

hypothesis is true, critics contend that the methods are too subjective because researchers can set the prior odds higher or lower to produce the outcome they want, notes Jessica Utts, a statistician at the University of California, Irvine. But that flexibility may actually be an advantage in contentious areas like parapsychology, Utts says: “Everybody has a prior opinion on this.” (Utts has argued previously that the statistical evidence for ESP-like phenomena is strong.) The Bayesian approach can tell people how much they should be swayed by new data, regardless of their initial beliefs, Utts says. She’s collaborating with Bem to reanalyze his data with Bayesian statistics.

Enthusiasm for Bayesian statistics has come and gone over the years. They’ve

been used in many fields from astronomy to clinical trials (*Science*, 19 November 1999, p. 1460) but have replaced the standard statistics in only a few. Sociology, which often deals with large sets of survey data for which p-values can be especially treacherous, is one area in which Bayesian methods are widely used, says Raftery, who works in sociology. He hopes the publicity around the Bem paper will encourage researchers in other fields to consider using Bayesian methods in their work.

But no statistical method can safeguard completely against erroneous results, and none can substitute for clear thinking, cautions Krantz: “One can’t expect statistics to do the job of human inductive inference.”

—GREG MILLER

SCIENTIFIC PUBLISHING

Open Access Gains Support; Fees and Journal Quality Deter Submissions

BERLIN—Scientists love open-access papers as readers, but they are less enthusiastic about submitting their papers to open-access journals, according to a new study. The European Union–sponsored Study of Open Access Publishing (dubbed the SOAP project) surveyed 50,000 researchers last year for their opinions on open-access journals, which make all their papers freely available online and usually charge authors a fee for each published paper.

The study found overwhelming support for the concept, with 89% of respondents saying that open access is beneficial to their field. But that support didn’t always translate into action: Although 53% of respondents said they had published at least one open-access article, overall only about 10% of papers are published in open-access journals. “We cannot ignore this gap anymore,” says Salvatore Mele, project leader for open access at CERN near Geneva, Switzerland, and a member of the study team.

The study, which released its results last week at a symposium here, found two main reasons researchers don’t submit to open-access journals: Almost 40% said that a lack of funding for publication fees was a deterrent, and 30% cited a lack of high-quality open-access journals in their field. For the majority of scientists, “journal quality and impact factor is most important—not [open access]—when deciding where to submit,” says Peter Strickland of the International Union of Crystallography, which publishes the fully open-access *Structure Reports*

Online as well as seven subscription-based journals.

The study also found that open-access journals are proliferating, especially among small publishers: One-third of open-access papers were published by the more than 1600 open-access publishers that publish only a single journal. Several hundred new open-access journals are being launched each year, noted Caroline Sutton of the Open Access Scholarly Publishers Association in The Hague. “It’s really difficult to launch a new subscription-based journal, but the open-access fee model is scalable,” she says. “As you receive more submissions and publish more papers, you get more fees.”

Large publishers are also catching on. The study identified 14 that publish either more than 50 journals or more than 1000 articles per year, accounting for roughly one-third of open-access publications. Several other large scientific publishers have announced new open-access journals in the past 6 months, notes Mark Patterson, director of publishing at the Public Library of Science (PLOS). All are modeled on *PLOS ONE*, the publisher’s biggest journal (and main revenue generator). The journal publishes papers after peer review in which experts check for scientific rigor but not overall importance.

Mele says the entire data set and the team’s analysis, as well as videos of the symposium, will be available this week via the SOAP project Web site (<http://project-soap.eu/>).

—GRETCHEN VOGEL

ScienceInsider

From the Science Policy Blog



Achilleas Mitsos has resigned as head of research and technology within the Greek education ministry. Mitsos, a former E.U. research chief, had hoped to set up a peer-reviewed grant system. But a year after Mitsos took the post, no money has been awarded and only one call for applications has been issued. Mitsos said in his resignation letter that disagreements with the deputy minister of education, Yiannis Panaretos, prevented him from doing his job. <http://scim.ag/mitsos>

The World Health Organization (WHO) has released a plan to tackle the growing problem of **resistance to the key malaria drug artemisinin**. The multipronged strategy, which would cost \$175 million, involves confronting the spread of resistant pathogens in Cambodia, where it has first appeared, with better monitoring and malaria control. Scientific tasks include finding molecular markers for resistance, speeding up the development of alternative drugs, and studying how mass screening and treatment might eliminate malaria in places where resistance is found. http://scim.ag/malaria_resist

A meeting last week of more than 200 climate scientists in Tsukuba, Japan, marked the official start of the 2013 Working Group II report for the **Intergovernmental Panel on Climate Change (IPCC)**. Updated procedures for the panel, which focuses on climate impacts and is one of three components in the overall report, include new guidance for authors grappling with contentious issues such as using non–peer-reviewed sources and describing areas of uncertainty. http://scim.ag/ipcc_tsukuba

Two students were murdered earlier this month near a manatee study along the coast of Colombia. “My idea about the [security situation] and how that has improved conditions for field biology just changed radically,” said Carlos Daniel Cadena, a prominent ornithologist at the University of the Andes in Bogotá, which both victims attended. One of the students was scheduled to begin a 6-month research project on manatees. <http://scim.ag/colombia-deaths>

For more science policy news, visit <http://news.sciencemag.org/scienceinsider>.

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