



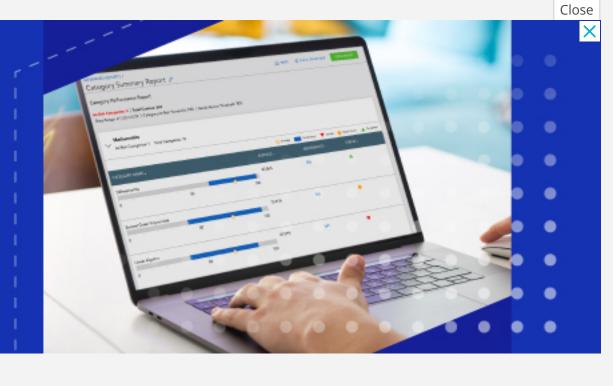
Hello, premon

My account THE Store Log out



Want to Make Informed Decisions for Your Programme?

Assessment Data Can Help.



Get Started



Academic conclusions differ wildly even on same data, study finds

New study raises questions over validity of single studies and suggests detailed tracking of researchers' decisions during analysis

July 26, 2021

David Matthews

Twitter: <u>@DavidMJourno</u>

Academics come to vastly different research conclusions even when given the same questions and dataset, raising the need for scholars to meticulously document the decisions and judgements they make during their work, a new study has found.

Twenty-nine teams of analysts tested two hypotheses on a common dataset of online academic discussions.



Source: iStock

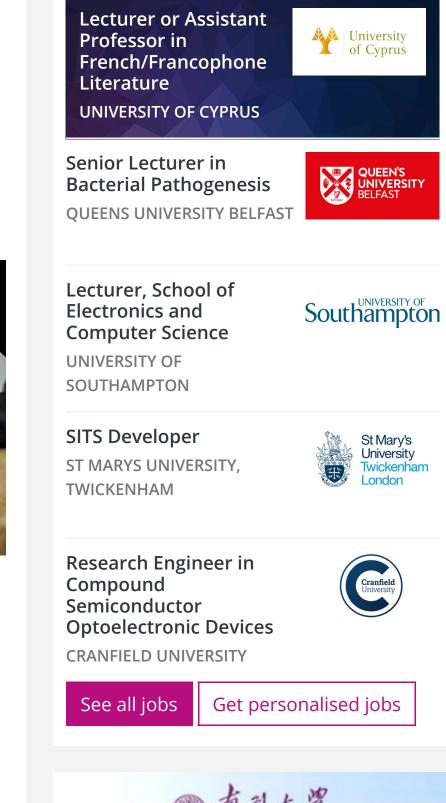
The first hypothesis was that "a woman's tendency to participate actively in a conversation correlates positively with the number of females in the discussion".

The second postulated that "higher-status participants are more verbose than are lowerstatus participants".

By tracking the decisions made by researchers using a new tool called DataExplained, the study discovered just how open to interpretation these questions were.

Some analysts defined "high status" as an academic's job rank, whereas others used citations, for example. "Verbose" could mean the number of words in an academic's comment or the number of comments they made over the course of a year. Different

FEATURED JOBS





teams also used different statistical techniques and sample sizes.



"Where you make judgements, there is noise, and more than we think," said co-author Martin Schweinsberg, assistant professor of organisational behaviour at the business school ESMT Berlin.

The result was that "researchers reported radically different analyses and dispersed empirical outcomes", according to the paper, which was published in *Organizational Behavior and Human Decision Processes*.

For the second hypothesis, testing a link between status and verbosity, 29 per cent of analysts found evidence in support, but 21 per cent concluded the exact reverse.

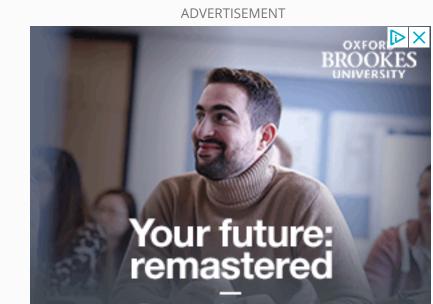
As for the idea that women speak more when other women are present, there was more consensus, with nearly two-thirds finding support for this hypothesis. Still, more than a fifth found an effect in the opposite direction.

The findings "very vividly show" just how many ways there are of tackling a seemingly simple question, said Professor Schweinsberg.

The work is the latest in a series of crowdsourced experiments in which multiple research teams independently tackle the same question with the same data. One 2018 experiment explored racial bias, looking at whether soccer referees gave more red cards to dark-skinned players.

A majority found evidence of racial bias, but the spectrum of findings was huge, with the "disturbing implication [being] that if only one team had obtained the dataset and presented their preferred analysis, the scientific conclusion drawn could have been anything from major racial disparities in red cards to equal outcomes", according to Professor Schweinsberg's paper.

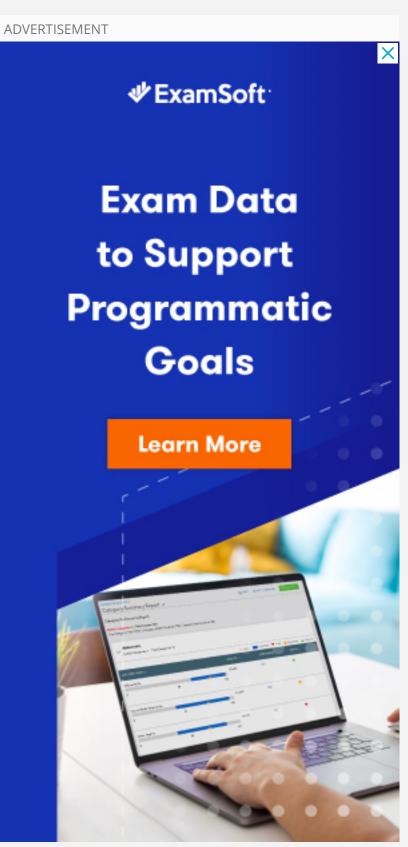
This latest experiment is different in that it closely tracked participants' decisions through DataExplained. "We provide a step-by-step chain to see how this happened," Professor Schweinsberg said. "Every few lines of code, we ask them a set of standard questions about paths taken."



Nankai University: #1 in Tianjin

Grooming global leaders for public interests and building a better world

Promoted by First Class Universities SPONSORED



Postgraduate study at Oxford Brookes

The platform, made public earlier this year, "records all executed source code and prompts analysts to comment on their code and analytical thinking steps", the study explains.

Whether this kind of systematic monitoring makes sense depends on the question asked, said Professor Schweinsberg. "If someone's dead or alive, there's not much ambiguity," he said, although his paper points to contradictory findings even in the medical field.

"If the question is big enough and has implications that are important enough, it might be sensible to [do] something like this," he suggested.

david.matthews@timeshighereducation.com

Read more about: **Research**

RELATED ARTICLES



Marine biologists clash on limits of research reproducibility

By John Ross 21 October

RELATED UNIVERSITIES

ESMT Berlin

ExploreVerify DocumentsCourses

HAVE YOUR SAY

Comment *



Ten UK universities create reproducibility-focused senior roles

By Simon Baker 13 December



New journal to publish 'negative' results and reproducibility disputes

By Jack Grove 18 September

Please make sure that your comment does not contravene our terms and conditions.

Update your username to use in public-facing parts of the site, such as commenting on articles here.

Submit comment

YOU MIGHT ALSO LIKE

US universities push for fewer hurdles on gene editing farm animals UK to review research system to uncover 'missing' elements

By David Matthews 26 July

UUK 'should sue predatory publishers over tsunami of spam'

By Jack Grove 23 July

Europe mulls scientific 'war games' to prepare for future crises

By David Matthews 22 July

SPONSORED

By Paul Basken 26 July



Rise of the killer robot

When will machines become smarter than humans? Toby Walsh, Scientia Professor of Artificial Intelligence at UNSW Sydney, considers 2062 the year that AI will match human intelligence.

Promoted by UNSW Sydney SPONSORED



How can we improve alternative learning in the Philippines?

De La Salle University

Promoted by De La Salle University SPONSORED



Preparing students for the Fourth Industrial Revolution

An Adobe roundtable at THE Live discussed how innovation can help develop new pedagogies and agile learning programmes

Promoted by Adobe SPONSORED



English Simplified Chinese (简体中文)

Subscribe

If you like what you're reading online, why not take advantage of our subscription and get unlimited access to all of *Times Higher Education*'s content?

You'll get full access to our website, print and digital editions.

Subscribe



OK