

With this new system, scientists never have to write a grant application again

Almost every scientist agrees: Applying for research funding is a drag. Writing a good proposal can take months, and the chances of getting funded are often slim. Funding agencies, meanwhile, spend more and more time and money reviewing growing stacks of applications.

That's why two researchers are proposing a radically different system that would do away with applications and reviews; instead scientists would just give each other money. "Self-organized fund allocation" (SOFA), as it's called, was developed by computer scientist Johan Bollen at Indiana University in Bloomington. When he first published about the idea in 2014, [many people were skeptical](#). But interest appears to be growing, and thanks to the work of an enthusiastic advocate, ecologist Marten Scheffer of Wageningen University in the Netherlands, the Dutch parliament adopted a motion last year asking the country's main funding agency, the Netherlands Organization for Scientific Research (NWO), to set up a SOFA pilot project.

Competition for funding has become too intense, especially for young scientists, Scheffer and Bollen say, and the current peer-review system is inefficient. It's also unfair, they argue, because a few scientists get lots of grants—Scheffer is one of them—whereas many others get few or nothing. But when Scheffer explained his idea at an NWO workshop about "application pressure" here last week, the agency didn't appear sold yet.

The duo says the numbers speak for themselves. At the U.S. National Institutes of Health, the overall success rate for grants applications has dropped from 30% in 2003 to 19.1% in 2016. In the latest round of European Research Council Starting Grants, the rate was a paltry 11.3%. At NWO, the success rate for grants for young scientists has dropped to 14%. A 2013 study estimated that writing and reviewing applications for €40 million worth of these grants costs €9.5 million annually.

In Bollen's system, scientists no longer have to apply; instead, they all receive an equal share of the funding budget annually—some €30,000 in the Netherlands, and \$100,000 in the United States—but they have to donate a fixed percentage to other scientists whose work they respect and find important. "Our system is not based on committees' judgments, but on the wisdom of the crowd," Scheffer told the meeting.

Bollen and his colleagues have tested their idea in computer simulations. If scientists allocated 50% of their money to colleagues they cite in their papers, research funds would roughly be distributed the way funding agencies currently do, [they showed in a paper last year](#)—but at much lower overhead costs.

Not everybody is convinced. At the meeting, some worried that scientists might give money mostly to their friends. Scheffer said an algorithm would prevent that, for

instance by banning donations to people you have published with, but he acknowledged it would be a challenge in small research communities. SOFA might also result in a mismatch between what scientists need and what their colleagues donate, and a competition for donations could lead to a time-consuming and costly circus, comparable to an election campaign.

The way to find out, Scheffer and Bollen say, is a real-world test, and they say the Netherlands, a small country with short lines of communication between scientists, politicians, and funding agencies, is a good place for one. Last year, Scheffer convinced Eppo Bruins, a member of the Dutch House of Representatives, to submit a motion calling for a pilot program at NWO, which the parliament approved in June 2016. The money could be taken from a €150 million NWO pot currently distributed among consortia of innovative Dutch scientists, Bruins suggested.

But NWO is not obliged to carry out the proposal, and so far has shown little enthusiasm. "NWO is willing to explore together with scientists and other stakeholders how to improve allocation rates, but is still considering practicality and support" for SOFA, a spokesperson tells *Scienceline*. At last week's meeting, NWO President Stan Gielen said the funds Bruins has in mind are distributed by NWO but are earmarked by the Ministry of Education, Culture and Science, which would have to give permission. Gielen added that any experiment should not come at the expense of existing funding.

Scheffer says he's not giving up. It's not a risky experiment, he says: "The money would not be wasted, after all, but just be given to other scientists." But he says he understands why NWO is not thrilled: If applied universally, the novel system would make the agency redundant. Perhaps it's telling, Scheffer says, that he has not been invited to an **international conference on applications and peer review that NWO is organizing in June.**

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