STEVE TING

Students on a science film-making course in New Zealand put their skills to the test.

by PBS Digital Studios. "They can click away at any moment," she says. She suggests avoiding standard classroom topics in favour of unusual phenomena — for instance, how sand behaves like a fluid when air bubbles through it.

For more-ambitious projects, scientists can recruit a crew through social media or friends. Warring won funding from ISF to produce a film about lichen; for her six-minute documentary, she recruited film-making friends whom she'd met through graduate school or Instagram. To make a short film during her neuroscience PhD programme, Salvatico got a student project grant from the organization Paris Sciences and Letters. A friend at film school introduced her to other students, who became crew members, and Salvatico recruited dancers by e-mailing a conservatory's student office.

"To me, science film-making feels equivalent to being a field biologist."

But video is time-consuming to produce. Each Instagram video takes Warring several hours, and Cowern's YouTube videos each require about 3–7 days of work. A short documentary can span months.

And although some projects bring in income, returns are typically modest. Warring earns thousands of dollars per year from licensing her photos and videos, and related projects such as creating an exhibition for the Brooklyn Botanic Garden in New York City. Before PBS Digital Studios started supporting Physics Girl, Cowern had about 125,000 subscribers and averaged around $500 –$1,000 per month in ad revenue. The network noticed her videos and invited her to join them in 2015; she now works full-time on Physics Girl. But reaching a point where YouTube-channel income can support a creator full-time is challenging, she cautions. Cowern produced about 35 videos over 3 years before joining PBS.

Aig estimates that for staff film-makers at production companies, annual salaries are around $30,000–40,000 for entry-level positions and $75,000–80,000 for middle managers. Top independent film-makers can make hundreds of thousands of dollars per year, but such cases are atypical. Gordon says that her net income is about 60–70% of what she earned as a scientist.

And film-making is not a cushy gig. "It is as hard as research, maybe even harder, to fully pull off," Gordon says. Her 2017 expedition off the coast of Mexico hit a snag when the team had to switch research vessels, and the new boat lacked the equipment to support dives for underwater filming. Gordon assembled an in-water studio — custom-made aquariums, lighting and other components — to film animals brought on board instead. Because the species required cold water, she had to work in a walk-in fridge that blew freezing air on her while 5-metre swells buffeted the ship. "It was miserable," she says.

But researchers drawn to the medium can start small — say, with a quick video of fieldwork. "Don't overthink it," says Rob Nelson, director of Untamed Science, a non-profit in Charlotte, North Carolina, that makes science videos. "Just grab a camera." ■

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CORRECTION

The Turning Point 'Gourmet investigator' (*Nature* **551,** 403; 2017) erroneously stated that Vayu Maini Rekdal's mother was born in Kenya. In fact, she was born in Sweden.

The Careers Feature 'Super catalysts' (*Nature* **552,** 139–140; 2017) misspelled the colloquial term for Margarita Salas's trainees: they are 'Icfonians', not 'Infonians'.

MEDICAL RESEARCH

Gender perspectives

Female co-authorship increases the likelihood that a medical-research paper will address gender-related differences in disease or treatment outcomes, a study in *Nature Human Behaviour* finds (M. W. Nielsen *et al. Nature Hum. Behav.* **1,** 791–796; 2017). Neglecting these disparities — which affect health outcomes in conditions such as cardiovascular disease and osteoporosis — can have life-threatening consequences, the study adds. The authors analysed more than 1.5 million medical-research papers published between 2008 and 2015. They found that the research was most likely to address gender differences when female scientists were first and last authors. However, female researchers comprised only 40% of first authors and 27% of last authors in the papers analysed. This is troubling, the study authors say, because last authors usually lead on identifying, planning and developing research pursuits in health disciplines. Increasing numbers of medical researchers, journal editors and science agencies already acknowledge the importance of including gender analysis in research, the authors note.

EDUCATION

Tools for post-PhD life

US graduate programmes are starting to formalize expectations for the skills and competencies that PhD students should have by the end of their studies, finds a report from the US Council of Graduate Schools (CGS) in Washington DC (see go.nature.com/2aab3gg). In a 2016 survey of its 241 member institutions, the CGS found that 65% of those responding reported that all or most of their doctoral programmes had developed formal ways to assess whether students are learning specific skills that are relevant to the workplace. The US academic community has long been considering how to address the fact that holders of science PhDs typically have not learned what they need for non-academic careers (see *Nature* **543,** 277; 2017). Employers outside academia want candidates with transferable skills (see go.nature.com/2m3fkfa), including experience in data science and big data; science policy; governance, risk and compliance; and time, project and budget management. The report recommends that universities work with employers to find out what they look for in job candidates. Universities in Australia, Canada and Europe have developed similar graduate-programme assessment metrics.