

MOVERS

France Córdoba, president, Purdue University, West Lafayette, Indiana



2002-07: Chancellor, University of California, Riverside

1996-2002: Vice-chancellor for research and professor of physics, University of California, Santa Barbara

1993-96: Chief scientist, NASA, Washington DC

The career of France Córdoba, the new president of Purdue University in West Lafayette, Indiana, was hardly the product of planning. Lacking scientific mentors, she majored in English at Stanford. She pursued anthropology, journalism and education, but wasn't satisfied with any of them.

A television special on neutron stars, after Neil Armstrong's historic visit to the Moon, changed her life by sparking an interest in astrophysics. She contacted the scientists at the Massachusetts Institute of Technology who were featured in the programme and got a summer job in their lab — which led to a graduate studentship in astrophysics at the California Institute of Technology, and on to a PhD.

Córdoba was attracted to high-energy astrophysics because the field was ripe for discovery. "I was in the vanguard of a small group of students proposing to do multi-wavelength observations to observe cosmic bodies of interest," she says. She then made the seminal discovery — soft X-ray pulsations from a class of close binary stars — that garnered her multiple job offers.

A permanent job at Los Alamos National Laboratory gave her ten years to start her career without having to move on to the next postdoc. Eager to be around students once more, she then accepted an offer to head Pennsylvania State University's department of astronomy and astrophysics. NASA administrator Dan Goldin would eventually select her to be the agency's first female chief scientist.

Goldin not only wanted to diversify the predominantly male establishment; he also wanted Córdoba to refocus the scientific agenda on fundamental questions, including the origin and evolution of the cosmos and a search for Earth-like planets. "As a result, we had a scientific explosion at NASA — particularly in astrophysics," says Goldin. He also asked Córdoba to make links among physics, chemistry and biology researchers at NASA, develop relationships with other agencies and steer NASA's international leadership in astrophysics. She delivered on every level, he says.

She has since overseen two University of California research agendas: as vice-chancellor at Santa Barbara and chancellor at Riverside. At Riverside she did groundwork for California's first new medical school in 45 years.

"I like complexity and thrive on stress — it keeps me energized," says Córdoba. She is now planning to extend Purdue's mission to include energy security, agricultural sustainability and information technology. "She's going to take it to the next level," says Goldin. ■

Virginia Gewin

NETWORKS & SUPPORT

Engineering a place for women

In Britain, only 15–20% of women with a degree in science, engineering and technology (SET) fields are working in a SET occupation. Some 50,000 have left the sector. And everyday workplace culture may be one major barrier to their recruitment, retention and advancement.

Representatives of universities, professional institutions and industry gathered at a seminar at the Institute of Physics (IOP) in London in late June to learn what 'workplace culture' means, how to assess it and how to change it. The seminar was organized by the UK Resource Centre for Women in Science, Engineering and Technology (UKRC), which was set up in 2004 with government funding to assist employers and individual women to tackle the problems.

Wendy Faulkner, of the Science Studies Unit at the University of Edinburgh, told delegates that the ways in which different individuals come to belong to the group may affect whether women are accepted. She suggested that workplace culture included styles of interacting, topics of conversation, humour and social circles. Crucially, said Faulkner, facets of masculine culture (such as football discussions and macho attitudes) mesh well with the culture of SET workplaces. Anecdotes from women

she has interviewed suggested that they found it hard to fit in, whether because they couldn't take part in a joke or because they weren't seen as 'real' engineers. In some cases, male colleagues made inappropriate remarks. One woman said she wanted to report a culprit, but felt she had neither the confidence nor the support. Delegates at the meeting mutely mouthed recognition.

Forty companies have made changes after using the UKRC's culture analysis tool of detailed questionnaires for managers and staff. Both the IOP and the Royal Society of Chemistry have used 'site visits' to assess cultures in university departments. This resulted in the IOP's formulation of a code of practice for addressing gender issues, including "appointment, promotion and selection processes and procedures that encourage men and women to apply for academic posts at all levels". This code could be adapted by organizations in other disciplines, says Peter Main, director of education and training at the IOP.

Studying and assessing workplace cultures is a difficult task. But if it helps to retain more women in SET fields, it's worthwhile nonetheless. ■

Roger Livesey is a public-relations officer at UKRC.

POSTDOC JOURNAL

(Almost) in press

I am currently writing the first manuscript from my postdoctoral research. We're very close to submitting to a journal, and I must say that I'm looking forward to getting it out the door. The latest edits haven't been about the scientific content of the manuscript so much as reshaping the story we are telling, arranging the data and sculpting the text to make it more compelling.

Preparing a manuscript for publication requires more stamina than I'd expected. My doctoral adviser and I are still trying to publish the last part of my dissertation research: research that was completed months ago. Despite its frustrations, the peer-review process seems to have worked well, as two rejections have made that manuscript much stronger. Those rejections were based not on the science, but on our inability to tell the story clearly. We're hoping that simplified explanations and a slight change of focus will do the trick.

Good science, I think, is as much about lucid communication as about proper pipette technique. In an ideal world, there would be other, simpler ways to disseminate one's findings than laboriously writing journal articles. Maybe one day, self-assembling data will be downloaded directly into interested scientists' brains, bypassing the need to construct an elaborate tale on paper. Until that fiction becomes reality, I'd better keep working on my storytelling skills. ■

Peter Jordan is a visiting fellow at the National Institute of Diabetes and Digestive and Kidney Diseases in Bethesda, Maryland.