A pathbreaking new study of online conversations among economists describes and quantifies a workplace culture that appears to amount to outright hostility toward women in parts of the economics profession.

Alice H. Wu, who will start her doctoral studies at Harvard next year, completed the research in an award-winning senior thesis at the University of California, Berkeley. Her paper has been making the rounds among leading economists this summer, and prompting urgent conversations.

David Card, an eminent economist at Berkeley who was Ms. Wu’s thesis adviser, told me that she had produced “a very disturbing report.”

The underrepresentation of women in top university economics departments is already well documented, but it has been difficult to evaluate claims about workplace culture because objectionable conversations rarely occur in the open. Whispered asides at the water cooler are hard to observe, much less measure.

But the intersection of two technological shifts has opened up new avenues for research. First, many “water cooler” conversations have migrated online, leaving
behind a computerized archive. In addition, machine-learning techniques have been adapted to explore patterns in large bodies of text, and as a result, it’s now possible to quantify the tenor of that kind of gossip.

This is what Ms. Wu did in her paper, “Gender Stereotyping in Academia: Evidence From Economics Job Market Rumors Forum.”

Ms. Wu mined more than a million posts from an anonymous online message board frequented by many economists. The site, commonly known as econjobrumors.com (its full name is Economics Job Market Rumors), began as a place for economists to exchange gossip about who is hiring and being hired in the profession. Over time, it evolved into a virtual water cooler frequented by economics faculty members, graduate students and others.

It now constitutes a useful, if imperfect, archive for studying what economists talk about when they talk among themselves. Because all posts are anonymous, it is impossible to know whether the authors are men or women, or how representative they are of the broader profession. Indeed, some may not even be economists. But it is clearly an active and closely followed forum, particularly among younger members of the field.

Ms. Wu set up her computer to identify whether the subject of each post is a man or a woman. The simplest version involves looking for references to “she,” “her,” “herself” or “he,” “him,” “his” or “himself.”

She then adapted machine-learning techniques to ferret out the terms most uniquely associated with posts about men and about women.

The 30 words most uniquely associated with discussions of women make for uncomfortable reading.

In order, that list is: hotter, lesbian, bb (internet speak for “baby”), sexism, tits, anal, marrying, feminazi, slut, hot, vagina, boobs, pregnant, pregnancy, cute, marry, levy, gorgeous, horny, crush, beautiful, secretary, dump, shopping, date, nonprofit, intentions, sexy, dated and prostitute.

The parallel list of words associated with discussions about men reveals no similarly singular or hostile theme. It includes words that are relevant to
economics, such as adviser, Austrian (a school of thought in economics) mathematician, pricing, textbook and Wharton (the University of Pennsylvania business school that is President Trump’s alma mater). More of the words associated with discussions about men have a positive tone, including terms like goals, greatest and Nobel. And to the extent that there is a clearly gendered theme, it is a schoolyard battle for status: The list includes words like bully, burning and fought.

In her paper, Ms. Wu says the anonymity of these online posts “eliminates any social pressure participants may feel to edit their speech” and so perhaps allowed her “to capture what people believe but would not openly say.”

In order to more systematically evaluate the underlying themes of these discussions, Ms. Wu moved beyond analyzing specific words to exploring the broad topics under discussion.

This part of her analysis reveals that discussions about men are more likely to be confined to topics like economics itself and professional advice (with terms including career, interview or placement).

Discussions of women are much more likely to involve topics related to personal information (with words like family, married or relationship), physical attributes (words like beautiful, body or fat) or gender-related terms (like gender, sexist or sexual).

In an email, David Romer, a leading macroeconomist at Berkeley, summarized the paper as depicting “a cesspool of misogyny.”

To be sure, the online forum Ms. Wu studied is unlikely to be representative of the entire economics profession, although even a vocal minority can be sufficient to create a hostile workplace for female economists.

Janet Currie, a leading empirical economist at Princeton (where Ms. Wu works as her research assistant), told me the findings resonated because they’re “systematically quantifying something most female economists already know.” The analysis “speaks volumes about attitudes that persist in dark corners of the profession,” Professor Currie said.
Gossip plays an important role in all professions, including economics, and it can often be benign. But anonymously sourced falsehoods can spread like wildfire, harming people’s careers.

Silvana Tenreyro, a professor at the London School of Economics and a former chairwoman of the European Economics Association’s women’s committee, told me that “every year a crisis or two arose” from rumors started on the forum, “with the typical target being a female student.”

Some economists say they find the discourse on econjobrumors.com to be a breath of fresh air. George Borjas, an economics professor at Harvard, wrote on his blog last summer that he found the forum “refreshing.”

Professor Borjas said: “There’s still hope for mankind when many of the posts written by a bunch of over-educated young social scientists illustrate a throwing off of the shackles of political correctness and reflect mundane concerns that more normal human beings share: prestige, sex, money, landing a job, sex, professional misconduct, gossip, sex. ...”

After receiving a copy of Ms. Wu’s paper, Mr. Borjas said: “While there is some value in that forum, there is also a great deal that is offensive and disturbing. The problem is I’m not sure exactly where to draw line.”

Professor Currie warned Ms. Wu that writing about these issues was likely to make her the focus of online harassment. Ms. Wu said she was undeterred.

If there’s an optimistic story to be told about the future of economics, Ms. Wu may well represent it. It’s unusual for a senior thesis to have this sort of impact, but she is no ordinary young economist. At only 22, she also defies the stereotype that women are reluctant mathematicians and coders, as her analysis shows her to be adept at both. Professor Card described her as “an extraordinary student.”

She is also tenacious, and when I asked Ms. Wu whether the sexism she documented had led her to reconsider pursuing a career in economics, she said that it had not. “You see those bad things happen and you want to prove yourself,” she said.

Indeed, she told me that her research suggests “that more women should be in
Correction: August 27, 2017
An article last Sunday about hostility toward women in economics misstated the current views of George Borjas, a Harvard professor, about Economics Job Market Rumors, an online forum, after he received a copy of a paper by Alice H. Wu, who will be starting doctoral studies at Harvard next year, about the forum. Mr. Borjas said, “While there is some value in that forum, there is also a great deal that is offensive and disturbing. The problem is I’m not sure exactly where to draw line.” He did not say that all his views about the forum were unchanged.
Justin Wolfers is a professor of economics and public policy at the University of Michigan. Follow him on Twitter at @justinwolfers.

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