Beating the system: Engaging the 'unreachable' on social media

July 13 2022

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Social media platforms are a ubiquitous communication tool, with nearly 2 billion people using Facebook every day, for example. But these platforms curate their offering, with neural networks using algorithms to

recommend content to their users, using inputs such as age, gender and location. For sciences, including astronomy, the result is a largely male audience watching, listening and reading to content from men. Now one leading woman astronomer, Dr. Becky Smethurst of the University of Oxford, is finding ways to overcome this bias, not least via her YouTube channel and its 400,000 subscribers. She presented her work at the National Astronomy Meeting at the University of Warwick on Tuesday 13 July.

TikTok, Instagram, Facebook, Twitter and YouTube are often excellent ways to reach a huge global audience and engage them with scientific topics. The challenge for science communicators is to overcome their inherent bias, where notably science is a "male" topic, and 23 of the top 25 YouTube science and technology channels are run by men. Algorithms then recommend them to other men, and so exclude other audiences such as young girls from seeing that content unless they make a particular effort to find it.

Smethurst is best known online through her YouTube channel "Dr. Becky", with over 400,000 subscribers and 28 million views to date. She uses this to overcome the constraints set by recommendation algorithms and connect with "unreachable" audiences. Part of her approach is to disguise a science video as something else, for example a review of memes or a day in the life video. People click on the video and watch it if it is a format they're familiar with, and in the process learn some science.

Subsequently this means they will be more likely to be recommended more science content. Using this approach for her channel, Smethurst notes that this approach increased engagement with 13–24 year-olds by a factor of 4, and with women by a factor of 11, above the base level from the recommendation algorithm.

Smethurst comments that she thinks of her work "as a science Trojan horse, using completely different ideas to bring people to astronomy. We desperately need to widen the pool of people coming into science, and I hope that my channel is making a real difference, so that everyone sees astronomy as something they can engage with and enjoy."

More information: Conference: nam2022.org/

Provided by Royal Astronomical Society