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SOCIAL MEDIA

Self-reflection, online

Some scientists might not like the persona they see when they look online. But they can do something about it.

BY VIRGINIA GEWIN

Michael Tobis has spent years tackling the controversies surrounding climate-related science on his blog 'Only In It For The Gold'. An Earth-system modeller at the University of Texas Institute for Geophysics in Austin, Tobis admits that he may now be more prominent as a blogger than as a published scientist. Although that might not appeal to all researchers, scientists have good reason to take online media seriously. "Scientists have an online persona — whether they like it or not," says Tobis.

Online media offer researchers unique ways to express their interests and goals, foster collaborations and garner invitations and opportunities. But even scientists who don't blog or tweet have an online presence that evolves apace — with or without their intervention. Auto-generated profiles from citation databases, Wikipedia entries, even photos from college can, by virtue of a simple Google search, paint an unwanted portrait of a scientist. If unedited, that portrait can cloud a researcher's work, mar scientific relations and even cost them potential opportunities.

At the very least, scientists should manage their online persona, but they should also consider the pros and cons of doing more. A higher profile can attract both acclaim and scrutiny, so scientists who wish to increase their exposure should consider which media outlets and what level of engagement would best craft an accurate reflection of themselves — and have a positive impact on their career.

CHECK YOURSELF

The Internet is markedly changing how science — and scientists — are perceived. Publications are lauded or rebuked in the Twittersphere (see *Nature* 469, 286–287; 2011), and leaked e-mails can escalate into political controversy, as in the case of 'climategate' (see *Nature* 468, 345; 2010). Scientists can also now engage with the public in new and innovative ways, as demonstrated by a researcher who was contacted about his ancestry after publishing his genome on the Internet (see *Nature* 468, 880–881; 2010). "Even if you never pay attention to the online world and don't want anything to do with it, it's bleeding into your real life," says Liz Neeley, the Seattle-based assistant director of science outreach at the Communication Partnership for Science and the Sea, an organization that helps scientists to engage with the public.

It is important, and fairly easy, for ►

► scientists to check how they are portrayed online, says Michael Habib, product manager at the abstract and citation database Scopus in Amsterdam. First: Researchers should Google themselves. Habib also suggests creating weekly alerts — automated e-mails that send Internet search results for the scientist's name and either their university or a unique phrase describing their research — through Google or Scopus. The researcher then needs to make sure the auto-generated profiles refer to them, and attempt to correct them when they do not. People with common names should take special care to verify their profiles. "There's a 'Wang problem' in China and a 'Smith problem' in the United States," says Habib.

Search-engine results can also reveal information in the public domain that the researcher doesn't want associated with his or her name, and prompt them to alter those results. "Unfortunately, you can't damp down the noise on the Internet; you can only increase the signal," says Neeley. She suggests that users fill in online profiles on Mendeley, LinkedIn, even Facebook, with the information that they do want displayed, such as their specialities, awards and affiliations. The desired details are likely to outweigh the information the researcher does not want known. That said, not all networking sites are easy to navigate, especially when it comes to delineating private and personal lives (see 'Facebook friend or colleague?').

Perhaps most important in keeping an Internet presence positive is making sure that a web page is effective and current. "If you aren't going to keep it up to date, much of the value is lost," says Habib. Prospective students or collaborators want to know about recent activities and initiatives. Publications, grants, project descriptions and upcoming speaking engagements should be routinely updated. Maintaining an additional, personal website, rather than

working with a departmental website and webmaster, may make updating faster and easier.

Those who wish to have a more visible and interactive online presence could also consider setting up a blog. Blogging may prove to be particularly useful for early-career scientists eager to find ways to distinguish themselves in an increasingly competitive job market, and those with professional interests outside their core research. It can also help to strengthen the public outreach component of grant applications, says Kurtis Williams, an astrophysicist at Texas A&M University–Commerce. Williams, known as 'Professor Astronomy' on his blog, says that his blogging helped him during his job search at a teaching institution. Recruiters used it to gain insight into his teaching style and personality. The institutions at which he was interviewed liked his blog activities. "In some cases it helped and in some cases it probably hurt — but that may have been a good thing, to find the best fit for everyone," he says.

WORTH THE EFFORT?

Although early-career scientists arguably have the most to gain by increasing their online exposure, they also have the most to lose. Williams is careful to describe his blog as 'outreach' when talking to colleagues. "If I simply said it was a blog, it may have negative connotations," he says. "Anything that doesn't move you towards publications is still considered by many a waste of time." Blogger Brian Krueger, a molecular-biology postdoc at the University of Florida in Gainesville, says that his former principal investigator viewed the energy that Krueger put into his blog — even though it was on his own time — as energy that should have been channelled into experiments. Krueger's new principal investigator supports his efforts. With his blogging platform 'LabSpaces', Krueger hopes to make science more transparent. For example, he has just begun an 'open notebook' approach, posting pictures of experiments and describing the theory behind techniques.

Some hope their blogging will enhance their career prospects. For instance, Jason Goldman

SELF HELP

Tips for successful blogs

- Have something novel to say.
- If you make a mistake, fix it quickly — and transparently.
- Be radical on one topic only, otherwise your credibility can be undermined.
- Beware of the blurt: don't write things when angry.
- Set a specific amount of time to blog.
- Have an established policy for dealing with rude or abusive comments.
- Register your blog at Scienceblogs.com or Researchblogging.org.
- To get an idea of what it is like to blog, ask to contribute a guest post to an established blog.

— a PhD student in developmental psychology at the University of Southern California in Los Angeles — says that he hopes to mention his blogging efforts in the outreach component of his tenure application when the time comes. Goldman started his blog, 'The Thoughtful Animal', to call attention to animal research that sheds light on the evolution of the mind. "Lots of people write on animals, but there wasn't a blog devoted to the science of animal cognition. I saw a hole I thought I could fill," he says.

Blogger Casey Dunn, an evolutionary biologist at Brown University in Providence, Rhode Island, is not sure whether he'll include his blog in his tenure application. He suspects it may be dangerous to approach blogging with tenure in mind, as blogs are often creative endeavours that may not have relevance to tenure. On his blog, 'Creature Cast', Dunn works with artists to explore creative ways, including the use of original animations, to explain science to the public. He says he'll leave it up to his departmental chair whether or not to mention the blog during Dunn's tenure process. Ultimately, it's difficult to know whether blogging is truly an asset to tenure applications, because committees generally don't share their deliberations.

Many scientists also use blogs as a part of their research programmes. Craig McClain, assistant director of science for the National Evolutionary Synthesis Center in Durham, North Carolina, says that he has gleaned research ideas from writing reviews of publications, found collaborators, opened up new opportunities to write for mainstream media and even received book offers. McClain started his award-winning blog 'Deep-Sea News' in 2005 as a way to reach the public. "Unless you are at a place with a great media-press office, it is hard to reach the public to explain science," he says.

McClain uses irreverent humour in his blog. In one of his posts, McClain capitalized on the public's interest in a video being shared over the Internet that depicted a life form living in a

PRIVACY SETTINGS

Facebook friend or colleague?

Social media sites such as Facebook have started to blur the lines between personal and professional spheres on the Internet. What should professors do when they receive a Facebook 'friend' request from a student?

Scientists should consider whether they prefer a 'filter' or 'firewall' approach — whether they place a barrier between their personal and professional lives or carefully craft a mix of the two. Choosing the firewall approach means not accepting friend requests from students, for example. Filtering

may be appropriate when it's awkward to completely separate the personal and professional. "I filter," says Liz Neeley, the Seattle-based assistant director of science outreach for the Communication Partnership for Science and the Sea, an organization that helps scientists to engage with the public. "I accept friend requests from students and colleagues, but I only post things I would talk about at cocktail parties. It's still me, it's still personal, but it's consistent with my professional side as well." **V.G.**

North Carolina sewer by attempting to identify it — and to therefore dispel the notion that it was “a mysterious alien creature here to suck out our brains”. The humorous style was intentional. “The public has a very narrow view of how scientists act, look and behave, and I wanted a blog that helped dispel the staid stereotype,” says McClain. It worked. His blog gets, on average, 2,000–3,000 hits a day, a lot for an independent blog site. “If people are entertained, they come back for more,” he says.

BLOGGERS BEWARE

Scientists actively cultivating a web presence should, however, tread carefully — it is difficult to remove something once it has been enmeshed in the blogosphere. “The Internet is forever. People should keep in mind that when you blog or tweet something, it becomes Google-able,” says Goldman, who has had guest blogs on *The Guardian* and *Scientific American*’s ‘Mind Matters’ blog.

And not all blogs have the same aims. Dennis Meredith, author of *Explaining Research: How to Reach Key Audiences to Advance Your Work* (Oxford University Press, 2010), says that would-be bloggers should first answer one question: will this blog be useful? The best blogs are those with a unique perspective that draws a readership the blogger deems worthy of the time and energy invested (see ‘Tips for successful blogs’).

Crafting an engaging and appropriate voice is the key to success. John Hawks, a palaeoanthropologist at the University of Wisconsin–Madison, developed rules for his blog through trial and error. After upsetting some colleagues with his cutting criticism of the science in a newly published paper, Hawks learned to rein in his comments. “I realized I had a bigger voice and needed to respectfully air comments and critiques of research,” he says.

Bloggers should realize that readers visit a site to be entertained, but also to engage in conversation, says Teresa Nielsen Hayden, the moderator for Macmillan’s online sites and former editor at the group blog known as BoingBoing. She says the key to self-sustaining conversation is having readers feel a sense of investment in the site. Bloggers might reward insightful comments by highlighting or linking back to them in subsequent posts.

Unfortunately, however, not all comments are useful, or even respectful. In

those instances, Nielsen Hayden opts to ‘disemvowel’, or remove the vowels from, rude posts. Bloggers have every right to remove unhelpful comments, she says. They should also read the comments left on their blog, says Nielsen Hayden. “You can’t throw a party and not attend it.” But that takes time — and that’s where Twitter’s swift tempo can trump a blog.

For some scientists, Twitter serves as a filter whereby respected tweeters post links to studies, articles or conference presentations that might pique scientists’ interest or even help to advance research aims. “It’s the meta-information that Twitter carries that is so important,” says Paul Filmer, programme director for the Inter-American Institute for Global Change Research, based in Arlington, Virginia, part of the National Science Foundation (NSF). Filmer administers the NSF and Voyager2 Twitter feeds. Other scientists may fail to see the point of messages that cannot be longer than Twitter’s limit of 140 characters.

“It’s easy to mock the idea of Twitter,” says Tobis, “with its silly name and teenagers reporting on what they had for lunch. But many scientists underestimate the extent to which casual background communication can help to identify trends and get quick questions answered.” He once used Twitter to find out the relaxation time constant for ocean acidification as a result of a carbon dioxide perturbation, an obscure topic not well-attuned to a simple Google search. McClain says Twitter has helped him to form “an extended journal club in a virtual space with colleagues from all over the world”.

The key is choosing wisely whom to follow. For example, leaders in a particular field often have advance notice of high-impact papers or job advertisements, access to which can be priceless. And scientists not using social media may be missing out on opportunities — without even realizing it. “Grant-making agencies, such as the NSF, are learning how to diffuse opportunities through these types of networks to reach the best and brightest,” says Filmer. An NSF tweet on 14 March, for example, alerted undergraduates to an opportunity to submit a two-minute video describing an original energy-innovation idea; the best will be aired on a special Weather Channel programme. What is more, use of Twitter and other social media can have tangible career-promoting results. “I can’t count the number of conference invitations that have come from people finding me online,” says Hawks.

It is possible to get too immersed, some note — there is no substitute for face time and real-world conversations. “The virtual world doesn’t exist in a vacuum,” says Habib. “The ‘virtual’ world and the ‘real’ world complement each other — and it’s important to tend to both.” ■

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EUROPEAN UNION

Funding revamp urged

The next European Union (EU) framework for research funding, which will start in 2014, must adopt simpler scientific and financial reporting processes, says a group of EU universities. In a report out on 14 March, the League of European Research Universities (LERU) in Leuven, Belgium, said that current rules — which require researchers to provide detailed time sheets and financial audits — should be streamlined. Researchers in countries with good accounting practices should be permitted to use those systems. Katrien Maes, LERU chief policy officer, says that the European Commission has been receptive to the recommendations.

GENDER POLICY

Equity rising at MIT

A report from the School of Science at the Massachusetts Institute of Technology (MIT) in Cambridge shows how policies have helped to increase the proportion of women from 8% to 19% of faculty members between 1995 and 2010. Rectifying salary inequities and extending the tenure clock after birth or adoption of a child have helped, says Hazel Sive, an MIT biologist. Most faculty members approved of the efforts, but some worried that women get preferential hiring treatment. Deans have pledged to address the potential for bias. The report, out on 21 March, says that because committees have fewer female than male researchers to draw from, equal-representation policies lead to women’s time being taken up disproportionately. It recommends improved mentoring for junior faculty members, access to childcare and systems to deal with gender-based harassment.

DEVELOPMENT

City seeks facility bids

New York City is looking for a partner for an applied-science facility that will hire hundreds of researchers in nanotechnology and environmental, materials and computer science in the next 10 years. The city, seeking economic benefits and a new talent pool, will donate property and funds. Some 27 universities worldwide have expressed an interest; the city will issue a formal request for proposals by September. Offers can come from single universities or teams, and potential for economic development is the main selection criterion. Mayor Michael Bloomberg says a winner will be chosen by the end of 2011.



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