

A decorative graphic on the left side of the slide, consisting of a network of light blue lines and circles, resembling a circuit board or a data network. The lines are vertical and horizontal, with some diagonal connections, and the circles are of varying sizes, some acting as nodes or junctions.

THE SPECTER OF MOTHERHOOD

CULTURE AND THE PRODUCTION OF GENDERED CAREER ASPIRATIONS IN ACADEMIC SCIENCE AND ENGINEERING

SARAH THÉBAUD AND CATHERINE TAYLOR
UC SANTA BARBARA

2023 KANTER LECTURE
PURDUE UNIVERSITY, FEBRUARY 24, 2023





High School Science Class



Students at a research university



“Science Professor”

Why are young women less likely than young men to persist toward academic careers in science and engineering?

TWO GENERAL ACCOUNTS

- “Family unfriendly” occupational **structure**
 - Tenure clock vs. “biological clock”, long work hours, etc.
 - But work–family concerns do not fully account for gendered patterns of career entry or exit
- Gendered workplace **cultures**
 - Gender bias and gendered harassment; “Cutthroat”, “old boys club” culture
 - Low quality mentoring; lack of women role models
 - Motherhood bias



THIS STUDY: MOTHERHOOD BIAS WITHOUT MOTHERHOOD

- Identify the cultural ideas and narratives about motherhood that are most prevalent in academic science and engineering contexts
- Identify the social processes by which ideas about motherhood get shared
- Show how exposure to these narratives can shape career ambitions before individuals have children
 - Extends previous research by specifying how motherhood bias can be relevant for women in the absence of pregnancy or parenthood



WHAT DID WE FIND?

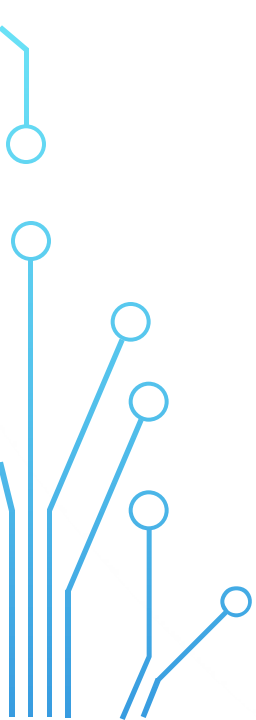
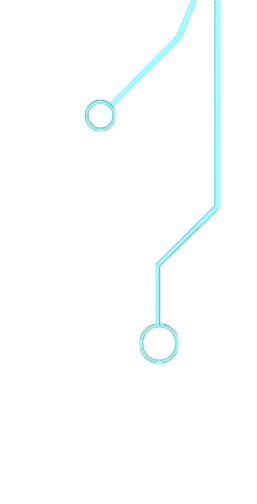
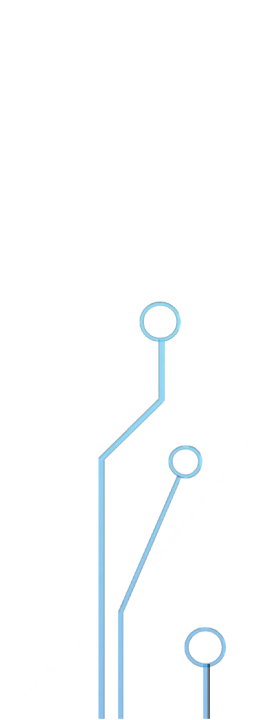
- In these contexts, motherhood is framed:
 - In opposition to professional legitimacy
 - As a subject of fear, repudiation, and public controversy.
- We describe this cultural narrative as the “specter of motherhood”
- The specter of motherhood shapes career ambitions and exacerbates gender inequality
 - Heightened negativity around the idea of motherhood 1) creates disadvantages for young women without children and also 2) discourages them from persisting in an academic career

DATA AND ANALYSIS

- In-depth interviews with 55 men and women graduate students and 2 postdocs in natural sciences and engineering, 1-3 hours in length
 - None of the participants had children
- 4 elite research universities; numerous departments and disciplines in broad areas of geology, physics, horticulture, neurosciences, astronomy, chemistry, biological sciences, and engineering (materials, aerospace, mechanical, and electrical)
- Interviews covered field and focus of study, relationships with advisors, other faculty, and peers, current and past academic experiences, collaboration, resources, social integration, career goals, family plans, and gender-related experiences.
- Supplemental data on gender composition of faculty and graduate students
 - 6-38% female faculty, 14-53% female graduate students
- Grounded theory approach; two-step process of open and theoretical coding

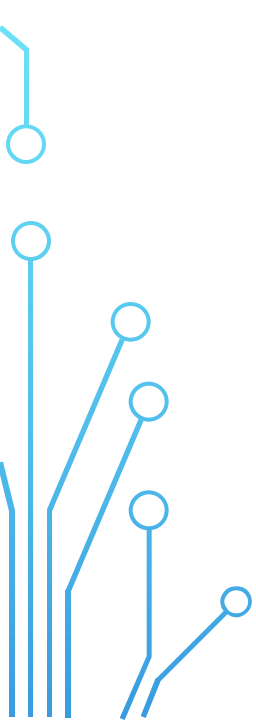


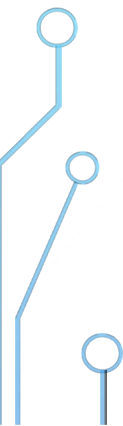
FINDINGS

- What kinds of ideas about motherhood are prevalent in this context, and how do people talk think and about it?
 - How do ideas about motherhood create disadvantages for young women?
 - Can the specter of motherhood help us explain differences between men's and women's in future career plans?
- 
- 
- 



FINDINGS

- **What kinds of ideas about motherhood are prevalent in this context, and how do people talk and feel about it?**
 - How do ideas about motherhood create disadvantages for young women?
 - Can the specter of motherhood help us explain differences between men's and women's in future career plans?
- 



CULTURAL BELIEFS ABOUT MOTHERHOOD

Dominant narratives in academic science and engineering frame motherhood, but not fatherhood, in opposition to legitimacy as a scientist or engineer.



CULTURAL BELIEFS ABOUT MOTHERHOOD

“There’s more to life than babies . . . you should have a passion for science that should be driving you more than . . . family.”
—Fumie’s male advisor, who is also a father

“I hope you don’t have a kid during grad school” because “[I don’t] know how any woman would graduate when they have a kid.”

—Erika’s male advisor, who recently trained a male student with kids

“I don’t understand why women complain. . . you just have to decide you get a family or a career in chemistry, one or the other and just accept it.”

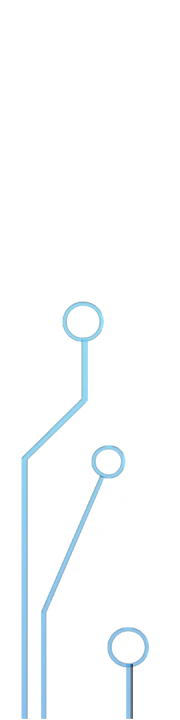
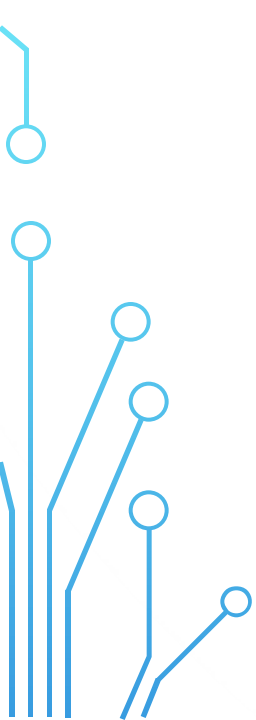
— Jean’s male professor, who is also a father



CULTURAL BELIEFS ABOUT MOTHERHOOD

Nik, in response to a question about whether his expectation to get married might affect his career:

“No. But if I was a woman, I would . . . because the general feeling is you get married and you have a baby. And if you’re going to go be an academic . . . it’s going to make people less likely to want to hire you. . . I think it sucks and it’s stupid. But it’s the way it is.”



FEARING MOTHERHOOD

Most of the women, but not men, respondents expressed a sense of fear or negative emotions when discussing the possibility of combining motherhood with an academic career.





FEARING MOTHERHOOD

“It’s still scary—you know, combining a faculty job with a family is just so much . . . It’s scary.”
—Alice

“Basically, I’m stressed and hoping for the best.”
—Emily

“Ahh [motherhood] would completely derail [my career].”
—Jun

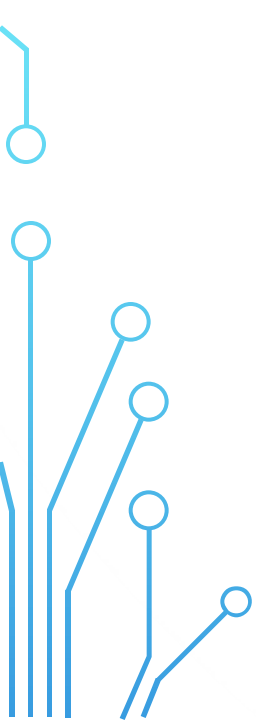
“[Being a mother in science] is definitely a fear I have, and I feel it shouldn’t be that way.”
—Christina



FEARING MOTHERHOOD

“It seems like all of the professors here . . . don’t have much of a family life. And even if they do, they have a stay at home [spouse]. . . . This is one of the biggest things I struggle with because I have no role models here.”

-Miranda



“One thing . . . the girls and I talk about at these wine nights is staying in science and having an academic position and having kids but actually having a good relationship with those kids. Because we talk about, do you know any women, a tenured female professor who has kids who has a healthy relationship with them? We’re like no.”



-Erin

REPUDIATING AND HIDING MOTHERHOOD

In their day-to-day interactions, faculty members and graduate students often refused to accept or associate themselves with notions of motherhood, and especially notions of intensive motherhood.



REPUDIATING AND HIDING MOTHERHOOD

“[one professor’s] gist was that having children is sort of narcissistic. And she’s above that. . . like, simpletons want to have kids.”
-Erin

“She’s not that fond of the idea of other people having children while they’re in grad school. So she kind of casually discourages that any time she gets a female student so I feel like that’s a topic that I would try to avoid discussing with her until it was really an issue. . . . [She thinks] if you had a baby then that would just be like the end of productivity.

-Anne, referring to her advisor



REPUDIATING AND HIDING MOTHERHOOD

People just never talk about their families. . . . I think there's this potential for not believing that people are as focused on their careers [if they discuss family]. I mean the woman I worked with at [university] had two kids, but she never talked about her family. . . . I never saw the baby and I have no idea what its name was . . . like pretty extreme. . . . I don't know how many of the other female faculty in my department have kids . . . we just don't talk about it. I feel like it's kind of taboo.

-Layla





REPUDIATING AND HIDING MOTHERHOOD

[Chris' advisor] refers to his afternoon of taking care of his kids as:

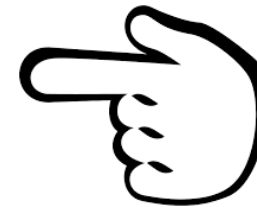
‘I’m screwed, I have to go play daddy.’ . . . I think he does it . . . as something to be cool or to give excuses why he’s not there.”

-Chris



FRAMING MOTHERHOOD AS PUBLIC AND CONTROVERSIAL

In frequent discussions, faculty and students construct motherhood as something that is both **public** and **controversial**.

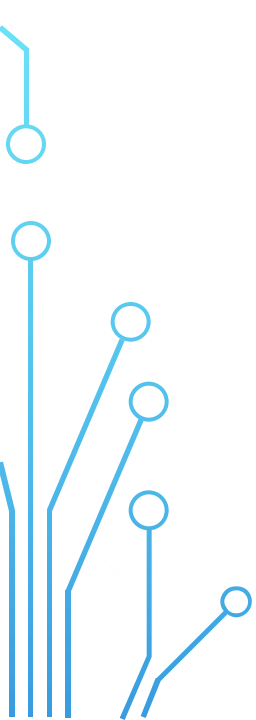




FRAMING MOTHERHOOD AS PUBLIC AND CONTROVERSIAL

“We talk a lot about women and science. . . people say that women are told that they have to focus and plan and then they try and plan out the whole work/life balance and they realize that academic jobs are ridiculous.”

-Jon



“Once or twice a semester young faculty come who are women who are doing all these very good things. . .they try to reassure you, but even if you have the reassurances you can see that they’re all saying, oh, my god, it’s so crazy.”

-Arianna





FRAMING MOTHERHOOD AS PUBLIC AND CONTROVERSIAL

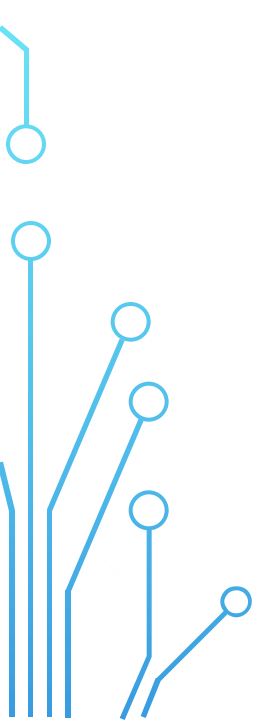
“[A faculty member] already had a toddler and then while she was getting tenure she was pregnant again, which is a little bit controversial . . . Some people were saying that that was unwise . . . Just 'cause she's giving her tenure talk and her belly is out to here.”

-Lyn





FINDINGS

- What kinds of ideas about motherhood are prevalent in this context, and how do people talk and feel about it?
 - **How do ideas about motherhood create disadvantages for young women?**
 - Can the specter of motherhood help us explain differences between men's and women's in future career plans?
- 



THE SPECTER OF MOTHERHOOD AND DISADVANTAGE

Cultural dynamics surrounding the concept of motherhood creates disadvantages for young women without children because:

1. Potential motherhood is routinely used to question their legitimacy in the profession and,
2. The more that women repudiate and hide their identity as potential mothers, the more they earn respect.





POTENTIAL MOTHERHOOD UNDERMINES LEGITIMACY IN THE PROFESSION

“Why are you getting a degree when you’re just going to leave the field and have children?”

-Question asked of Christine

“Women applicants get preferably interviewed, but then they end up dropping out anyway to have babies.”

-Comment made to Shelby by a fellow student





WOMEN EARN RESPECT BY REJECTING AND HIDING POTENTIAL MOTHERHOOD

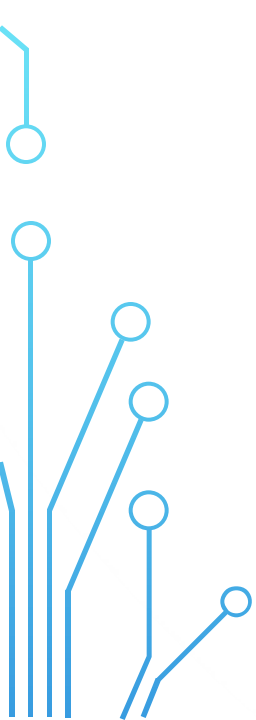
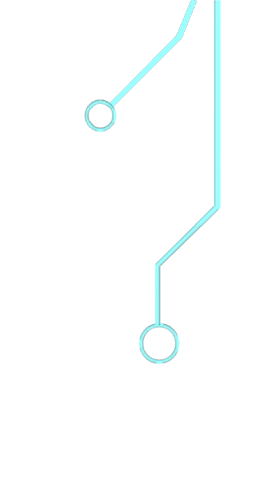
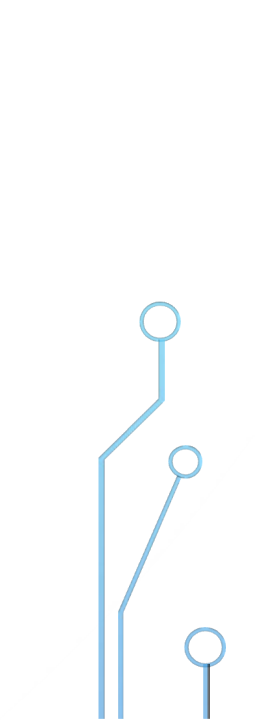
My advisor affords me some really special opportunities . . . Partially because I always put forth . . . that I was completely driven from a career perspective . . . that I was not restricted in any way by [plans for] having kids . . . I'm just not sure he affords the same caliber of opportunities to other women.

-Mina





FINDINGS

- What kinds of ideas about motherhood are prevalent in this context, and how do people talk and feel about it?
 - How do ideas about motherhood create disadvantages for young women?
 - **Can the specter of motherhood help us explain differences between men's and women's in future career plans?**
- 
- 
- 

THE SPECTER OF MOTHERHOOD AND FUTURE CAREER PLANS

TABLE 3: Reports of Changes to Career Plans at Time of Interview

	<i>Open to Academic Career at the Beginning of Graduate School</i>		<i>Plans to Leave, at the Time of Interview (of Those Who Reported That They Were Open to an Academic Career at the Beginning of Graduate School)</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Women	36	92.31	16	44.44
Men	16	88.89	3	18.75
Total	52	91.22	19	36.54

NOTE: “Open to academic career” includes individuals who had plans to stay in academic science or engineering or who were undecided about whether they would pursue academia or not.

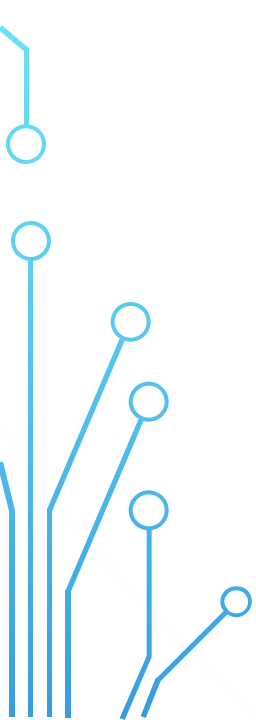


THE SPECTER OF MOTHERHOOD AS RATIONALE FOR LEAVING ACADEMIA



“No one wants to be beta [rather than an ‘alpha scientist’]. If you’re going to be a scientist, you’re supposed to be one of the . . . best. [Being a mother] is a huge struggle if you are an alpha scientist.”

-Christin



“The culture of the workplace is that it can be very hard to . . . have a family and be in science, because you are expected to put in so many hours and it seems like that’s less acceptable for women who have families...I felt like my suggestions, my ideas—contributions weren’t taken as seriously, weren’t perceived in the same way [as male peers].”

-Saanvi



TAKEAWAYS AND IMPLICATIONS

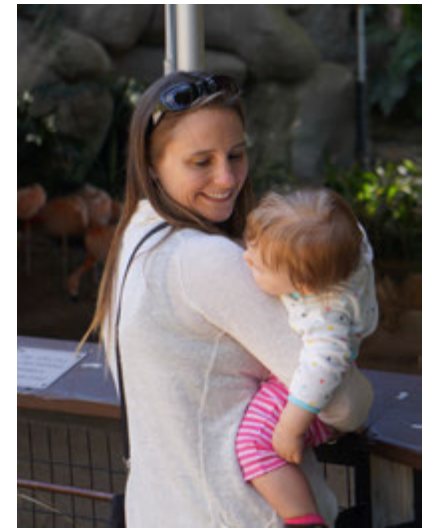
1. Ideas and practices around the concept of motherhood in academic science and engineering disproportionately disadvantage young women and shape aspirations before they know if they even want to have children or not



TAKEAWAYS AND IMPLICATIONS

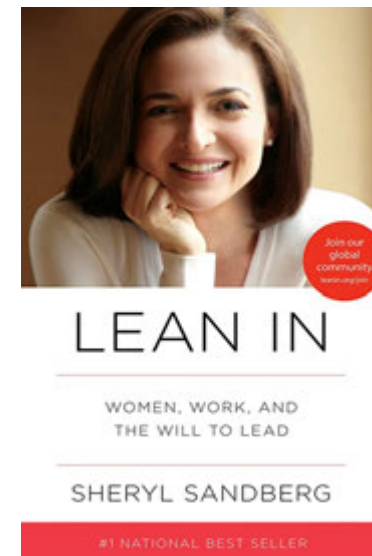
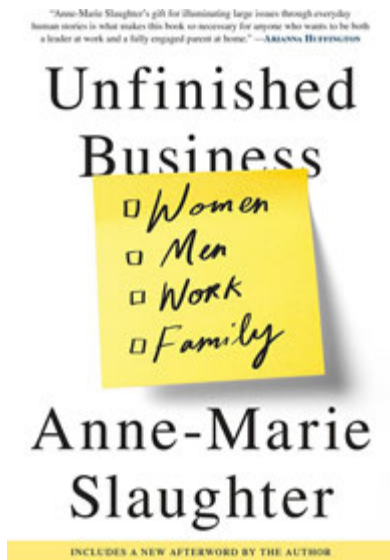
2. To increase the percentage of women faculty in STEM disciplines, it will be necessary to create interventions that target the content and tone of cultural narratives about motherhood in these workplaces

-> Programs aimed at raising awareness about the tangible advantages and rewards associated with combining motherhood with an academic career – not merely the challenges – can help create a more positive, inclusive culture



TAKEAWAYS AND IMPLICATIONS

3. Future studies should assess whether the specter of motherhood may be present in other disciplines and professions, and if so, whether it may contribute to gender inequality in those contexts



THANK YOU!



Sarah Thebaud
sthebaud@ucsb.edu



Catherine Taylor
catetaylor@ucsb.edu