Technology, ecology and anthropology underpin Maffey's work on the management of deer in Scotland.

COLUMN
Freedom to range

Gina Maffey explains how she learned to overcome the hurdles of an interdisciplinary PhD.

My colleague in computer science handed me a coffee before I headed to a meeting on the teaching of anthropology and, later, to lunch with a few ecologists. It was a typical day. From the beginning of my five-year PhD programme in environmental science, my academic life has taken on a kaleidoscopic appearance. As I moved between meetings grounded in different disciplines, I was left feeling as though I only ever sat on the periphery of each individual department. I lacked a scholarly home, and felt like a visitor within my own university.

Initially, bouncing between three disciplines had been fascinating: there were new concepts to grasp, alternative perspectives to consider and fresh ideas to apply to familiar research problems. Before long, however, the technical jargon used by the computer scientists would leave me baffled. In anthropology, my contributions to discussions felt shallow as I struggled to find the time to read texts outside the syllabus — texts that my peers all seemed to know. Even my original academic home, ecology, had begun to seem foreign: I was no longer up to date with the latest papers.

I began my studies at the University of Aberdeen, UK, in 2010, attracted by the promise of an interdisciplinary PhD on the management of deer in Scotland. I believed that this work would be both innovative and applicable to real-world problems, and that this corner of the academic arena would be one that I could come to know well. But rather than refining and narrowing my speciality as the first year progressed, I seemed to be spreading my efforts patchily across an ever-broadening area of research.

My thesis project explored the potential to use digital technology to collect habitat data. My supervisory team included two ecologists, a social scientist and a computer scientist. It was fulfilling to watch them bring their own expertise to the table, but I often left meetings with my head swimming, clutching a scribbled list of diverse suggestions on how to approach the project and what literature to look up. I realized that I needed to tame the interdisciplinary sprawl that my project was growing into.

I looked for a single theme that unified the disciplinary approaches and used it to create a road map. For me, this unification came from grounding the research in the underlying issue of communication — specifically, that between people involved in the management of deer. As I began my second year, I started to realize which technologies would be most helpful in collecting habitat data, and how the project could develop.

There was just one problem: I was no longer an ecologist. For my third-year assessment, I listened to my peers at the School of Biological Sciences present results from their research projects. All these projects fitted into a clear disciplinary frame. By the time I stood up to speak, my confidence had been shattered. I did not doubt the validity or strength of my research, but was uncertain where that research fitted in.

I was convinced that everyone in the room would question what I was doing there. The lecture theatre in which I had once felt so at home seemed alien and unfamiliar. Then, as my first slide appeared, I began to pick faces out of the crowd. There were those who had taught me statistical modelling and advised me on interview techniques. There were colleagues from geography and computing who had popped in to listen. All were united by a common interest in environmental issues, and they cared about my research.

That presentation in 2013 was the last time that I used a disciplinary label to describe myself. Now, when introducing myself in university departments I begin with the topics that interest me. I say: "I look at the use and role of digital technologies in conservation," rather than cagily murmuring, "I am an ecologist." It prevents people from pigeonholing me into a department before they hear what I actually do.

Although researchers and other colleagues react positively, university administrators are not quite so flexible. They can find it tough to handle interdisciplinary projects, let alone interdisciplinary researchers. Project budgets, desk space and examinations all need to be linked to a physical school or department, even if the intellectual product does not adhere to the same boundaries. This made the paperwork surrounding my PhD more confusing: I never knew which box to tick on forms or how to approach assessments designed for single-discipline programmes.

These forms and assessments need to change. I am just one of a growing number of people with PhDs in interdisciplinary fields. And I know that I was also extremely lucky. I witnessed unfortunate conflict in PhD projects when different supervisors pulled students towards single-discipline approaches, but I was fully supported by supervisors who encouraged inquisitive interdisciplinary thinking and who guided rather than steered my project.

Interdisciplinary researchers demand a more flexible approach to research, one that allows room to experiment, reflect and develop. Unfortunately, departmental labels restrict the ability to do this. One simple way around this problem is to encourage researchers at an early stage of their careers to start conversations by outlining their interests. We must help them to realize that they can introduce themselves without using a label — to accept that they can be a Jack of all trades. ■

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