TURNING POINT
Johan Bollen

Johan Bollen caused a stir in January when he and his colleagues proposed an alternative science-funding model (J. Bollen et al. EMBO Rep. http://doi.org/f2pz34; 2014). Bollen, an informatician at Indiana University Bloomington, explains how the proposal developed, and how the idea of resource allocation became part of his research agenda.

What got you thinking about funding models?
A lot of people are unhappy with the current system. When you submit a proposal, you are like a contractor, but science does not work like that — it works best by generating ideas and gifting them to society and other scientists.

How did your idea take shape?
Some friends and colleagues had a Christmas party in 2012, and as soon as alcohol started to flow, so did commiseration. Guests talked about reviewer comments on proposals, marvelling that one person can have that much power. The disgruntlement is a by-product of how the review system works. I started by saying, "Why not just take all that money and distribute it evenly?". The goal was to see if we could, with as little administration as possible, distribute funding so that researchers have the freedom to explore the topics that they think matter most.

Briefly, what is your plan for science funding?
All scientists would receive a base amount — for example, US$100,000, which roughly corresponds to the US National Science Foundation's 2010 budget divided by the number of senior researchers funded that year. Each scientist would be required to distribute a predetermined percentage of their funding to the researchers whom they believed would make best use of the money.

How did the proposal evolve?
A big concern emerged: some scientists who do not deserve funding will get it. But, we thought, what if every scientist had to distribute some of their funding to others on the basis of their track records? The more we thought about it, the more viable it seemed.

What kind of feedback have you had?
The feedback has been mostly positive, but the proposal is generally regarded as too crazy to work. The main critique is that this is a form of collusion: giving money to a colleague sounds like nepotism. But it would be easy to have conflict-of-interest rules. We could, for example, use funding databases to see if donors were former advisers or at the same institution as recipients. The problem is that the system has no top-down control, which doesn't work for some people.

How do you respond to critics who say that your proposal is anti-peer review?
Peer review is a valuable tool, but funding panels can be costly and have wildly different outcomes. Reviewing one-project proposals is not the best way to allocate funding — I think we should fund people rather than projects.

Your research models public mood using social media. Are you modelling the response to your proposal?
Not scientifically. I have been on Twitter, mostly to answer questions. It sounds callous, but I do not care if people like the proposal. I want them to reconsider their allegiance to the existing system.

Will you continue to push the concept?
Absolutely. My colleagues and I are talking to funders to see if we can run some experiments, including ones with actual funding being distributed and ones involving social choice and funding in selected communities.

How has the idea of innovative resource allocation bled into your research?
I have become enamoured with the idea that society could allocate resources by crowdsourcing rather than assembling panels of experts. I plan to focus more on how resource-allocation algorithms could be applied to societal problems such as poverty alleviation. The decisions of the few may not always be better than the decisions of the many. ∎

INTERVIEW BY VIRGINIA GEWIN

UK science workforce

Ethnic-minority workers are most highly represented in the most senior and junior positions of the UK scientific workforce, says a 7 March report. *A Picture of the UK Scientific Workforce*, from the Royal Society in London, examines gender, ethnicity and other factors, and is the most comprehensive analysis of its type, says Julia Higgins, chair of the report's steering group. The report finds that black researchers are slightly under-represented in the most senior roles, whereas scientists from China are statistically over-represented in those positions. It also finds that although women comprise just over half of the scientific workforce, they account for less than one-quarter of those in the highest-level positions.

Skewed rankings

Female full professors are less likely than men to co-author papers with assistant professors of the same sex, finds a study (J. F. Benenson *et al. Curr. Biol.* **24,** R190–R191; 2014). Study authors calculated the expected co-author combinations for papers published from 2008 to 2011 by psychologists at 50 US and Canadian universities. They found 14 pairings of senior and junior women, compared with the expected 29, and 76 pairings of senior and junior men, compared with the expected 61. Women's tendency to pair with another woman of the same rank impedes their academic mobility, says co-author Joyce Benenson of Emmanuel College in Boston, Massachusetts.

Costs of childcare

Career interruptions for childcare cost female physicians earning power, says a German study (A. Evers and M. Sieverding *Psychol. Women Q.* **38,** 93–106; 2014). The authors surveyed medical students in 1989, asking in part about attitudes towards medical school. A poll of the same cohort 15 years later revealed that earnings correlate with career absences, not with the respondents' earlier outlook. Some 87% of the 47 female respondents reported absences of an average of 1.8 years, mostly for childcare; just under two-thirds of the 52 men reported absences of an average of 7.2 months, mainly for non-employment. Roughly 90% of men were earning more than €36,000 (US$49,440) a year, compared with 55% of women.