

MOVERS

Geoffrey West, president, Santa Fe Institute, Santa Fe, New Mexico



2003–present: Distinguished professor, Santa Fe Institute, Santa Fe, New Mexico

1999–present: Professor of biology, University of New Mexico, Albuquerque, New Mexico

1982–present: High-energy physicist, Los Alamos National Laboratory, Los Alamos, New Mexico

Geoffrey West is fluent in the language of the Universe. He has harnessed the power of mathematics to tackle some of biology's most fundamental questions, which all too often go unnoticed by an academic community moving towards applied research in order to secure funding.

Realizing, as a young boy sitting on the white cliffs of his native England, that he could easily determine the distance to the horizon using passing ships shaped his future study of physics. After graduating from the University of Cambridge, he found inspiration in a PhD assistantship at Stanford University in California. At Stanford, it was the collegial interactions with fellow classmates, rather than his instructors, that motivated him to continue in science. His time in California also paved the way for this theoretical physicist to cross disciplinary boundaries.

In his spare time, West began to contemplate the biological process of ageing and to work on a way of quantifying what keeps organisms alive. His growing interest in biology led him to the friendly, open atmosphere of New Mexico's Los Alamos National Laboratory, which had a history of interdisciplinary work. In 1992, the proposed Superconducting Super Collider project he'd been involved with for years was scrapped, prompting him to do more than just dabble in biology. And an opportune encounter with a biologist helped him make that transition.

Mike Simmons, then vice-president of the Santa Fe Institute (SFI), a private, independent institute in New Mexico, introduced West to Jim Brown, an ecologist at the University of New Mexico who was looking to collaborate with a physicist. "I was speaking Latin and he was speaking Greek," West says of their meetings. It took a year of work to get past the jargon, reach across their scientific disciplines and publish a seminal paper in *Nature* detailing some of the laws that dictate an organism's metabolic rate.

"People don't realize you need to create an atmosphere in which researchers are willing to ask elementary questions without feeling defensive or vulnerable," West says.

Last year, West moved to the SFI. As its newly elected president, he will now be able to foster the environment he hoped to find as a college student — one that emphasizes big-picture science. "One of the great ironies is that despite talk of interdisciplinary research, it remains to be realized at the grassroots level," says West.

He hopes the SFI will continue to fill that void, providing a haven for researchers to explore without boundaries. ■

Virginia Gewin

RECRUITERS & ACADEMIA

Getting out of a rut

In my travels to academic institutions and companies around the world, I frequently meet scientists at varying stages of their careers who feel trapped and uninterested in their jobs. Some in their mid-50s feel they can't escape the 'publish-or-perish' rat race, and younger ones see no flexibility in the career path they have chosen.

The good news is that they can build tremendous flexibility and excitement into their careers by taking on a wider range of professional activities, such as editorial work, consulting and administration. Measured participation in such activities, even just on an extracurricular level, will not get in the way of doing good research, and can open up alternative career paths.

Thanks to this multitasking strategy, I have been recruited to a part-time position as chief scientific officer of iCo Therapeutics, a biotechnology company based in Vancouver, Canada. I have also been considered for jobs as editor-in-chief of journals and dean of arts and sciences at a major university. Many of my peers have had similar opportunities.

Indeed, many scientists have successfully made the transition into an allied field and are very happy as a consequence. Some have turned part-time work as industrial consultants or members of scientific advisory

boards into senior-level positions at biotechnology companies. Postdoctoral fellows can join these companies and work their way up.

Work as a reviewer can lead to memberships on editorial boards, and even to full-time appointments as editor-in-chief of major journals. Younger scientists can work at law firms, often receiving a fully financed legal education while training to be a patent lawyer.

Major service on university committees can lead to jobs as high-level university administrators, or at a more junior level to work at consultancies.

And scientists at all levels often become primary- or secondary-school teachers. Some join fast-track teaching programmes to qualify for posts at state schools, and others work at leading independent or private schools. This transition often begins by volunteering to lecture at such schools.

For every disenchanted scientist I have met in academia or industry, there are many others who have shown that, as long as scientists develop some skills in allied fields, there is truly no need to feel stuck in a rut. ■

Santa Jeremy Ono is a professor of biomedical science and associate dean at University College London.

GRADUATE JOURNAL

A time to reconnect

Suddenly, everything is over. A year of intensive study, the final examination, followed by celebrations, leafing through a year's worth of papers, cramming my life into eight boxes, and then going home to Germany for a month of relaxation before I begin my PhD.

It was a tough year, not just for me, but also for my family and, most of all, my girlfriend who lives in Germany. She and I tried to simulate a normal life as we managed to see each other at least every second weekend. Between these visits were many long-distance phone calls and long working hours on both sides. Nevertheless, our relationship remains intact and strong, and I'm very grateful for her support. These holidays are my girlfriend's and family's as much as they are mine.

Being at home has made me realize how important it is for graduate students to maintain a personal life outside the laboratory and to take time off to be with loved ones. We cannot forget that the people who love us guarantee us a home when we return from the lab, be it for a weekend or when our degree work is finally finished. And they are as affected by our career decisions as we are ourselves. Time is precious, and spending it with my family has been just as valuable to me as spending it at the lab bench. ■

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