skills necessary to make these changes possible. The world badly needs scientific discoveries and innovations. Bringing more women into STEM fields taps into a huge pool of talent, encourages the best science possible, and gives women themselves better access to high-paying and rewarding careers.¹¹

Social Networking

It's essential to recruit talented women to our faculties, but it is not sufficient. We have to keep them and see them flourish. At the moment, in all fields, they are twice as likely as men to leave.¹² Even women who are full professors have reported barriers in the dynamics of their departments and some have said they feel invisible to their colleagues.¹³ If we want to increase the participation of women, we must address the chilly atmosphere that creates setbacks that might seem small at the time but can accumulate in ways that hinder or end an academic career. As Virginia Valian has written, "Mountains are molehills piled one on top of the other."¹⁴

To change this environment, we need a culture of collaboration, of give and take, and a sense of common fate. We need rich social networks, full of both instrumental and emotional support, and not just the kind you find on the internet. We are profoundly social beings from the earliest moments in our lives, and our institutions reflect this. As Steffen-Fluhr has written, "Universities and corporations are not merely buildings and balance sheets; they are webs of interaction and perception whose complex structure is largely invisible to the people embedded in them."¹⁵ These networks supply the social capital for successful careers, so it is important for women be part of them --- not isolated out on the edge.

Frequently there is a pattern to that isolation that works against women feeling securely embedded within their departments, disciplines, and the institution as a whole. Women scientists and engineers often find their numbers are few, or they may even hold solo positions. They perceive a distance between their lives and that of the senior faculty and role models in their midst, and the combination of token status and psychological distance reinforces a sense of being under constant scrutiny and even stereotype threat. Finding ways to solidify and diversify their social networks -- both the formal ties to others (department chairs, mentors, central administrators) and as importantly the informal ties (peers in other departments, role models in industry or in their discipline nationally, supportive male colleagues), can be a critical antidote to the inevitable isolation of small numbers.

High quality relationships between department chairs and women faculty are critical. Responses to a recent survey at Syracuse found significant differences between men and women

¹¹ Falci, et al, 3.

¹² Falci et al, 4

¹³ Gatta, Mary L.& Roos, Patricia A. (2005). Rethinking occupational integration. *Sociological Forum*, 20 (3), 369-402, cited in Falci, et al, 9.

¹⁴ Valian (1998). 4.

¹⁵ Steffen-Fluhr, N. (2010). More than the sum of its parts: advancing women at NJIT through collaborative research networks. *NSF ADVANCE Project Summary* (2010-2012)

STEM faculty on perceptions of the activities that contribute to success. The women believed that being a teacher, an advisor of students, a good department colleague, a campus citizen, and a member of one's community weighed more heavily in tenure decisions than men thought they did. The women also believed that periodic, formal performance reviews, upper limits on the numbers of committee assignments, and upper limits on teaching obligations were more essential to their success than did men. Having high-quality relationships with their chairs may provide women more strategic discretion regarding teaching loads and appropriate levels of service.

As Abigail Stewart, director of the ADVANCE Program at the University of Michigan found during five years of interviews with newly-hired women of all ranks from the science and engineering departments, they often had no mentoring or other programs they could easily access for advice and help. She advocates setting up formal mentoring programs if they do not exist and creating peer mentoring groups that many junior faculty find helpful. This can be done in a variety of ways, as you are clearly embracing here at TCNJ with a robust Mentorship Initiative that makes use of sponsors both within and outside the College.

In a similar effort, the ADVANCE project at North Dakota State links senior female STEM faculty members with junior faculty members, as same-gender mentorship relationships are generally associated with better outcomes. Literature in change management shows that women in the academy also gain tremendously from meeting women at other universities and creating informal networks with women in other universities, benefits that can endure for years.¹⁶ Interviews with "high flying faculty," women who achieved full professor by the time they were 48, have suggested that relationships made during their graduate studies were important and were extended through attendance at professional meetings, international research collaborations, consulting on steering committees, research sabbaticals, and joint projects at other institutions.¹⁷

One of our prime objectives at Syracuse, for example, is to use our ADVANCE grant infrastructure to connect women faculty to other STEM women, social networks, and campus hubs of innovation and expertise so they are supported throughout their journey to tenure and a full professorship. They can participate in a personal evaluation to map their professional network and develop a strategy for improving it. Individual women faculty members can receive short-term coaching, and senior faculty members will engage with junior faculty members in round-robin, collegial, social events. We hope this will be a "matchmaking process" that will foster many informal mentoring relationships.

We will also host empowerment workshops, similar to those that comprise your Professional Development Initiative at TCNJ, on topics such as assembling your own board of mentors and support network, mapping and evaluating the strength of your personal and professional networks, and preventing burnout, which can be caused by social isolation, poor work-life balance, or crisis-oriented and reactive systems of work. Women faculty from other neighboring colleges and universities and industry will be invited to attend.

¹⁶ Monks, K., & Barker, P. (1999). Management development for women academics and administrators. *Journal of Management Development* 18 (6) 531-545.

¹⁷ Ismail, M. & Rasdi, R.M. (2007). Impact of networking on career development: Experience of high-flying women academics in Malaysia. *Human Resources Development International*, 10 (2), 153-168.

Network building requires institutional support of several kinds, some financial and some structural. The Family Initiative at TCNJ provides such critical support, especially in dual career contexts. Similarly, at SU, we are providing funds for attending professional meetings, having face-to-face meetings with research partners, and paying for child care during travel. And to facilitate the formation of collaborative research projects, special visiting faculty-of-practice positions will be filled by women from industry as potential collaborators.

A key impetus for naturally building stronger social network ties, both formal and informal, is to do collaborative work of all kinds. We can reduce our daily experience of isolation, and improve our work at the same time, by pooling knowledge. A collaborative workplace also requires and produces a great deal of social support – both instrumental and emotional.

Several institutions working with ADVANCE grants have seen these benefits. Diana Billimoria and Greer Jordan observed a science department at Case Western Reserve University¹⁸ where the leadership encouraged team teaching, numerous social/intellectual departmental events, and quite a bit of shared and transparent decision making. In addition to good science, these practices produced a strong record of recruitment, retention, and promotion of women.

One female student who was visiting the department at Case Western told Billimoria and Jordan: "I kind of got the feeling that people here at least spoke to each other as opposed to being locked up in their labs all day and not getting along or having time to socialize."¹⁹ Another woman, a post doc, said, "This environment is so much more like family than it is like work-mates who you don't talk to or care about or see much outside of the workspace."²⁰

In this particular department, the rigid lines between work and play, career and family, campus and community, that can hold women back largely evaporated. In the fall, faculty members even got together to clean the leaves out of each other's gutters --- a tradition that illustrates both instrumental and social support at its best!

As a new study recently completed by faculty members at the University of Nebraska at Lincoln found, the levels of *friendship* experienced by women and underrepresented minorities play a critical role in their success. Whereas women frequently find themselves deeply engaged in "formal work," such as research exchanges and committee work, the strength of their informal ties varies and can be significant in balancing the weight of formal work.²¹

¹⁸ Billimoria, D. & Jordan, C.G. (2005) A good place to do science: an exploratory case study of an academic science department. Paper presented at the 2005 NSF-ADVANCE Meeting in Washington, D.C., online at <http://www.case.edu/admin/aces/AGoodPlaceToDoScience.pdf>.

¹⁹ Billimoria and Jordan (2005) 9.

²⁰ Ibid. 10.

²¹ Falci, et al.

And balancing the weight of formal work is essential, for women who are under-represented ("tokens") in their departments are often asked to do extra service work, leading to what NSF has described as "activity exhaustion."²²

From my point of view, it's vital to make friendships possible by creating a way of life in, across, and outside of the academy that is more *flexible*. Women usually bring multiple identities into their working environments: as women of color, as LGBT women, as parents, as daughters, as wives, as partners. With these identities come multiple commitments and complications. It is true that men also have responsibilities --- some more than others. Nonetheless, the experience of conflicting identities is the *pervasive* one for women. What most women lack is --- not a "wife," as some of us joke—but a third space that gives us time, the structures, and the flexibility we need. Whether our commitments are to family, to community, to collaboration, or to students, we should not be forced to check our identities and commitments at the door. And flexibility should be encouraged across the board so it will enhance the lives of all, not stigmatize the needs of women.

This flexibility can take many forms: As at Case Western, it can foster collaboration and social support within departments. Like NJIT, it can include more interdisciplinary work across departments so that women begin to experience a critical mass of like-minded partners and mentors, even when their own department may have few. It can expand the definition of scholarship and provide merit considerations for such work. It can promote recognition at the institutional level for excellence in advising and mentoring. It can honor the importance of work-life balance, as you are doing at TCNJ in drafting a set of teaching load adjustments and other family-friendly policies. And it can come through more expansive connections to communities of experts in industry, neighborhoods, non-profits, government, outside the academy itself, providing new models of excellence and new career trajectories, as we are working to do through the ADVANCE program at Syracuse.

Building Third Spaces

This brings me to a consideration of how we create "third spaces" of engagement for women and faculty in general in STEM fields. These third spaces need to include both the strength in numbers that comes from a critical mass of women and the richness of social networks that solidify a sense of belonging and at the same time provide instrumental support to foster a career. Flexibility of norms and diversity of participants seem critical to building such nurturing environments for success. Although our academic structures, rules, and timetables have served men very well, they may need to be re-shaped to fit the complex lives of both men and women in the future. The same is true for our disciplines. Excellence in scholarship demands being able to see through and break down barriers to new knowledge and a willingness to bridge the arbitrary boundaries we often draw around our academic disciplines, taking the best policies and practices with us.

As one example of flexible third spaces, the institutional transformation we are working on at Syracuse draws on concepts we have developed over the last few years, a vision of Scholarship in Action --- a vision for the university that focuses its intellectual capital on

²² Ibid.

problems in and of the world --- and our construction of a physical link, the Connective Corridor, between our university up on the hill and downtown Syracuse. Syracuse is an older industrial city deeply in the midst of revitalization, and SU is a key anchor institution in this process. Our faculty and students are right at the heart of many large scale collaborations, teaming up with diverse communities of experts from industry to neighborhood citizens on pressing challenges of environmental sustainability, K-12 education, economic development, art, technology and urban design. These commitments provide, in turn, rich interdisciplinary and collaborative contexts for faculty in general. For women in STEM fields, they offer opportunities to expand the matrix and become a part of something larger --- a rich and diverse social network in a third space of activity.

As part of our larger effort, we are encouraging women faculty in STEM to participate in cross-sector, collaborative research through Syracuse's network of internal and external partnerships and projects. We host several notable interdisciplinary research centers and industrial partnerships on campus and in the City of Syracuse. They provide ready-made opportunities for extensive networking, and flexible contexts that support research and seed innovation.

One of these, The *Syracuse Biomaterials Institute*, integrates faculty from five STEM departments and works with SUNY Upstate Medical University to foster collaborations across institutional boundaries.

Another resource is the *Syracuse Center of Excellence in Environmental and Energy Systems*, a hub of university-industry collaborations that focus on improving health and performance in built environments, on building energy efficient "green" infrastructure from data centers to residential homes, on cleaning our urban water-ways, and developing clean and renewable energy sources.

A partnership with enormous value for engineering and computer science and our iSchool is the *JPMorgan Chase Technology Center* which has corporate employees, faculty, and students working together on Global Enterprise Systems and a range of technology challenges related to cybersecurity.

The *CASE Center for Systems Engineering* is a New York State-supported applied research center that facilitates faculty partnerships with industry. One of the jewels in the CASE crown is *Blue Highway*, an innovation incubator, founded by the medical device firm Welch Allyn, where faculty, post-docs, and students collaborate both across universities and with industry.

I believe that these third spaces of cross-sector collaboration, interdisciplinary research, and applied innovation are especially good environments to nurture women faculty in STEM, as they quite naturally override the typical barriers of a chilly climate. In them, women are less isolated and less likely to feel like tokens than in their departments (as a critical mass can form from participants across departments and disciplines). They can build richer social/professional networks (with instrumental support coming from a wider variety of colleagues in differing

positions), and in the process see a somewhat more flexible array of career models (such as those pursued in industry).

Perhaps most empowering is the likelihood that their work will be recognized and rewarded, with much less risk of falling through the interdisciplinary cracks between departments. Many of these collaborative third spaces engender strong cultures of enthusiasm, even passion, for the work, as everyone feels a part of a thriving enterprise that is making a difference in the world. This matters to many women. As Pat Mather, one of SU's leaders in biomaterials said, "Most women (bio)engineers I advise mention altruistic motivation for choosing the field, which innately seeks to improve our world at the most human of levels, our health."

A clear illustration of the advantages for women that reside in these third spaces of collaboration is the Syracuse Biomaterials Institute (SBI). It is a gender-diverse environment of interdisciplinary collaboration from "top" to "bottom." Pat Mather, an engineer, and Cristina Marchetti, a physicist, co-direct the Institute. And 55 percent of the SU graduate students and half the post-doctoral and research associates are women. Among the SU faculty members, 32 percent are women from home "departments" that span engineering and the sciences.

They are joined at SBI by faculty from other institutions, including SUNY Upstate Medical University and SUNY College of Environment and Forestry. Their collaboration is both tangible and intangible, and it includes the open sharing of space and instrumentation in the new Institute facility so that everyone can benefit from start-up and grant resources.

The same collaborative model permeates their graduate training through a newly funded NSF IGERT grant and includes participation by experts from non-technical disciplines (such as public affairs and public communications). There are also many opportunities to form diverse social and professional networks built on the "strength of weak ties," as Mark Granovetter labeled these informal networks.²³

These networks are amplified for new faculty, post-docs and graduate students through the connections that are already in place, to industry and to other university organizations such as the Burton Blatt Institute that focuses on research and advocacy for persons with disabilities. Altogether, this is a thriving, supportive enterprise with an ethos of collaboration and open discourse, and a strong focus on mission that draws everyone together in common cause and not, I suspect coincidentally, in common fate.

It is that sense of common fate that may well be the most potent antidote to the oft-experienced chilly climate for women in STEM. And, by the way, I am glad to say that Pat Mather and SBI have recently succeeded in recruiting Erin McMullin from TCNJ's Engineering Sciences Program to join SBI's very warm environment as she pursues a PhD in bioengineering at Syracuse. Welcome, Erin!

Institutional Transformation

²³ Granovetter, M. (1983). The strength of weak ties: a network theory revisited." *Sociological Theory*, 1, 201-202.

Efforts such as SBI and the ADVANCE project more generally, to construct third spaces that promote collaboration and friendship, are part of the broader project of institutional transformation, of building what the social and legal scholar Susan Sturm calls the "architecture of inclusion." We can do this, as I have suggested above, by recruiting more women and engaging more men, building supportive and diverse social/professional networks that change the climate from chilly to warmer, and then rewarding deep and broad participation in third spaces of collaborative scholarship.

At the same time, we need to make sure that our policies and practices --- for hiring and tenure and promotion, for example --- support this kind of collaboration and allow for cultural change. This likely won't come easily, as at Syracuse it took us four years of debate in the faculty senate to move forward on a change in the promotion manual to encourage interdisciplinary, collaborative and/or engaged scholarship to be rewarded.

Accordingly, as we build this architecture of inclusion for women in STEM fields, it is terribly important not to forget that all of us --- the players across the leadership of the institution and on the ground in it --- have a role to play in changing the culture. As Benjamin Schneider has observed, the only hope for creating permanent organizational change lies in shifting the culture of an organization.²⁴

And to keep our attention focused on culture change, I believe it is critical not to forget where we came from. Each of us has memories that can help shape our behavior in highly constructive ways. I got two powerful lessons early in my career as I moved from my confident undergraduate days at Sarah Lawrence to what was then a male-dominated world --- graduate school at Stanford in mathematical-cognitive psychology.

On my first day there, I found myself riding the elevator with one of the most powerful cognitive psychologists in the department. He was also quite tall, and I, obviously, was small. He looked down at me and bellowed, "So who are you, and where are you from?" I said my name and that I was a new graduate student recently graduated from Sarah Lawrence. He reared up and said, "We don't take girls from Sarah Lawrence." I said, "Well, you did," and then, thankfully, I arrived at my floor.

In an instant, I had learned that even when you are, in a technical sense, an insider, you can still embody difference --- as I am constantly made aware when tall guys (and women for that matter) take public note of my height. Stereotype threat is a powerful force. Moments when your "outsider" marking becomes clear --- no matter how successful you are --- can be either empowering or a problem, and I think we all need to take it as the former!²⁵

The second lesson I learned quickly was that we all have a penchant for lionizing exceptional individuals while hanging onto negative views of the groups from which they come. In spite of the fact that I did very well in graduate school and received tenure after three years at

²⁴ Schneider, B., Brief, A.P., & Guzzo, R.A. (1996). Creating a climate and culture for sustainable organizational change. *Organizational Dynamics*, 24 (4)7-19.

²⁵ Spencer, S.J., Steele, C.M., & Quinn, D.M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology* 35, 4-28.

my first job at Princeton, I doubt that my senior colleague at Stanford ever revised his views of "girls from Sarah Lawrence." My point is not that I am exceptional --- quite the contrary --- but rather that we all glamorize the individual who rises above the expectation for her group but tend to overlook the situation of the group and what stacked the odds against them in the first place. We rarely revise our implicit schemas about groups based upon how individuals within them actually fare, and even more critically, we don't worry about the talent lost by leaving groups behind.

As we expand the possibilities for higher education, we must bring along more than the one or two exceptional women in STEM. We must reduce the odds against the entire group by changing the expectations that routinely work in many ways against them. It has to become the norm, not the exception, to see women and members of other under-represented groups in the circles of influence. For ourselves, for all of the young women who have just graduated from our campuses, and for all the young women who will walk through our doors for the first time this fall, we must have a "new normal" --- and it must be full of engaging third spaces with many faces and role models and rich networks of support. No great work gets done without that support, and there is no single recipe for success, so the more flexible we are the more likely we will see women thrive in the years to come.

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