

Phd Studentship in the Diamantina Research Institution.

UQ Brisbane

Website of Diamantina Institute <http://www.di.uq.edu.au/>

The topic is to examine the questions; What is 'translational research'? What are its features? How does it work? How can we distinguish translational research from other forms of 'basic' biomedical investigation? Is translational research different from the medical research that came before, and if it is, in what ways is it different? What kind of research skills are needed for translational research? How should we organize such research?

The aim of this project is to explore and map the operational characteristics of 'translational research'. This aim would be addressed using qualitative methods of sociology (such as Ethnomethodology, Conversation analysis, Membership Category Analysis), to examine the lived in situ interaction and action, observation of lab meetings and other places where scientists discuss their work, and the analysis of texts such as interviews, research manuscripts, grant applications and theses.

We are looking for one PhD student who would be eligible to apply for an APA scholarship. We are not looking for someone with scientific qualifications but rather a sociologist, ethnomethodologist, conversation analyst, who would be within the institute and sit in on institute activities, such as lab meetings, as well as have access to research material such as research papers, grant applications, even lab notebooks. This would be supplemented by interviews with staff and other forms of sociological and social investigation such as analysis of texts, as well as some bibliometrics.

Similar studies are conducted regularly in leading scientific institutes and present no threat to intellectual property or researchers' sense of propriety. For example, Steve Woolgar and Bruno Latour in their study of the Salk Institute in La Jolla; or a study of the Stanford Linear Accelerator and the KEK High Energy Accelerator Research Organization in Japan. Access to texts and other research materials would need to be negotiated, with agreed participation from individuals and groups within the DI, otherwise the student would derive no benefit from being present here.

The project would be co-supervised by Dr William Burns (DI) and Dr Joan Leach (UQ English, Media Studies and Art History), Dr Richard Fitzgerald, (UQ Journalism and Communication)

Other information on “translational” research and this proposed project.

1. What is translational research? Lee Nadler (Nature Medicine 2002) defined a translational researcher as a researcher who ‘improves diagnosis, prognosis or disease prevention in patients’, or ‘conceives and executes new treatments in patients’. However, this is tautology: a translational researcher is one who translates. Nadler is defining translational research by its long term outcome. Given the length of clinical trials and licensing, this could mean decades, exceeding the career span of an individual researcher.

How, therefore, the immediate question is how does one define translational research in the short and medium term – that is to say, the career time scale? Is the standard measure of research output, publications in primary journals such as Nature or Proceedings of the National Academy of Science, evidence of translation? (In industrial research, the equivalent would be patents.)

A researcher can publish hundreds of papers and have no impact on the actual care of patients, or have an impact in a very indirect way and very much later. For example, Watson and Crick uncovered the structure of DNA which opened up the possibility of genetic diagnosis. But were Watson and Crick translational researchers? What time scale do we place on the translation process? How many steps must there be between the research and the treatment for the research to be said to be ‘translational’? In what ways can research that does not lead directly to new treatments, or only leads to them in decades, be said to be translational?

Is the aim of a translational research to produce both information (publications or patents) and objects/artefacts (e.g., effective medicines), while a non-translational researcher wants to produce only information? But how can we distinguish these categories of information and artefact? There is also the problem of the long-term process required to produce artefacts, given regulatory requirements. There is no obvious artefact until the drug or other intervention is actually marketed. This cannot be used to define research performance over the usual career life span. Furthermore, what type of outputs constitute a ‘translation’: new drugs, vaccines, diagnostic tools, lifestyle interventions (presumably a plethora, all different in some way)?

Another question that arises out of the concept of translational research is: if this is a new phenomenon, then it must be different in some way to what came before. But in what ways is it different? What research model is it being defined against? Surely, if anything, modern medical research is less translational than medical research, say 60 years ago, when regulation was lighter and it was possible to test new ideas on patients almost immediately (the extreme case being Nazi war science). Is translational research really a call to bring these more rough and ready research practices back from the past, to peel away the layers of regulation that have been put in place since the Nuremberg doctors trials – and abolish what translational research advocates see as the self-referential world of molecular biology that grew up in the 1980s and 1990s?

Researchers who advocate translational research cite the example that billions of dollars have gone into biomedical research in the last two decades, but we have little, or not enough to show for it. Therefore, they argue, scientists need to change tack, to take into account the health needs of the community in which they live, rather than focussing on esoteric (read: 'internal') problems of science. It is a subset of the 'get out of the ivory tower' argument. But even if this is true, how does one judge which research programmes address the needs of the community, or even what research priorities the community might have? This argument suggests that the definition of translational research lies not in the ivory tower but outside it and raises the question about who decides what is translational and what isn't – the politician, the scientist, the doctor, the patient – or the community (local, national, international?) – or perhaps a combination of them all?

Yet here is the paradox: advocates of translational research hint at a radical democratization of research (in which the community tell scientists what they need). At the same time, however, grant money gets doled out according to the opinion of peer review committees, suggesting that the translational properties of research are determined not in the community but within science itself.

Instead of trying to ask these questions in the abstract, this project will adopt an observational approach. Namely: are the translational qualities of the research detectable in the course of day-to-day research, e.g., laboratory conversations, meetings, drafting of grants, papers, theses, lab notebooks...that is to say the daily craftsman- and craftswoman-ship of science rather than in its much constructed and re-constructed outcomes?