

MOVERS

David Wallace, director, Isaac Newton Institute for Mathematical Sciences, University of Cambridge



1994-current: Vice-chancellor, Loughborough University, Leicestershire, UK

1979-93: Tait Professor of Mathematical Physics, University of Edinburgh, UK

1972-79: Lecturer and reader, Department of Physics, University of Southampton, UK

1970-72: Harkness Fellow, Physics Department, Princeton University, New Jersey

David Wallace was nine or ten years old when his headmaster set the school class a simple problem, outside the usual curriculum. Wallace solved it, triggering a lifelong fascination with mathematics and science. His parents supported his experiments — even tolerating the hole burnt in his bedroom floor by some caustic soda he had secretly bought for his chemistry set.

Since then, he has dedicated his life to mathematics and science. That dedication recently culminated in his appointment as the next director of the Isaac Newton Institute for Mathematical Sciences in Cambridge. The institute supports programmes in theoretical, basic and applied mathematics.

Wallace is particularly looking forward to applying mathematics to environmental areas, for instance, by building models to examine factors that influence climate change. As well as the director's post at the institute, he will also serve as the N. M. Rothschild & Sons Professor of Mathematical Sciences.

After 12 years as an administrator, Wallace is very keen to return to the experimental world. "I always want to try something where I might fail," he says. "This is one of the things that make this position so challenging and rewarding."

His mentors, he says, always encouraged him to take on tough challenges. It's an admonition he took into his personal life as well as his career — he has completed four marathon runs. He understands the role of mentor very well: his PhD supervisor at the University of Edinburgh, he says, "taught us new techniques and inspired me in many ways".

He has also had to grapple with sometimes competing interests, serving on a number of corporate boards while also acting as university administrator — a situation he dealt with as if solving another mathematical problem. "Seeing how everything might fit together in a bigger picture can be very useful to resolve the apparently conflicting information one sometimes faces," he says.

He believes that instinct can sometimes be as important as logic when thinking of decisions and foresight. "You can always analyse data but in a lot of things you have to rely on instinct," he says.

The best advice he can give to young scientists is nevertheless very straightforward. "Do what you want to do," he says, "and take risks whenever you think it is right."

SCIENTISTS & SOCIETIES

Building a student network

In 2002, a dispute broke out between a group of students and Germany's Max Planck Society. It centred on disparities in the distribution of stipends and employment contracts for foreign and German students, and it had an unexpected spin-off. As a result of the argument, students at various Max Planck Institutes realized that they could use a more effective means of communicating with each other. This led to the formation of the Max Planck PhDnet, an online forum and networking site connecting more than 3,900 PhD students across the 78 institutes. Its goal is to foster communication on issues affecting students' professional lives.

PhDnet has evolved so that now PhD students from each institute elect a representative. These communicate with each other throughout the year on a web forum and also meet annually to discuss specific issues. The meetings are endorsed by the president of the Max Planck Society, who participates in some of them. This gives the students a chance to put questions directly to him. PhD representatives get an added incentive for volunteering, in that they learn about event management, networking and fund-raising.

PhDnet now promotes PhD advisory

committees, provides a comprehensive questionnaire to evaluate the quality of students' research experiences, and encourages students to make their voices heard in political decisions at the institutes. It has also begun to offer three types of seminars at various sites across Germany, exploring interdisciplinary subjects, career advice and 'soft' skills such as communication.

Because the Max Planck Institutes span life-science, chemical, physical, technological and humanities research, there is both the opportunity for broad interdisciplinary work and the challenge to communicate across these diverse areas. In the career seminars, PhDnet invites established researchers in various fields from academia and industry to talk about career paths. The soft-skills seminars stress effective scientific communication — specialists, give tips on effective oral and poster presentation and scientific writing.

PhDnet has grown quickly, but there are still a lot more things it can do. In a microbiologist's terms, it is only in its early log phase.

Benno Quade is spokesperson for PhDnet. Ajaybabu Pobbati is a team leader for the meetings work group.

▶ www.phdnet.mpg.de

GRADUATE JOURNAL

Master of my fate

In September, I will complete my graduate coursework and gain a Masters of Science degree. The next stage — DPhil, the Oxonian PhD — is now in sight.

But the vision of my scientific future is not becoming much clearer. A feeling of déjà vu dominated the past few months. It reminded me of the uncertainties I underwent when first considering what to do after medical training and, more recently, deciding to receive more academic training after earning an MSc. Enrolling in research training in a lab and subject I don't know very well feels like a recurring theme in my life — making long-term commitments based on little information. So far, I think I've made good decisions, and remain on track, but I still harbour apprehension and doubts about the next move. Many factors come into play, such as thoughts about how promising the project is and if I will get along with the team. My analytical ego has no reservations about the latter point and the first one is unforeseeable. So I go for it. With slight discomfort.

A second issue should have cheered me up but instead helped me procrastinate; I received two offers. So, on top of my uncertainty about continuing with a PhD came the question of whom to work with. I felt bad about turning one bid down, especially because I liked the lab and the team as much as the one I accepted.

Now it's time to sit through this period of doubtfulness, and hope I will find out that I made the right decision again.

Tobias Langenhan is a first-year graduate student in neuroscience at the University of Oxford, UK.