

WHEN AND WHERE I ENTER?

Exits, Pathways, and Potholes for Black Women in Tech

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OUTLINE

- Obstacles to Broadening Participation
- An Alternate Path Forward
- Illustrations from Black women in Computing
- Disciplinary Culture and Organizational Change



BROADENING PARTICIPATION

- The impetus to broaden participation has focused on
 - Understanding the challenges faced by women
 - Less on those faced by minorities
 - Rarely on those for whom those identities intersect.



Only the BLACK WOMAN can say “when and where I enter, in the quiet, undisputed dignity of my womanhood, without violence and without suing or special patronage, then and there the whole...race enters with me.”

—ANNA JULIA COOPER, 1892

In *When and Where I Enter: The Impact of Black Women on Race and Sex in America* by Paula Giddings



WHY FOCUS ON THE INTERSECTIONS?

- Illuminates challenges shared by women and minorities.
- Exposes the inequality endemic to the culture of science by highlighting how race exacerbates difference.
- Illustrates clearly the role of constraints in shaping the choice to leave or stay science.
- **Challenges the pipeline assumption**

CONTROLLING IMAGES

“As a generalized ideology of domination, stereotypical images of Black womanhood take on special meaning...These controlling images are designed to make racism, sexism, poverty, and other forms of social injustice appear to be natural, normal, and inevitable parts of everyday life.”

- Patricia Hill Collins (2000:69)





INTRODUCING THE ROAD

- The pipeline metaphor **doesn't ask who leaks and why?**
- Choices individuals make to remain in or leave science are not “free”
- Need to better articulate ideas of agency and constraint
- **Imagine a road with exits, pathways, and potholes**
 - Some people leave
 - Some journey on
 - Some get stuck



ROADMAP FOR CHANGE

- Differentiates between entry, exits, and way stations.
- Recognizes that challenges faced on the road are not uniform.
- Some challenges may appear universal, **such as the presence of the pothole in the road**, but are experienced individually.
- While other challenges are truly universal, **such as heavy rain**, that equally impact all drivers on the road.
- However the ability of the driver to navigate the road depends on their tools, **agency and self-efficacy**.
- The result is *apparent* universal challenges and individual outcomes.



BLACK WOMEN IN COMPUTING

- Constraint – Policing Belong
- Presumptions of Ignorance
- Agency – Persistence despite Isolation and Hostility



JUST LIKE ONE OF THE GUYS

*...I had done computer science stuff my whole life. My dad being a professor, we had a computer at home. I would do basic computer programming – as in basic, the computer language – and I would play these games. **I was very comfortable with computers.***

- Bette



POLICING BELONGING – B.S.

...they assumed that I grew up in some crack den somewhere because I'm from Brooklyn, NY...they assumed that I was there because of affirmative action, and it was just the most hostile racial environment that I've every been in in my life.

- *Melissa*

- Kvasny, L., Trauth, E. and Morgan, A. (2009). "Power Relations in IT Education and Work: The Intersectionality of Gender, Race and Class", *Journal of Information, Communication and Ethics in Society*, Vol. 7, Issue 2/3, pp. 96-118.

POLICING BELONGING – PHD

When I was a grad student at Greene and I went to a lab that only graduate students could go to, to do some work. I walk into the lab and there's a lab assistant there, who's also a grad student. He looked at me come in and I sit down and I start working. He comes up to me and he says, "I believe you're in the wrong place." And I looked at him and I said, "No, I'm not." And I kept working, right? So then I'm all right. He's getting a little agitated and he says to me again, "I believe you're in the wrong place." And I'm not upset because I'm thinking, "Okay, there's no one who looked like me who's ever been in this lab before who's ever attended this university before." So he really believed. And he's never seen me before so he really believed I'm in the wrong place."

- Mariah

HOSTILITY AND THE PHD

It was almost an attacking environment...I was getting sick just about every six weeks, and I couldn't really figure out why. But once I left, I wasn't getting sick any more. The thing is that there were professors who warned me before I went. They said: We've never had a black PhD come out of that department...

- Bette

PRESUMPTION OF IGNORANCE – B.S.

...So you're in physics class, and people are choosing lab partners and *you're the last one picked because you're Black and they assume that you're an idiot*, and this was in ... physics 21, which was the most failed class for engineers at [my college]. It's a four-credit course, I got an A-. And I remember the first exam, the average -- it was a 125 point exam-- and the average was 68. And so they were passing the exams around, and I got a 103, so the highest grade in the class. And the shock on the White students' faces when they saw, because they literally assumed that I was an idiot.

- Melissa

- Kvasny, L., Trauth, E. and Morgan, A. (2009). "Power Relations in IT Education and Work: The Intersectionality of Gender, Race and Class", *Journal of Information, Communication and Ethics in Society*, Vol. 7, Issue 2/3, pp. 96-118.

PRESUMPTION OF IGNORANCE - PHD

*I didn't really think much about male versus female until I actually went to Wilson and the white women were rejecting me. I'm like, "What is this?" For me, it wasn't about gender for the most part early on or even race. But even when I went to grad school, it was about race because it was in my face. It was the other people come to me reacting to me or telling me things that clearly they didn't know me from Adam. **They didn't know my skills and abilities so I assumed it was my race or my gender or both or I didn't know...** At the beginning of every semester, you had to come together and be a part of a team to work on your projects for the course. **And it never failed**, every single class, after the beginning of the first class, there's a second class, people are trying to form their teams. **My fellow classmates including the women would look at me up and down from my hair to my toes at least twice and say, "No."***

- Mariah

PERSISTENCE DESPITE ISOLATION

...There's wasn't a lot of black people and Latino people. Weren't a lot of females and I was like why are they not staying?...Just stick it out you know. Even my college roommate she went from computer science to math. And I was like Tasha stick it out you know. But they wouldn't stick it out and I'm like you gotta just stick it out you know. You can't be worried about what they think or what they say or how they treat you. You gotta just do the work. Because your work will stand for it's self. So no one would believe me so they just kind of left. And I was like well I'm sticking it out. I don't care what you guys are doing but I'm going to stick this out. I know I can stick this out. So it was more or less like a challenge to myself to finish every class you know...

- Rhonda



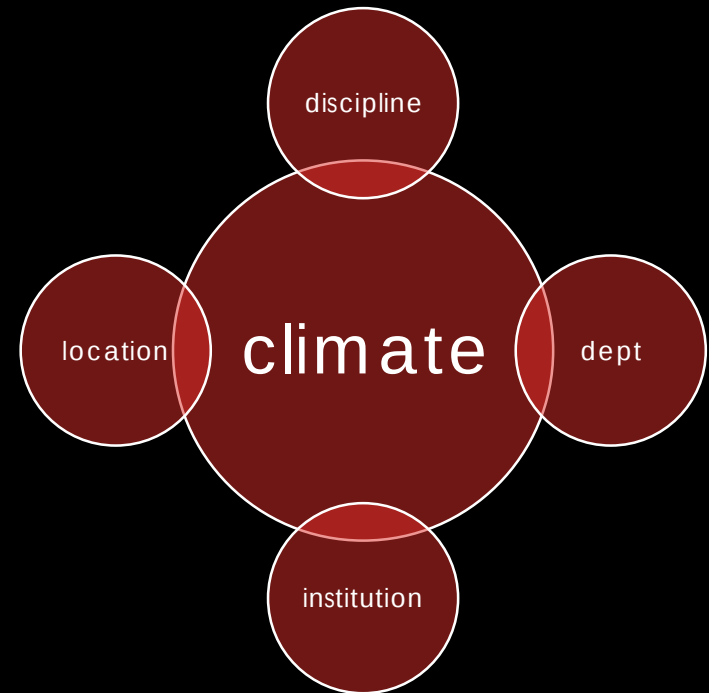
BLACK WOMEN IN COMPUTING

The Black women profiled here shared several traits in common that facilitated their success and resistance to the culture of tech

- Early exposure to science
- Familial support and encouragement to pursue computing
- High levels of pre-college academic achievement.
- A large proportion went to a HBCU for undergraduate training before attending PWI institutions for the PhD.
- Unabashed confidence that allowed them to deflect the negativity in their environments.
- A network of professionals, professors, and other minorities within and across fields that reinforced their worth despite messages to the contrary.

UNDERSTANDING *DISCIPLINARY* CULTURE

- If we want to shift climate, we need to pay attention to the **disciplinary** and **departmental** culture which has endured over time (Griffin 2018)
 - STEM disciplines may communicate exclusionary norms, images (elitist, competitive, color-blind, male-dominated, white)
 - May feature large weed-out classes, lack collaboration, or community-relevance
- “while...often informed by the institutional culture, **climate** is considered more **malleable**.”



MAP THE CLIMATE TO FACILITATE CHANGE



Who finds the environment chilly or warm?
Who feels included or excluded?

Who is present and who is absent? Who is thriving and who is not?

What are the norms in this environment?
How do people treat each other?

Historically what changes have taken place which affect this department, institution, and region?

CONCLUDING THOUGHTS...

- Black women are navigating hostile departments and disciplinary cultures.
- Tech has disciplinary subcultures, i.e. human computer interaction vs artificial intelligence, with consequences for representation.
- We must challenge the myth of meritocracy that masks the pervasive inequality Black women experience that shapes the decision to stay or leave the field.
- Purposeful work to shift climate will enable more women of color to persist in tech.

Thank You

PATHWAYS,
POTHOLES,
AND THE
PERSISTENCE OF
WOMEN IN SCIENCE

Reconsidering
the Pipeline

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