Correspondence

Science community steps up to reform open access

The International Science Council (ISC) and ALLEA (All European Academies) last month drew the attention of the scientific community to the inadequacies of open access to research papers as currently implemented by publishers (see go.nature.com/3otps2d and go.nature.com/3cfp6bq). Open access to the record of science is essential for an equitable and inclusive global scientific enterprise and to the scientific self-correction that is crucial for rigour and public trust. The ISC statement sets out eight fundamental principles of publishing that need to be upheld in serving the needs of science, including mandating access to all evidential data and removing restrictive copyright.

Publishing, making ideas and data public on increasingly diverse and sophisticated platforms, accompanied by critical peer evaluation, is central to how science works. Its governance should therefore be accountable to the science community — the principal producer, validator and consumer of scientific publications.

The science community is raising its voice; funders, governments, universities and research institutions must now step up to reform open access to the scientific record according to the framework outlined in the ISC and ALLEA statements.

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See go.nature.com/3hmhcms

Ahmedabad: local data beat the heat

The Indian city of Ahmedabad, population around 6 million, aims to assess the effectiveness of its Heat Action Plan annually (see L. Keith *et al. Nature* **598**, 29–31; 2021). The results so far are encouraging. The city's coordinated research and policy efforts are testament to the power of collecting local data.

The evidence-based plan and early-warning system were launched in 2013 (K. Knowlton *et al. Int. J. Environ. Res. Public Health* **11**, 3473–3492; 2014). Its impact is evaluated, with help from partner civil-society groups, using surveys of local stakeholders. Ahmedabad's municipal corporation then updates the plan (see go.nature.com/3cihlwc) to incorporate any improvements recommended by stakeholders and releases it before the next heat season.

Heat-related premature deaths were reduced by an estimated 1,100 or more annually in 2014 and 2015 relative to the years before the plan was implemented (J. J. Hess *et al. J. Environ. Public Health* **2018**, 7973519; 2018). The reductions were greatest on the hottest days.

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Support deaf participants at virtual conferences

Virtual meetings are often considered to be a more inclusive alternative to in-person scientific conferences (see R. Joo *Nature* **598**, 257 (2021) and *Nature* **598**, 221–223; 2021). They might indeed benefit some disabled participants, such as those who use wheelchairs. But in my experience as a legally deaf researcher, too many conference organizers overlook the needs of people with impaired hearing who must rely on lip-reading, signing or subtitles for comprehension.

The problems are mainly caused by technical limitations. Monoscopic cameras are far inferior to stereoscopic sight when it comes to recognizing the small peculiarities necessary for lip-reading. Even well-thought-out camera placement — frontal, with the face centred in the image, coupled with circular, soft artificial illumination — cannot overcome this constraint.

Organizers of conferences of all kinds could bolster inclusivity by incorporating live captioning for talks and discussions. Automated captioning often does not recognize scientific terminology, so organizers need to use simultaneous transcription by scientific experts. Concurrent written online discussion using the chat functions integral to most meeting platforms, or services such as Slack or Discord, can help attendees to connect and network.

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Ditch gendered terminology for cell division

The cell-division processes of mitosis and meiosis are still described in gendered language that was established in the early 1900s. So-called sister chromatids — the two copies formed by a replicating chromosome — separate in a mother cell, which then divides into daughter cells. In our view, this outdated anthropomorphization is neither accurate nor necessary. We think it also reinforces stereotypes and non-inclusive, gender-binary thinking.

In the process of mitosis — cell division in tissues — those cells that students are taught to call mother and daughter cells have identical DNA. But human daughters share only half of their genetic material with each parent. And sister chromatids are genetically identical, yet human (non-twin) siblings differ in their genetic make-up. In the process of meiosis, which creates sperm and egg cells, four daughter cells each inherit only half the chromosomes of the mother cell. However, human parents and children have the same number of chromosomes.

Such inaccurate descriptors can confuse understanding of genetic processes. Instead, we suggest it would be more accurate to talk about originator cells dividing to give progeny cells. Sister chromatids could simply be termed paired chromatids.

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See go.nature.com/3ghgjzn