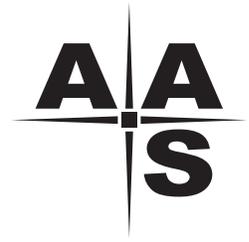


STATUS



A REPORT ON WOMEN IN ASTRONOMY

JANUARY 2016

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The Gender Distribution of AAS Members: 2015

Kevin B. Marvel (Executive Officer, American Astronomical Society)



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Since at least the 1970's, the fraction of AAS members who identify as women has been growing. Every few years, the Society, either through the Executive Office or through an independent survey effort, looks carefully at the gender distribution. This activity is helpful in trying to understand trends and shifts in our membership, which might impact the type and range of services we provide. It also provides a snapshot of the field as a whole, if we assume that AAS membership fairly represents the astronomical sciences generally.

Demographic statistics of this type are challenging and dynamic. The AAS membership is not static, and our membership records are incomplete. Especially in the younger age brackets, the

flux of people into and out of the organization is disproportionately large, and the number of people in the very youngest age brackets is also quite small, so a fluctuation of just a few people as members makes a huge percentage change. This group is not highly numerous (roughly 5% of the total), but this feature is important to remember and understand.

Some members have chosen not to provide information about their gender identity, either through neglect or oversight, or, in some cases, through personal choice. Gender identity is not strictly defined, and some people do not identify with the gender binary of male or female, yet membership database systems currently lack the ability to represent the broad spectrum of identities. Even demographers generally continue to debate how to best represent the diversity of individuals and their gender identification. As standards become accepted, the Society will adjust and change as well. We will be working in the coming year to develop a way for all our members to provide us with their gender identity. For now, we must work with the information we have, despite its weaknesses and incompleteness.

Continued ...

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Editor

Nancy Morrison (Univ. of Toledo)
nmorrison@utnet.utoledo.edu

Acquisitions Editor

Joan Schmelz (Univ. of Memphis)
jschmelz@memphis.edu

Associate Editors

Katy Garmany (NOAO)
garmany@noao.edu

Joannah Hinz (MMT Observatory)
jhinz@as.arizona.edu

Patricia Knezek (NSF)
pknezek@nsf.gov

Contributing Editor

Meg Urry (Yale University)
meg.urry@yale.edu

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<http://www.aas.org/cswa/STATUS.html>

Gender Distribution of AAS Members — continued

What studies of this type cannot tell us is the status of women in our field in terms of equity generally. For example, our data say nothing about their level of compensation and if that compensation is commensurate with that of men. They say nothing about the fraction of members of either gender promoted to tenured positions, nor do they say anything about the appointment of members of either gender to senior leadership positions in our field. They tell us only what fraction of the AAS membership have chosen to identify as male or female in our demographic data.

By looking at this distribution over time ([Figure 1](#)), however, we can clearly see an ongoing trend that is reflected in my own personal experience attending AAS meetings over the years: the fraction of AAS members who are women is going up and that trend has continued monotonically since the first reliable data I have available in electronic form. Also, once AAS members reach the postdoctoral stage, roughly the age bracket 28–32, the fraction of women moves forward nearly uniformly over time to the next higher age bracket — except in the oldest age bracket, where women's longevity becomes quite obvious. We are not, actually, recruiting new female AAS members once they hit 83 years of age!

This positive demographic change repeats all the way back to the first data set and tells me that once a woman has her Ph. D. and is an AAS member, she tends to stay an AAS member and, I assume, an active astronomer. This is a good sign, as it shows that there is no leaky pipeline, at least for AAS membership. It may tell us that women who choose to join the AAS see benefit in membership throughout their career and stay members — quite heartening from where I sit. But what it certainly shows us is that there is an ongoing demographic change in our membership, one that stands in stark contrast to other closely aligned disciplines.

Again, our data can tell us nothing about these women's career paths, which is why the AAS is working with AIP to complete a longitudinal survey — the first of its kind — to try and understand the career path for women in our discipline and to inform any projects or programs that the Society might undertake to help bolster their career path and ensure their success along with that of their male counterparts.

[Figure 1](#) shows the data from the five demographic surveys. It shows only the percentage who identify as men or women (not the absolute numbers), partly because of the varying nature of the data I have and partly because of the limitations of data presentation.

Continued . . .

From the Editor, Nancy Morrison



In this issue of *Status*, we welcome AAS Executive Officer Kevin Marvel back to our pages with another article in an occasional series on the gender demographics of the Society. His previous article appeared in *Status*'s 2009 June issue, and he participated in the surveys described by Fran Bagenal in the 2004 June issue and by Meg Urry in the 2000 June issue.

The 1973 survey was carried out by the Working Group on the Status of Women in Astronomy (Cowley, A. P. et al., *BAAS*, **6**, 412) and reported membership statistics back to 1900. Another survey was carried out in 1978 by the *ad hoc* Committee on the Status of Women in Astronomy (M. H. Liller et al., *BAAS*, **12**, 624). It reported a female membership percentage of 8.2%, similar to that in the 1973 survey.

Also for this issue, I have contributed a short report on a diversity workshop at the the 2016 meeting of the American Association for the Advancement of Science (AAAS). This report is the second in what may be developing into a series, since the typical AAAS meeting seems to have at least one very worthwhile career development workshop.

Occasionally, we reprint material from other sources. For this issue, I chose two pieces from *AWIS Magazine*, which is published by the Association for Women in Science (<http://awis.org>). These pieces provide perspectives that are strikingly different from those of our typical content, namely those of urban development and venture capital (VC).

Lastly, this issue includes a review of a book that seems to have received little notice but offers insightful comparisons between black and white professional women and how they function in a white male-dominated environment.

It would be good to know the rough number of people in each age bin. However, for the first two years of data presented, 1973 and 1990, only a fraction of the total membership is included and so, although the percentages are likely a good representation of the full member population, I don't actually know, nor can I determine without parsing through the printed member directories at those times, the actual number of people in each age range. Therefore, we have to live with the fact that the percentages are percentages of a subsample of the full population. For the most recent three data sets, though, the samples are complete, and I have access to the full populations. Just for those who are curious, the population totals for each age bin in the 2015 data are shown in [Figure 2](#).

Figure 1: The gender distribution of AAS members, in the age ranges shown at the top. The vertical bars in each group correspond to the years shown, except for the first group and the last three groups, where only the most recent years are included. The data come from the AAS’s demographic surveys in those years.

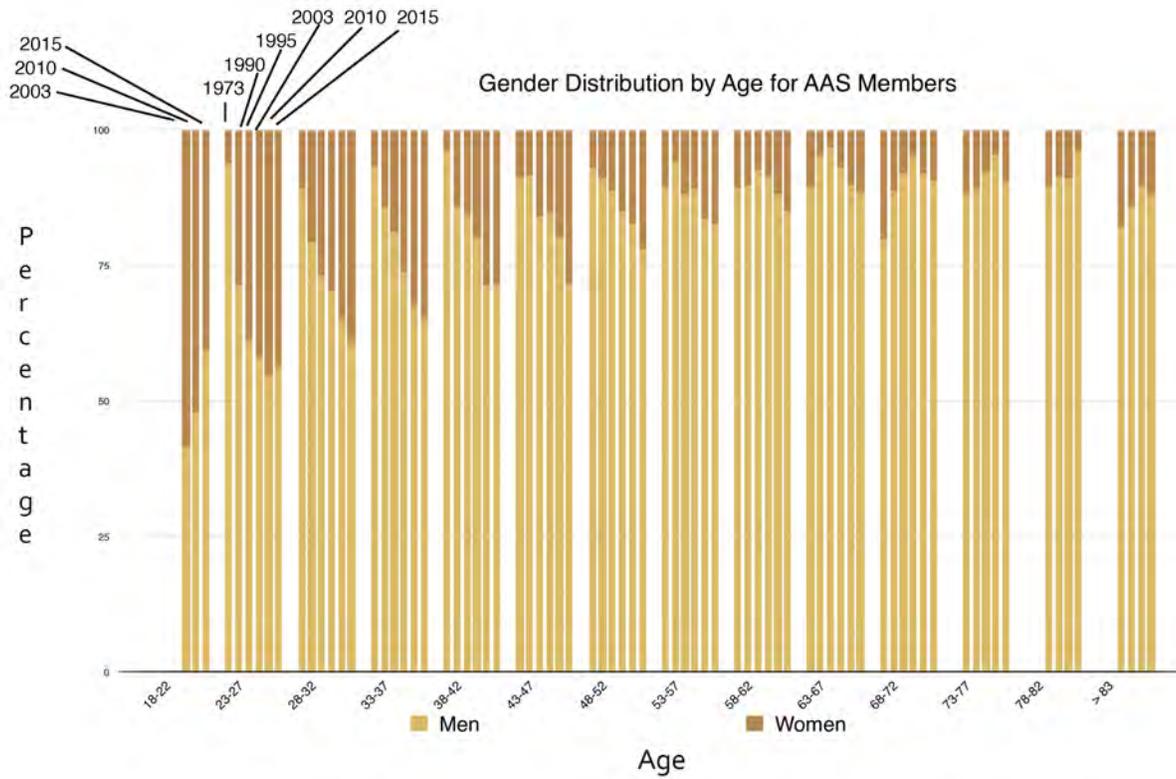
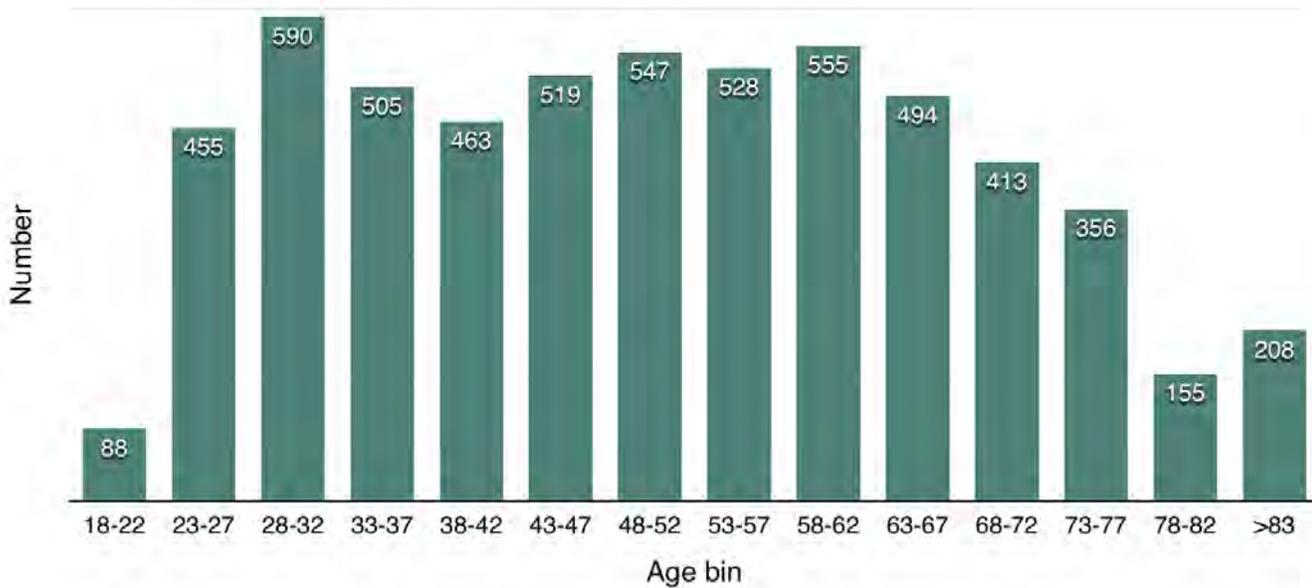


Figure 2: The number distribution of AAS members in the age ranges shown, from the AAS’s 2015 demographic survey. Graphics by Nancy Morrison.



Expanding Potential, A Program for Inclusivity

Nancy D. Morrison (Dept of Physics and Astronomy, The Univ. of Toledo, retired)



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In February, I attended the 2016 AAAS meeting in Washington DC where, on the Sunday of the meeting, there took place a one-hour workshop entitled, “Expanding Potential: Overcoming Challenges of Underrepresented STEM Groups,” by presenters Shaila Kotadia and Kevin Costa. After a tag-team presentation, Kotadia and Costa invited audience

participation, which was lively and varied as audience members shared personal experiences. There were some especially interesting remarks by people with disabilities. Because of the sensitive nature of some of these experiences, we were asked not to share them publicly.

Costa is Managing Director of Synberc, and Kotadia is Education, Outreach, and Diversity Manager. Synberc is the Synthetic Biology Engineering Research Center, an NSF-sponsored institute located at UC Berkeley [1]. The center has a five-person diversity team and a strong diversity program overall. Synberc’s program, Expanding Potential: Fostering an Inclusive STEM Community, has three main components: public workshops, meet ups, and seed projects. In the following, I’ll draw on Synberc’s web pages, as well as on my notes from the AAAS workshop.

Workshops

In his introduction to the Expanding Potential workshops, Costa said that the goal of the workshops is to help professionals understand problems faced by underrepresented groups through a personal approach, and thereby to encourage programs to change their culture.

So far, Expanding Potential workshops have been given in November 2014 (one day) and January 2016 (two days) in Berkeley. All STEM students and professionals, as well as people from the community, were invited to attend. The first workshop was subtitled, “A workshop on navigating the hurdles faced by women in STEM fields,” and it emphasized formal informational sessions, along with a roundtable discussion and a networking event.

In the second workshop, the keynote speakers focused on the different experiences of various underrepresented groups. Compared with the 2014 workshop, it gave more emphasis to presentations by junior scientists, including a discussion of their own experiences by a panel consisting of two undergraduates, two graduate students, and two postdocs. In his AAAS description of the workshop, Costa emphasized the importance of getting trainees’ perspectives.

The second workshop included short presentations by seed project awardees (see below), who also led workshops on the topics of their projects: unconscious bias, mentoring, and empowerment of students to effect change. Efforts were made to show how similar programs could be adapted to furthering the development of an inclusive climate at various institutions. Finally, audience members were invited to share their experiences in order to assist program developers with meeting their needs.

In the AAAS workshop, Kotadia explained that these major changes in format and content were induced by feedback on the 2014 Expanding Potential workshop. Outstanding among that feedback was a cogently written essay by an attendee of the first workshop, Julia Chang [2]. She criticized the first workshop for overemphasis on the concerns of white, straight women — that is, its lack of concern with intersectionality — and for its ‘us/them’ approach. She called for soliciting input “from STEM workers who identify among multiple marginalized communities.”

Expanding Potential — continued

Next, Kotadia gave her view of outcomes from the 2016 workshop: what is needed to make change? Here is a summary of her points, based on my notes.

- Share data on diversity. Older, white male, leaders need to see this information.
- To create solutions, tap into diverse communities. A lot of people in these communities know what to do. In particular, students working outside the context of organizations are often not given enough credit.
- Create a community for diversity with space for people to share their experiences. Everyone's effort will be enhanced, compared with what people can accomplish when isolated at their own institutions.
- Close the gaps in previous efforts, particularly in evaluation and assessment of projects.
- Hold more face-to-face discussions, which are better than surveys for gaining understanding of people's experiences. Answers to surveys may be artificial because of the strangeness of being a study subject.

In answer to a question from the audience, Kotadia said that the next annual workshop will address power and privilege.

Seed projects

According to the Expanding Potential web page [3], the Seed Projects program arose in part from Chang's feedback. Funding in the amount of a few thousand dollars is offered for innovative diversity projects that could be adapted to a range of institutions.

Successful proposals are posted on the Synberc web page. An example that particularly appeals to me is one from physics graduate students and postdocs at the University of Colorado at Boulder (CU), entitled, "Empowering Students as Agents of Change: Using Diversity Workshops to Improve Equity in STEM." The workshops were to be aimed at graduate student leaders of CU-Prime [4], an organization founded in 2013 that aims to develop an inclusive community. The overarching goal of the workshops was to "empower student leaders of CU-Prime as agents of change within the CU Physics Department."

Meet ups

The Expanding Potential program organizes several small group meetings per year with the purpose of creating a "safe space" for people to discuss sensitive topics such as bystander intervention, how to create inclusive environments, and how to address the complete spectrum of gender identities. Synberc staff are also available to assist other organizations in setting up similar meetings on topics of interest to particular underrepresented groups.

Conclusion

What I have seen and read about Expanding Potential program impresses me with the program's creativity and responsiveness. The fact that a major shift in structure and emphasis between the two workshops could be accomplished in the short span of just over a year speaks volumes. I hope that readers of this short report will visit the program's web site and take away good ideas for your own diversity activities — and perhaps consider attending the next annual workshop.

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- [1] <http://www.synberc.org>
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- [3] <http://www.synberc.org/expanding-potential-2014>
- [4] <https://sites.google.com/a/colorado.edu/cu-prime/>

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The True Meaning of Techquity

By Libby Schaaf

Mayor of Oakland California



This goal entails cultivating sustainable partnerships with the emerging innovation sector and our residents to expand access to employment opportunities, internships and training. I am committed to ensuring that the growth and prosperity we're experiencing in Oakland, and throughout much of the region, is reaching more of our residents – particularly our low-income communities and communities of color.

While Oakland lies a short 37 miles away from Silicon Valley, it has not experienced many of the same advantages of the tech boom. For example, a 2014 Oakland Unified School District study showed that around 40% of Oakland public school students were without working computers and high-speed Internet access at home. Without these tools, our students' ability to do daily homework assignments, complete college applications, apply for jobs and virtually explore the world beyond Oakland — have unfairly been cut short. And while California's unemployment rate has dropped to just 6.3%, Oakland's unemployment rate, while improved from 2010's 16%, is still too high at 9.4%.

In Oakland, we are working to change this paradigm by making technology equity — or what I call techquity — a reality. As mayor of Oakland, I am striving to use technology to enhance the way government interfaces with the public and delivers services. This goal entails cultivating sustainable partnerships with the emerging innovation sector and our residents to expand access to employment opportunities, internships and training. I am committed to ensuring that the growth and prosperity we're experiencing in Oakland, and throughout much of the region, is reaching more of our residents — particularly our low-income communities and communities of color.

Towards this goal, Oakland applied and was ultimately selected to become one of President Obama's 10 TechHire Communities — cities committed to expanding access to tech jobs and supporting local employer demand. The initiative aims to empower Americans with the skills they need through universities and community colleges, but also through non-traditional approaches like coding boot camps and high-quality online courses. Local organizations like

Techquity — continued

Impact Hub Oakland, Oakland Technology Exchange (OTX) West, Black Girls Code and Code.org already provide valuable programs and opportunities of this kind, including high-quality workspace, tech boot-camps, workshops and after-school programs for children in underserved communities in Oakland.

As part of the TechHire initiative, Oakland expects to have placed 400 individuals in paid internships or full-time tech jobs by the end of this year. Partnerships with local organizations such as Hack the Hood, Hidden Genius Project, Stride Center, Kapor Center for Social Impact, and the Urban Strategies Council, are an integral part of achieving this goal.

The Oakland Unified School District is another important TechHire partner. Its leadership in creating a science, technology, engineering and math (STEM) “corridor” in West Oakland public schools ensures and advances STEM learning in this traditionally underserved area of Oakland. At West Oakland Middle School, for example, rising 6th graders take part in a six-week STEM Academy which includes weekly projects at the University of California Berkeley Lawrence Hall of Science focusing on math and science. During their time at West Oakland Middle School, students also have the opportunity to take field trips to STEM-based companies like Pixar and Facebook.

One Oakland TechHire partner, #YesWeCode, is committed to providing low-cost access to coding boot camps, as well as securing 300 apprenticeships and job commitments from companies such as Square, Lyft, Pinterest and Twitter. Intel has also invested \$5 million into engineering and computer science programs at Oakland high schools, and pledges to continue supporting these students through college and after in the form of job placement opportunities within the company.

As a TechHire city, Oakland will play an integral role in helping tech companies discover new talent in Oakland,



and further guarantee that Oakland’s growth will continue to be founded upon the relentless ingenuity and creativity of our residents. This partnership will also help ensure that the rich diversity at the heart of cities like Oakland is better reflected in the halls of the technology companies that are driving our global economy.

I have complete confidence that our city’s continued focus on STEM and our work to build an equitable pipeline into the tech sector will transform Oakland into a model hub of innovation.

Ultimately, Oaklanders will generate Oakland’s progress — progress which will move the city forward, drive an inclusive economy and create shared prosperity for the next generation and long-time residents alike.

Mayor Libby Schaaf is Oakland, California’s 50th mayor. A native Oaklander, she previously served one term as a member of the Oakland City Council. A former Council chief of staff and top mayoral aide to Jerry Brown, Mayor Schaaf has two decades of public service experience that began while she was a young attorney leading volunteer efforts in Oakland. She later left her legal career at Oakland’s largest law firm to build and run the first centralized volunteer program for Oakland public schools at the Marcus Foster Institute. Mayor Schaaf eventually went on to become public affairs director for the Port of Oakland.

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Women's VC Champion Weighs in on Systemic Transformation

Jonathan Sposato Chairman of Geekwire.com and CEO of PicMonkey

Earlier this year, I made a public statement that many within and outside the tech community found highly resonant: *"From this point forward I will only invest in startups where there is at least one female founder."* The room erupted with applause and by the end of my talk, a prominent female entrepreneur approached to say, "You're totally trending on Twitter." A few days later there was national press coverage on CNN and the LA Times.

The immediate and overwhelming support from women (and many men) was both heartening, and more importantly, a strong signal that we touched a nerve. But the backlash from many in the community who disagreed with the statement was hugely telling of how absolutely dire the reality is for many female tech entrepreneurs.

Most women in tech are simply pushing a much larger rock up a steeper hill.

I did not make the statement for PR gain. The truth is, that at the time, the statement backing women felt natural and non-controversial during the course of a keynote at an angel investing conference. The pipeline for the deals I was seeing every week felt balanced, ideas from female helmed companies were of high quality, and I was already writing checks to women founders. My statement felt like the next natural progression of my existing investment strategy; let's double down on women. Little did I know that still, in 2015, the reality from the point of view of most women in tech was far from encouraging.

Women's VC Champion — continued



Colleagues cited extreme difficulty raising money, highly dismissive behavior from venture capitalists (VC), and, most alarming, a general culture of antagonism towards women in the tech work place. Two recent data points to consider:

- Investors who heard pitches by entrepreneurs preferred pitches by a man over the identical pitch from a woman at a multiple of $2\times$ (68% to 32%) in a study commissioned by HBS, Wharton, and MIT Sloan. According to the study, “Male-narrated pitches were rated as more persuasive, logical and fact-based than were the same pitches narrated by a female voice” (Brooks et al., 2014).
- In a recent study of over 200 performance reviews in technology jobs by Forbes magazine, negative personality criticism (for example, terms such as abrasive or irrational) showed up in 85% of reviews for high performing women but only 2% of reviews for high performing men (Snyder, 2014). Clearly, it would be overly simplistic to assume that the extreme percentage gap is the result of the fact that 85% of women have personality problems while only 2% of men do.

So how did this happen and why?

If you were to rewind the clock a quarter of a century to the early '90's when I started in tech, you would have naturally assumed issues of gender equality would have all but evaporated. When I was a young hire at Microsoft, my immediate boss was an accomplished female manager who had the trust of the company's senior leadership (Lisa Maki, currently CEO of Pokitdok), her manager was a female General Manager who was considered a rock star (Charlotte Guymon, currently board member of Berkshire Hathaway), and her boss, in turn, was a female Senior Vice President who could create entire new product divisions out of thin air (Patty Stoneseifer, former CEO of the Gates Foundation). My entire management chain up to Bill Gates was female. All were the “triple threat” boss you looked up to — strong, managing people with great product insights and excellent business acumen. Our product division was chartered with productivity and lifestyle products the likes of which had never been seen (Encarta, Creative Writer, Fine Artist, 3D Movie Maker . . .). Patty's famous ‘100 products in 100 days’ rallying cry catalyzed us to deliver on the most diverse offering of multi-media products in the pre-internet age.

As a result of their strong stewardship, our consumer products division was likely the most gender balanced product division on the Fortune 500. My own “Kids & Games” product unit felt about 50/50 men and women. Meetings were energetic, creative, and collaborative. Product design was fun and appealed to a broad swath of consumers. Marketing campaigns were emotionally resonant and high impact.

Then, inexplicably, all the women left.

There were many, many factors, not the least of which was the fact that earning a job at Microsoft in the late '80's/early '90's was akin to winning the lottery. After 4.5 years, your options would vest into seven figure sums (sometimes eight). The burnout factor was certainly high given the company's high demands, but women were still leaving (and not returning) in disproportionately high numbers relative to their male colleagues. One in-house HR study suggested that perhaps the exodus was mostly a function of life stage — women have babies, take five months off (Microsoft

Continued . . .

Women's VC Champion — continued

was highly progressive with regard to parental leave at that time, and is still well above market), and if they were stock rich, felt little incentive to return to the grind.

[But privately, many of my female colleagues reported discomfort with a culture that was antagonistic to the communication style and product sensibilities of women.]

And the net impact was profound. It was as if the culture shifted overnight to a less forgiving, less collaborative tone. More staff meetings would occasionally open with insensitive banter of male one-upmanship. Some product divisions fell below a critical mass threshold of about 13–15% women and would actually repel more women from joining, entering a gender-biased death spiral the team would never recover from. The net percent of consumer products commissioned by the company targeted at women grew less and less. Now, no one explicitly wants these things as part of a company strategy. There is no slide in someone's PowerPoint deck that says "let's be a bunch of guys making products for guys." But, they happen slowly and certainly over time. As one female colleague left after another due to culture, I was left asking; "which came first, the chicken or the egg?"

Why are stories from the previous tech epoch important now? Because many of the beneficiaries of that era, including myself, are the influencers, investors, and decision makers of today. It is for this reason that the newest generation of female tech leaders are pushing a larger rock up a steeper hill today. What is the problem exactly? Here are 3 examples based on real world feedback.

- It takes longer for women to raise money vs. men. Seed rounds for tech startups are usually in the \$1M to \$1.5M range, consisting of angel syndicates of 5 to 20 investors. It simply takes longer for women to raise this amount from investors than their male colleagues. Three ex-Amazon men might close the round in 3 to 4 months, while three female counterparts might take 9 months.
- Female founders are often told their ideas are less relatable by investors. The refrain, "I have to talk to my wife/daughter/secretary first" is perhaps a well intentioned, but subtle signal to say, "I am incapable of assessing your idea because I perceive it is gender-based."

- Perhaps most alarming, there exist some edge cases of agenda mutation for social gain. Several female entrepreneurs have reported needing to don fake wedding rings so that advances by male colleagues happen less frequently. The most forgiving perspective here is that in an industry where there are so few women, single males have to seize every opportunity. But the reality is that women are faced with additional friction that reduces efficiency. It is disheartening to go to a third meeting with an investor only to find that the true agenda is something else.



We need to turn this tide. Now.

So what is my call to action? For entrepreneurs, I have a three-point ask.

1. *It is just as easy to find a female co-founder, as it is a male one.* For any budding male entrepreneur, seek any number of accomplished female colleagues you have had come across your network. It is not a surprise that I

Women's VC Champion — continued

became the lead investor in the aforementioned Lisa Maki's Pokitdok venture. My co-founder in PicMonkey was an adept CMO I worked with at Google.

2. *Acknowledge that women make better leaders, and hire them into c-level positions.* Corinne Post, associate professor of management at Lehigh University's College of Business and Economics, published a report in June titled "When is Female Leadership an Advantage?" in the Journal of Organizational Behavior, and reveals that as co-ordination requirements increase, teams with female leaders report greater team cohesion, more co-operative learning, and more inclusive communication than those led by men. Better communication equals better leadership.
3. *Acknowledge that products are actually better when they are created by teams comprised of both men and women.* This is particularly true in the consumer internet space where female internet users account for roughly 67% of the purchasing power. At PicMonkey.com, a highly popular photo-editing and collage site, I often feel that a product team comprised of almost nearly 50/50 women and men is our secret weapon. Our most popular for-pay features are the touchup and collage features conceived by female members of the team. To put it another way, our most profitable features were invented by women.

And to further turn the tide, we have to also call bullsh*t on three common misconceptions on the investor side.

1. *"There is a pipeline problem for women in STEM. Women are just not out there."* There is a belief on the part of many male investors that the low percentages of female companies is due to proportionally lower percentages of women starting companies. The fact is that while 42% of all STEM degrees have gone to women, only 27% of the STEM work force is made up of women (Dean & Koster, 2013). Looking at tech startups specifically, a dismal 3% of Silicon Valley tech startups have at least one female founder. Therefore, we need to acknowledge that there are areas of friction from funnel-in to funded startups at the end of the pipeline.

2. *"Supporting only companies founded by women is actually sexist."*

I was stunned by a vocal minority who felt supporting women founded companies is patronizing to women and "ultimately sexist." I think as leaders we have to pick a lane. We have to first acknowledge that we are working within a sexist framework, and then work to dismantle it. In a national study by the University of Wisconsin, psychology faculty were sent CVs for an applicant (randomly assigned male or female name), and both men and women were significantly more likely to hire a male applicant than a female applicant with an identical record (Steinpreis et al., 1999).

The vast majority of female entrepreneurs I've met personally have divulged heartfelt stories of discrimination, and want the system to change. Data that there is a problem are clear and present, and ignoring this fundamental premise is akin to building houses in a hurricane.

3. *"There is a silver bullet, systemic fix to the problem."* Many well intentioned fixes have been proposed over recent years. Perhaps we need to retrain women to communicate or pitch just as assertively as men. Or better yet we should widen the funnel of total women going into STEM.

Because of the well-researched differences in how women and men are perceived in technology, simply mentoring women to "being more assertive" and negotiate better is misguided as a solution to extinguishing the problem. According to the same Harvard Study cited above that observed greater fundraising success on the part of men, female voices are actually perceived as less logical and less persuasive than male voices(!) And in a double jeopardy, women are also in turn viewed negatively as being 'too difficult' for exhibiting assertiveness. And as cited earlier, there is a very high attrition rate for women working in tech, thus simply widening the funnel and teaching more girls to be engineers is alone not enough to solve this problem.

Continued . . .

Women's VC Champion — continued

I assert that if we truly want climate change for the tech culture, let's not find false reassurance in quick fix solutions, but demand a sort of social engineering where everyone needs to change behavior. We need to reorient a worldview that seeks to re-educate women within the broken framework, to one that educates men to break it. And I believe this re-education is most especially true for the male leaders. More leaders need to make a stand with me, awareness needs to be broadened, and dialogue needs to continue.

Finally, the impact of change can be profound. All great companies start small. Before Facebook, Google, or Microsoft were publicly traded companies with billions in market cap, they were all small startups begun by entrepreneurs working out of their dorm rooms or apartments. We investors are the believers who add the necessary fuel to ignite an entrepreneur's vision. The best investors also 'level up' to being trusted advisors and help mold product and culture over time. Let's fund and green-light more female founded companies and create the next generation of great tech titans. A generation of tech titans that create even better products, better culture, and a better future.

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Jonathan Sposato is Chairman of *Geekwire.com* and CEO of *PicMonkey*. A serial entrepreneur and investor in many startups, Jonathan is currently the Chairman of *Geekwire.com*, the northwest region's top technology news site, and CEO of *PicMonkey* the world's most popular web photo-editor. He also has the distinct honor of being the first person to sell 2 companies to Google. As the CEO of *Picnik*, Jonathan created a category-defining (1st search result for "photo editor") online photo editor to profitability and reached over 60M visits a month.

Prior to *Picnik*, Jonathan founded *Phatbits* which went on to become *Google Gadgets*.

Jonathan was also an investor in several startups founded by women, chief among them *Pokitdok*, *Glamhive*, *GiftStarter*, *Run-way2Street*, and *VivifiLab*.

Prior to startups, Jonathan was a Senior Manager in Microsoft's consumer division, personally delivering the next level of thought on key Microsoft properties to chairman Bill Gates and the company's leadership, as well as driving the development of award-winning software applications, Xbox video games, and social communications applications.

Jonathan is a graduate of Whitman College.

Our Separate Ways

by Ella L. J. Edmondson Bell and Stella M. Nkomo, a Review

Nancy D. Morrison (Dept of Physics and Astronomy, The Univ. of Toledo, retired)



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While writing a report on women of color in academia [1], I encountered a reference to the 2001 book, *Our Separate Ways: Black and White Women and the Struggle for Professional Identity* by Ella L. J. Edmondson Bell and Stella M. Nkomo [2]. In my expectation of insights into cultural differences between white women and women of

color in the professions, I was not disappointed. The book reports a study of successful women business executives, who, like women scientists, have struggled to succeed in a white-male-dominated world.

Edmondson Bell, Nkomo, and their students conducted life history interviews with eighty black and forty white women executives, as well as a national survey of 825 black and white women managers. Oversampling an understudied group (the black women) is a standard procedure in sociology, as is the life history approach. It is meant to capture a person's interpretation of her socially defined roles, external life events, historical events, and sociocultural context, as well as psychological development. It conveys a richer sense of a person's life than can be captured by quantitative means.

Most of the women who were interviewed worked in Fortune 500 companies. Their job titles included divisional head, regional director, corporate treasurer, general counsel, director, and several flavors of vice president. Most were born between 1945 and 1955,

with a few born after 1955. When they assumed managerial positions in the 1970s and 1980s, many were the first women managers in their companies, and many of the black women were the first blacks of either sex. At that time, it was not uncommon to ask whether women could even be managers.

The interviewees' early experiences followed common themes. The first theme is "lost childhoods," meaning that the women were raised in poor, unstable families or that they suffered traumatic losses in childhood. The second theme, "their fathers' daughters," traces the influence of the women's fathers. The third theme traces the influence of geographic and social location, and the fourth theme covers "armoring," which consists of black families' teaching their children defenses against racism and giving them tools that they would eventually use in the corporate world. Edmondson Bell and Nkomo believe that armoring is "a critical element of the black woman's psychosocial development."

Of both the black and the white women, some came from broken or impoverished families that required the young girls to bring in income and to take on their mothers' home management responsibilities. They were helped by a parent's strong interest in their education or by the intervention of an unrelated person such as a teacher. Against this common background was a cultural difference: the white women were raised in a culture of individualism, in relatively insular families, while the black women were raised in a culture of communal resistance to oppression. The black families tended to have a network of "fictive kin," in which non-blood relations step in to play the roles of parents, siblings, or other relatives as needed.

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Our Separate Ways, a Review continued

The women's relationships with their fathers followed two general patterns. In the "daddy's girl" pattern (mainly applicable to the white women), the father was deeply involved with the daughter and supportive of her aspirations. These daughters were taught self-reliance, that their gender was not a limitation, and that they could be anything they wanted in life. In their parents' relationship, the mother was treated as an equal whether or not she worked outside the home. These women learned to get along comfortably with men by observing their parents, and their fathers served them as professional role models.

In the "domineering dad" model, the women learned to be tough and competitive. For the black women, this second model was more typical (although not universal). Several "recalled that their earliest exposure to sexism occurred within the confines of their own families." Even though these women felt empathy for their fathers, they grew up determined not to repeat their mothers' experience, and they developed a "no-nonsense, take-charge attitude." The authors observe that many black men react to powerlessness in society by dominating their home lives.

In exploring the influence of geographic and social setting, the book discusses the interview subjects' self-identifications of race and ethnicity. Many of the white women grew up in prosperous, ethnically and culturally homogeneous suburban settings. When asked about self-identification, they usually mentioned religion rather than ethnicity, and racial issues hardly ever surfaced. As they grew up, black people were remote from their concerns. If anything, they came to believe that blacks and whites are the same under the skin and that equal opportunity is the norm.

The chapter entitled, "Executives in Training" describes the upbringing of two middle-class black women. Both lived in integrated midwestern suburbs and experienced racial tensions as they moved in both black and white societies during their school years. Their parents instilled in them a strong sense of self and a faith in ability to succeed. The parents also exposed the daughters to the best of white America — but selectively, exposing them to successful black people or choosing activities that would convey an understanding of white society, so that they could learn

to be bicultural.

After reviewing the women interviewees' early years, the book takes up critical moments, or "flashpoints," in their professional lives. As young adults, few of the women aspired to careers in management. Management was outside the scope of women's traditional roles, and discrimination by race and gender was rampant in MBA programs and in the workplace. For black women, the situation was further complicated by the fact that their families resisted the idea of a career in management. "... middle-class professional African-Americans were either teachers, doctors, or lawyers — not managers."

Therefore, most of the women took meandering paths to managerial careers. Few of them had help from career counseling in high school. Even the ones who were sure they would be going to college had little notion of what they would be doing after that. The black women typically were influenced by the "ethic of giving back to the African-American community." Only when they saw that a business career would provide the authority and resources for helping people did they see it as consistent with this ethic. No such consistent "career anchor" existed for the white women.

In contrast, a few of the women decided on a managerial career in high school and moved directly toward their goals. Of them, the black women took, on average, 1.5 years longer to achieve a managerial position than the white women did. This difference had a long-lasting impact on their careers; at the time of the study, the black women still had not advanced as far as the white women had. While all the women met resistance in pursuing managerial careers, the black women met more.

Once in a managerial position, the women's positions as 'firsts' or one of a small minority enhanced the difficulty of adjustment to corporate culture. Those from poor or working-class backgrounds had to cross class lines as well. Virtually all of them experienced isolation and were subjected to tokenism or (for the black women) double tokenism. The black women reported more pressure to perform and a greater lack of role models, and fewer of them felt accepted as "part of the team."

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Our Separate Ways, a Review continued

Continually, they faced the issue of whether to confront racism or ignore it; often, they confronted it. They showed an impressive ability to distinguish the effects of their own abilities from those of racism or other external causes, an ability termed “defensive efficacy.” The authors judge this ability to be an outgrowth of their early armoring.

The black women came to understand and accept the hierarchy and the politics of the companies and also that upward mobility is not uniquely tied to merit. They felt tolerated but not accepted — outsiders within the organization.

In contrast, most of the white women were not prepared for corporate culture or for sexism. Less vocal about injustice, they believed they could fit in by doing the right things. In a related tendency, they were more likely to have (white) male mentors than black women were.

In addition to the glass ceiling faced by white women, many of the black women managers perceived corporate culture to be “a concrete wall topped by a glass ceiling.” A glass ceiling is transparent; the white woman is visible below it and can see the top above her. Behind the concrete wall, however, a black woman is invisible and isolated. She has to climb the concrete wall before having the possibility of breaking the glass ceiling. This perception is borne out by Edmondson Bell and Nkomo’s national survey: 32% of the white women were in top management positions, but only 14% of the black women. In changing jobs, black women more often made downward or lateral moves.

In the workplace, the black women reported “daily doses of racism” and being held to a higher standard than white men or women. Their experiences of stereotyping were judged to be harsher than those of the white women. They reported exclusion from informal networks and challenges to their authority more frequently than the white women did.

Edmondson Bell and Nkomo compared the black and white women’s strategies for success. Both groups availed themselves of helpful individuals, not company policies. Indeed, all the women saw their companies’ commitment to advancing women and minorities as hollow, although the white women were less skeptical

about these policies. All the women regarded perseverance and hard work as requirements for success, along with willingness to change jobs when they encountered lack of potential for advancement or a racist/sexist boss. Another requirement was to have sponsors, as opposed to mentors. A mentor is a guide or coach, while a sponsor is also an advocate. [3] The white women were more successful at obtaining sponsors.

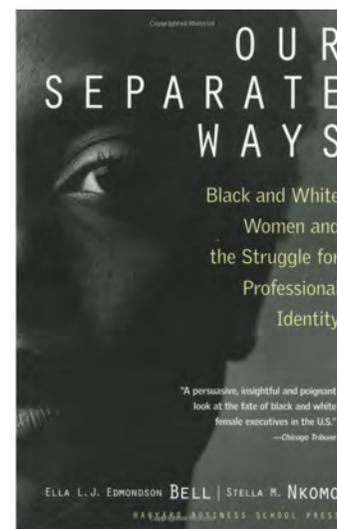
Although excluded from informal networks, some of the black women managers created their own formal networks, such as regularly scheduled luncheons. When not offered opportunities for professional development, they sometimes created their own opportunities, for example by volunteering to undertake projects. A way to hold onto their sanity was to keep in touch with their communities and to support other blacks at work.

All the women had learned how to get ahead, but the black women were much more eager to change the system. They were more outspoken about discrimination and quicker to recognize it. They insisted on speaking the truth and on being heard — although this strategy can backfire. High-level executives used their access to people at the top to work for advancement of blacks within the company. Working in the external society — such as by serving on the boards of black cultural institutions — was also typical.

Edmondson Bell and Nkomo term those who work within the structure of their professional lives to make change “tempered radicals.”

At the root of tempered radicalism for black women, the authors see their deep connections to black community, along with the culture of resistance. Among the white women, there were few tempered radicals.

Perhaps because of a belief in meritocracy and a greater sense of belonging compared to black women, most of them preferred to ignore race and gender issues.



Our Separate Ways, a Review continued

The book provides an insightful discussion of the relationship between work and life. Here, gender trumped race for the most part, but there were interesting racial differences. White women were more likely to report having a supportive partner. Black women (especially those from less-privileged backgrounds) were more often called on to help their families with personal or financial problems. But, unlike many of the white families, the black families were ignorant of the business world and couldn't provide career support. Another problem for the black women was a shortage of equal-status partners. "The percentage of black women employed in executive, administrative, and managerial occupations is greater than the percentage of black men."

The book includes an insightful discussion of racial identities, white privilege, and the white mindset. While white women reported thinking much more about being a woman than about being white, the black women felt proud of their blackness. They derived great mental strength from their female ancestors and from their homelands (a term with a cultural as well as a geographic meaning). Endowed with this rich sense of racial identity, they learned to navigate the white world without leaving the black world. Many of them felt that they led two separate lives, while some described themselves as living in one richly diverse universe.

Finally, the book describes the stereotypical views each group has about the other and the sources of tension between them, and it suggests guideposts for a way forward. Space does not permit a fuller discussion in this review, but I highly recommend these later sections.

Although I have tried to summarize all the book's main points, it includes much more rich material. The individual women's stories and their routes to success are fascinating.

Readers who are African-American may find the material familiar, and indeed many of the concepts have been current in sociology for some time. To white readers, though, the book may be eye-opening, as it was for me — even though I don't completely share the insular background that typifies the middle-class white women in the study. The book emphasizes both the difficulties the black women have faced and the strength these women derive from their upbringing and culture. It's obvious that they need every bit of that strength. This book helped me understand the women of color I know in science today and greatly intensified my respect for what they have accomplished.

Although out of stock at the publisher, this book continues to be available used [4] — or check your library.

This review benefited from helpful comments by Joanna Hinz and Dara Norman.

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