Self-declared introvert Paul Brack presents at a 2016 Royal Society of Chemistry conference.

ROYAL SOC. CHEM./LOUGHBOROUGH UNIV.

a fulfilling career is about finding a good fit.

That's what Harkness has begun to realize, although she didn't formally consult Holland's theory. After her PhD, she moved to the Woolcock Institute, where research groups are smaller and more tightly knit, she says. That makes it a good place for her as a young, introverted scientist, she explains.

WRITING NEW RULES

Public speaking and in-person networking are seen as crucial to success in science and so many other fields partly because our culture tends to be geared towards extroverts. At least, that's the argument in *Quiet* (Broadway, 2013), a book by US writer and lecturer Susan Cain about the power of introverts. Her central argument is that society often treats introversion as a personality flaw, but that introverts should be valued. Quiet scientists can show off their strengths in a variety of ways.

David Steen has had great success with social media. A wildlife ecologist at Auburn University in Alabama, he is a proud introvert. "I don't manage it — I embrace it," he says. Steen describes himself as the guy who sits in the back of meetings and doesn't say much; similarly to many introverts, he prefers to gather his thoughts before he speaks.

Then, he communicates through tools such as Twitter, where he has more than 12,800 followers (*Slate* magazine crowned him "best biologist on Twitter" in 2015). The medium offers him the opportunity to gain visibility and to interact with the broader scientific community at his own pace and on his terms. "Can take all day to write a tweet," said Steen, in a tweet. "Compare that to the brief window of time you have during a meeting to come up with verbal eloquence."

Cheek recommends creating a Google Scholar profile and becoming active on ResearchGate and Academia.edu. Researchers can also use LinkedIn to advertise scientific qualifications and promote publications and awards, Brack says. "You can share that in a way that you don't feel like you are ramming it in people's faces, or being overbearing."

Shy and introverted researchers can advance their careers in other ways that feel compatible with their personalities. Brack recommends joining committees, as he did recently to help organize a chemistry conference in Scotland. "I find that I need to be around someone quite a while before I'm comfortable enough to really talk to them and make that sort of a connection," he says. "Being in a committee is quite useful for that." Researchers can also follow up on meetings and seminars with e-mails to contribute to and stay involved in scientific discussions, particularly if they don't want to speak up in a group setting.

Regardless of the strategy that researchers choose, Sleeth recommends seeking out a mentor, or even a sponsor — whom she defines as someone who will advocate for and endorse young scientists — and especially shy and introverted ones. That person could be their adviser or it could be a co-author or colleague, she says. The important thing is that they help to open doors for young scientists and advertise their strengths and accomplishments. "Because then you're not bragging," she says. "Someone else is doing it on your behalf." ■

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GENDER

Co-author differences

Female faculty members at US research universities have fewer co-authors than do men over the entirety of their career, according to a study published last month (X. H. T. Zeng *et al. PLoS Biol.* **14,** e1002573; 2016). The study says that on average, women have shorter careers and lower publication rates, both of which contribute to the difference in their number of co-authors. Analysing the publication records of 3,980 faculty members across six disciplines in science, technology, engineering and mathematics, the authors found that women are more open than are men to new collaborations, a career strategy that has been found to produce higher-impact research. Yet the study also found gender differences in some disciplines. For example, female molecular biologists typically work in smaller teams than do their male counterparts. Looking specifically at the sub-field of genomics, which tends to produce work conducted by large teams, the authors also found that female scientists are under-represented as co-authors.

INCOME

UK pay gap

Men who work in the UK science and technology sector earn 24% more than women who work in the sector, according to the Annual Survey of Hours and Earnings from the UK Office for National Statistics (ONS). The survey found that for full- and part-time workers across all sectors, the gender pay gap is 18%, the lowest since the survey was launched in 1997, when the gap stood at 27.5%. The UK government will require all employers with more than 250 staff members to begin publishing their gender pay and bonus gaps from April 2017 in a bid to help women to overcome income barriers. In another effort to achieve parity, the government will coordinate with businesses to raise the number of women on executive boards to 33% by 2020. It has already extended the right to request flexible working, which could include flextime and teleworking, to all employees; introduced shared parental leave; offered support to female entrepreneurs for launching and growing a business; and increased the national living wage. Tackling the pay gap could add £150 billion ($US187 billion) to the nation's annual gross domestic product in 2025, according to estimates.