*Flex*Bulletin #98: STEM Dilemma - Female Drought or Flex Famine?

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The Keystone pipeline debate has fueled political conflict for half a decade, with little oil to show for it. But now a very different pipeline discussion has gripped the country. Tech companies in dozens of states, and the educational infrastructure that supplies their workforces, are approaching consensus that the problem of "too few women" in high-tech is essentially a pipeline problem. And at the rate things are going, this conclusion will lead to front-loading the pipe at a rate Keystone's advocates could only envy.

Every day it seems another Federal program, public initiative or round of personal or foundation funding is rolled out to accelerate the entry of women and minorities into STEM fields (Science,Technology, Engineering and Mathematics). This supply side solution could prove to be an expensive and long-term patch that requires a major shift in already challenged educational priorities.

Perhaps it's wise to push the "pause" button on the emerging consensus. After all, data matters. And there is a growing body of research, writing and opinion suggesting that while supply is no doubt part of the problem, the challenge is more complex, familiar and amenable to solution than another polarized pipeline controversy. Sometimes newer industries, no matter how "innovative," can learn from their older and more mature predecessors. Perhaps we can solve the seemingly insoluble more creatively.

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"If you build it, [s]he will come." - "Shoeless" Joe Jackson, *Field of Dreams*

Are there too few women in the field or is there work to be done on the field?
Many people, including many tech leaders, believe that the under-representation of women, Hispanics and African-Americans reported by major tech firms is due to a constrained supply. They argue that greatly increasing the numbers of STEM-educated women and minorities in the pipeline will eventually solve this problem. No doubt a new, fast-growing, specialized industry needs newly minted staff.

Equally true: such a strategy will yield the best results if these newcomers are truly welcomed into existing tech firms. Better yet if they stay over time and encourage peers to join them. Such was the great lesson learned by Kevin Costner's character Ray Kinsella in the film *Field of Dreams.* A fictional pioneer reminiscent of today's risk-taking entrepreneurs, Kinsella plowed under his corn crop and built a stunning ballpark in the middle of his Iowa farm. To everyone's eventual and great surprise, players, including the legendary (and deceased) Shoeless Joe Jackson, came to practice. He brought with him a small start-up team recruited from the adjoining cornfield. Soon, enough players had materialized to field full teams and perhaps the makings of a league.

Who knew? There turned out to be part of a robust player pipeline lurking in the cornfield. But until there was an even playing field - or at least a visible and then well-lighted field at all - the supply of capable players simply couldn't show itself. At least in an area we could call fictional or virtual baseball, an apparent shortage turned out to be just that - an *apparent* shortage.

What tech women refugees say from their off-field positions
Of course "high tech ain't baseball." But any student of the business press over the last year has read the disclosures from tech firms of their dismal employee demographics - huge majorities of white and Asian-American males, smaller numbers of women and low single digits of African-Americans and Hispanics. Thus, the urgency of the pipeline.

But what these dismal numbers reflect, but don't begin to capture, are the significant "leaks" in the existing pipeline. A growing number of studies, articles and interviews chronicle the problems of retention, real or perceived harassment and hostility in employment interviews that keep or drive talented tech talent out of the field. And the aura of a mostly male bastion from Venture Capital through coding - reinforced by the popular culture in portrayals like HBOs "Silicon Valley" - hardly encourages new flow into the pipeline. Unlike ghostly ballplayers in the fictional *Field of Dreams*, these former tech players are real - and can tell their tales.

Whatever happened to ...?
One of the most interesting chronicles of a slow, steady exodus of women from tech comes in research done by Seattle tech veteran Kieran Snyder. Following a decade working at Microsoft and Amazon, she became Co-Founder and CEO of software start-up Textio. In October *Fortune* published her article **"Why women leave tech: It's the culture, not because 'math is hard' "** Its pointed sub-title is "Stories from 716 women who left tech show that the industry's culture is the primary culprit, not any issues related to science education." Among the findings:

- Not surprisingly,484 women cited motherhood as a factor in leaving their jobs. All but 42 did not plan to become stay-at-home moms, but were unable to continue working because:
  - There was a lack of even basic flexible work arrangements
  - Salaries were inadequate to enable quality childcare
  - The work environments were described as unsupportive, requiring on-call responses during unpaid leaves and providing no privacy for expressing breast milk as examples

  One interviewee concluded motherhood alone didn't do in her career: "Motherhood was just the amplifier. It made all the problems that I'd been putting up with forever actually intolerable."

- At least 192 women (over 25%) cited "discomfort working in environments that felt overtly or implicitly discriminatory as a primary factor in their decision to leave tech."
  - Discrimination encompassed age, race and sexuality in addition to gender and motherhood
  - An African-American woman was one of two gay people in a company in which 28 of 30 people were "white, straight men under 35." She said:
    - "My coworkers called me Halle Berry. As in, 'Oh look, Halle Berry broke the website today.' I'm pretty sure for some of them I'm the only actual black person they've ever spoken to. Everyone was the same, and no one was like me. How could I stay in that situation?"

- The article's summary is equal parts unsurprising and shocking: "Of the 716 women surveyed, 465 are not working today. Two-hundred-fifty-one are employed in non-tech jobs, and 45 of those are running their own companies. A whopping 625 women say they have no plans to return to tech. Only 22-that's 3%-say they would definitely like to."

If the problems sound familiar, so might some of the solutions
Much more research would have to be done - and should be done - within and across tech to determine how much of the pipeline problem could be solved by fixing the kind of leaks described above. A new industry might merit novel problem-solving. But problems that have been around for decades, such as enabling breast milk pumping, treating unpaid leave as just that and outlawing "Halle Berry" comments at work, should be low-hanging fruit.

In reading about and discussing this problem, I can't help but think back to the early days of leveling the playing field in the major accounting firms which were dominated by technically proficient and well-educated men. Rather than being masters of code and automation, they were interpreters of the tax code and organization. While the search for talent was always central, they did not have an external pipeline problem per se. Their talent challenge was more internal. Deloitte & Touche, a change leader, described its predicament as "a hole in our pipeline." A brief summary of their problem and solution:

- In 1994, women were 50% of new hires and 5% of partners; annual turnover was 22%
- Strong, creative leaders (CEO, national HR and Women's Partner leaders) acted firmly
- Initiative for Advancement of Women required Men & Women as Colleagues training
- Intensive research and training led to reduced and flexible schedules across the firm
- Internal networks, training, mentoring maximized growth of internal resources
- Appropriate child care supports were provided for dispersed, mobile workforce

I recall my own work with Deloitte (as it's now called) in the late 1990s as a flexibility advisor to the Initiative. Deloitte was an accounting firm and we were all committed to tracking the numbers. Among the initiative's gains *in the first four years* were significant effects on the internal and external pipelines:

- Turnover was reduced from 22% to 16% for an estimated saving of $25 million
- The percentage of women partners rose from 5% to 14%; the trend continued thereafter
- In year four, 200 valuable, experienced hires joined, crediting Deloitte's inclusive, flexible climate

While its initiative took many forms over the years, it celebrated a major milestone by announcing in February that Cathy Engelbert would become CEO of the world's largest professional services firm - the first woman to lead one of the Big Four.

A pretty straightforward conclusion
The lesson from all this seems quite simple. "Pipeline problems" need careful analysis, comprehensive solutions and long-term commitment to their resolution. And of courses solutions in the technology industry won't mimic those that have gone before. That's why one starts with careful analysis. But careful analysis means just that: a penetrating look at what needs to change, not the adoption of bumper sticker-like slogans.

These problems and solutions of humans working with humans may prove more similar than today's conventional wisdom suggests. Surely we can take away the fact that there is limited logic in building massive pipelines without fixing the holes that plague them as well.

We welcome your comments on this Bulletin.When you write, please email me at:
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