

Collaborating across the Sectors

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The way researchers remain largely in disciplinary silos is a discouraging factor to anyone needing to work with colleagues in other disciplines, especially when one party is a scientist and the other from the social sciences or humanities.

The Council for Humanities, Arts and Social Sciences drew attention to the impediments that face cross-sectoral research with real impact on society, economy and environment as we published our latest report, *Collaborating across the Sectors*, last week.

It's still all the biologists in this building, the economists over there, and the historians and lawyers somewhere else. The problems posed by physical separations are mirrored in funding systems. Applications for research grants are considered by the social sciences panel, or the biological sciences panel, or creative arts or physics panels.

It's the 'boundary-spanners' who are often disadvantaged, and they are the very people who have the key to some of our most promising research.

More than one thousand researchers reported their experiences in two surveys carried out in the course of the 18 months' research for the report. The picture they painted was one of continual frustration as they nursed their project through the system:

"There are no incentives to overcome disciplinary boundaries and you have to do it by willpower. I can only do it because I have been doing it for 30 years—and I have done it through establishing trust rather than institutional support" said one survey respondent.

It is of cold comfort to these researchers that the barriers are often accidental and usually the byproduct of our customary ways of doing things. It is not as though they have been erected by faceless bureaucrats determined to maintain the ideological purity of discipline-driven research.

The report sets out the benefits of cross-sectoral collaborations, where the humanities, arts and social sciences work with science, technology, engineering or medicine. 'HASS' and 'STEM' get together on the big issues: caring for an aging population, maintaining water supply, cyber crime, and aboriginal health and welfare.

The problems researchers face when they engage in cross-sectoral collaborations fall into four broad areas: cultural, resourcing, structural rigidity, and recognition and status.

The first problem comes down to cultural differences between disciplines:

"The approaches of empirical studies— hypotheses setting and deductive approaches—are dominant in biophysical sciences. The interpretative and constructive approaches of social sciences don't mesh with this."

Pecking orders amongst disciplines make collaborations difficult, especially since so many respondents talked about the importance of mutual respect as a factor in successful projects.

Good leadership, allowing time for a relationship to develop, and the employment of 'boundary-spanners' who are comfortable dealing at the fringe areas between disciplines all help overcome this issue.

The second problem is resourcing. The current funding environment was seen by respondents as offering little encouragement, and significant barriers, for cross-sectoral collaborations. These require flexible structures, a risk-taking culture and sympathetic administration.

Participants in the study were not positive about the current structures, and saw potential threats in the Research Quality Framework. This particularly applied when it came to evaluation, and proposals for cross-sectoral collaborations were seen as being disadvantaged in having to compete against proposals based on a single-discipline:

"A project rooted in one discipline and evaluated by people from that discipline gets higher scores than a project that seeks to integrate across disciplines. There is a limitation of highly qualified evaluators to look at both the technical and social aspects of a project."

The third problem is the rigidity of structures in Australian universities and research organisations. The physical environments, the funding arrangements and the prevailing culture discourage engagement across the sectors.

One way to overcome the disciplinary divide is to integrate the disciplines at the start by locating them in the same program, rather than getting them to collaborate from their own disciplinary programs. This is one reason why cross-sectoral collaboration can be difficult in CRCs set up with a discipline-based program structure. It is also the reasoning behind CSIRO's new Flagships program.

The fourth impediment is a lack of a clear reward structure. The conventional reward systems in research are constructed along the lines of a single discipline: promotion within the department or faculty, articles in discipline-based journals, funding provided by panels focussed on a narrow range of disciplines.

Given this, involvement in multi-disciplinary collaborations is not always viewed as a career-enhancing move. Universities are still fundamentally rooted in disciplines, despite their attempts to move on from this:

"I think in some ways it is politically dangerous to take on [collaboration] ... even though the upper executive of universities want everyone to engage in post-disciplinary research clusters, in the ranks there is a need to hang on to existing bodies of knowledge in the disciplines."

Some solutions can be found with changes to the provision of research funds through the ARC and NHMRC, perhaps by earmarking a given percentage of funds so that cross-sectoral proposals compete among themselves for funding. The RQF must not become one further and major barrier to cross-sectoral advance.

Other changes lie in cultural attitudes and the administrative arrangements of our organisations. The steps to tackle these issues should be laid out at a national summit of all parties to the research process, to test their ability (and willingness) to address the impediments.

Professor Stuart Cunningham is President of the Council for Humanities, Arts and Social Sciences. *Collaborating across the Sectors* is available from chass.org.au or in hard copy by emailing office@chass.org.au.