US media coverage of new science less likely to mention researchers with African and East Asian names

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When one Chinese national recently petitioned the U.S. Citizenship and Immigration Services to become a permanent resident, he thought his chances were pretty good. As an accomplished biologist, he figured that news articles in top media outlets, including The New York Times, covering his research would demonstrate his "extraordinary ability" in the sciences, as called for by the EB-1A visa.

But when the immigration officers rejected his petition, they noted that his name did not appear anywhere in the news article. News coverage of a paper he co-authored did not directly demonstrate his major contribution to the work.

As this biologist's close friend, I felt bad for him because I knew how much he had dedicated to the project. He even started the idea as one of his Ph.D. dissertation chapters. But as a scientist who studies topics related to scientific innovation, I understand the immigration officers' perspective: Research is increasingly done through teamwork, so it's hard to know individual contributions if a news article reports only the study findings.

This anecdote made me and my colleagues Misha Teplitskiy and David Jurgens curious about what affects journalists' decisions about which researchers to feature in their news stories.

There's a lot at stake for a scientist whose name is or isn't mentioned in journalistic coverage of their work. News media plays a key role in disseminating new scientific findings to the public. The coverage of a particular study brings prestige to its research team and their institutions. The depth and quality of coverage then shapes public perception of who is doing good science and in some cases, as my friend's story suggests, can affect individual careers.

Do scientists' social identities, such as ethnicity or race, play a role in this process?

This question is not straightforward to answer. On the one hand, [racial bias](#) may exist, given the profound [underrepresentation of minorities in U.S. mainstream media](#). On the other, science journalism is known for its [high standard of objective reporting](#). [We decided to investigate this question](#) in a systematic fashion using large-scale observational data.

Chinese or African names received least coverage

My colleagues and I analyzed 223,587 news stories from 2011-2019 from 288 U.S. media outlets reporting on 100,486 scientific papers sourced from Altmetric.com, a website that [monitors online posts about research papers](#). For each paper, we focused on authors with the highest chance of being mentioned: the first author, the last author, and other designated corresponding authors. We calculated how often the authors were mentioned in the news articles reporting their research.

We used an [algorithm](#) with [78% reported accuracy](#) to infer [perceived ethnicity from authors' names](#). We figured that journalists may rely on such cues in the absence of scientists' self-reported information. We considered authors with Anglo names—like John Brown or Emily Taylor—as the majority group and then compared the average mention rates across nine broad ethnic groups.

Our methodology does not distinguish Black from white names because many African Americans have Anglo names, such as Michael Jackson. This design is still meaningful because we intended to focus on perceived identity.

We found that the overall chance of a scientist being credited by name in a news story was 40%. Authors with minority ethnicity names, however,

were significantly less likely to be mentioned compared with authors with Anglo names. The disparity was most pronounced for authors with East Asian and African names; they were on average mentioned or quoted about 15% less in U.S. science media relative to those with Anglo names.

This association is consistent even after accounting for factors such as geographical location, corresponding author status, authorship position, affiliation rank, author prestige, research topics, journal impact and story length.

And it held across different types of outlets, including publishers of press releases, general interest news and those with content focused on science and technology.

Pragmatic factors and rhetorical choices

Our results don't directly imply media bias. So what's going on?

First and foremost, the underrepresentation of scientists with East Asian and African names may be due to pragmatic challenges faced by U.S.-based journalists in interviewing them. Factors like time zone differences for researchers based overseas and actual or perceived English fluency could be at play as a journalist works under deadline to produce the story.

We isolated these factors by focusing on researchers affiliated with American institutions. Among U.S.-based researchers, pragmatic difficulties should be minimized because they're in the same geographic region as the journalists and they're likely to be proficient in English, at least in writing. In addition, these scientists would presumably be equally likely to respond to journalists' interview requests, given that media attention is increasingly valued by U.S. institutions.

Even when we looked just at U.S. institutions, we found significant disparities in mentions and quotations for non-Anglo-named authors, albeit slightly reduced. In particular, East Asian- and African-named authors again experience a 4 to 5 percentage-point drop in mention rates compared with their Anglo-named counterparts. This result suggests that while pragmatic considerations can explain some disparities, they don't account for all of them.

We found that journalists were also more likely to substitute institutional affiliations for scientists with African and East Asian names—for instance, writing about "researchers from the University of Michigan." This institution substitution effect underscores a potential bias in media representation, where scholars with minority ethnicity names may be perceived as less authoritative or deserving of formal recognition.

Reflecting a globalized enterprise

Part of the depth of science news coverage depends on how thoroughly and accurately researchers are portrayed in stories, including whether scientists are mentioned by name and the extent to which their contributions are highlighted via quotes. As science becomes increasingly globalized, with English as its primary language, our study highlights the importance of equitable representation in shaping public discourse and fostering diversity in the scientific community.

While our focus was on the depth of coverage with respect to name credits, we suspect that disparities are even larger at an earlier point in science dissemination, when journalists are selecting which research papers to report. Understanding these disparities is complicated because of decades or even centuries of bias ingrained in the whole science production pipeline, including whose research gets funded, who gets to publish in top journals and who is represented in the scientific workforce itself.

Journalists are picking from a later stage of a process that has a number of inequities built in. Thus, addressing disparities in scientists' media representation is only one way to foster inclusivity and equality in science. But it's a step toward sharing innovative scientific knowledge with the public in a more equitable way.

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