

GUEST EDITORIAL

## **Renegotiating the Social Contract? The Emergence of Knowledge Translation Science**

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Unlike routine applied (or operations) research, which may identify and address barriers related to performance of specific projects, implementation science creates generalizable knowledge that can be applied across settings and contexts to answer central questions. (Madon, Hofman, Kupfer, & Glass, 2007, p. 1728)

This morning I received an unexpected phone call from Alison Kitson in the United Kingdom. This caused me to remember and reflect on a number of things. First, it brought to mind our meeting in 1998 in Toronto, at a conference where I was presenting my dissertation findings. She came up to me after my talk and wondered if we might test some theory (to which I said, well, if we had data...). Second, I recalled that nearly 10 years ago Alison had written the Discourse for *CJNR*'s special issue on research utilization (Kitson, 1999). She opened that discussion by saying, "What is apparent in both the study and the application of research utilization principles and methods is that it is a social process" (p. 13). I reflected on how much and how little attention we have paid to this fairly well-accepted understanding. Third, her phone call reminded me of how much our world has changed in a decade, how much it has shrunk, how global we have become — we talked as if it were perfectly normal to ring someone across the Atlantic in the middle of their breakfast and chat with complete disregard for the long-distance minutes accumulating. I remember when a trans-Canadian call — let alone a trans-Atlantic one — was an event of some note and its minutes carefully restricted. Fourth, Alison's call got me thinking about colleagues and friends nearby and far-flung around the globe, and about the generosity with which Alison has opened her network of friends and colleagues to me. Fifth, I thought about the first knowledge utilization colloquium we organized in Edmonton in 2001 — a bit by accident, as she was "passing through." I recall her urging me to contact this young fellow Lars Wallin

in Sweden and invite him to the colloquium, and then continuing on her journey, leaving me (so it seemed at the time — albeit with good cheer) to organize a meeting and wonder if anyone would come. We built it and they came; we are into our eighth annual colloquium this year. Lars did not make it to Canada in 2001, but he was in Oxford in 2002 and meeting him there launched one of the most enjoyable collaborations of my career.

Ten years ago the three of us barely knew each other. Today we are all mixed up in a set of international collaborations in the knowledge translation<sup>1</sup> field. Those collaborations span joint research, shared trainees, chance encounters, writing together, arguing and laughing together, international meetings, cross-national and international funding, and other boundaries. Some of what we are mixed up in will likely make a difference and some of it will no doubt just be part of living on this earth. Which is the more important is not always entirely clear to me — I suspect the latter.

Ten years after Kitson published her Discourse in *CJNR*, Lars Wallin presents his in this issue. Wallin's arguments for more intervention work in the field of implementation science in nursing are timely. He touches on how far we have come and how far we have yet to go. His comments come from a deep understanding of and much reflection on the issues in this field and should be weighted accordingly. We see evidence of Wallin's commitment to intervention work in a recent article describing the baseline work for a research-implementation intervention project in Vietnam (Målqvist et al., 2008). In this work he and his colleagues are also tackling developing-world issues such as those addressed recently in *Science* (Madon et al., 2007). Lars calls for more intervention work in nursing, and, despite its difficulties and challenges, he calls straightforwardly for us to get on with it. I agree with this call; we are much in need of intervention work in the knowledge translation field in nursing. The literature remains replete with descriptive studies from which we are unable to modify practice or plan to improve outcomes.

We received few submissions on intervention studies in response to our call for papers for this issue of the Journal, and even fewer reporting on attempts to evaluate an intervention. We chose to publish one such report. In that article (Rashotte et al.), we get a stark picture of how truly challenging it is to design a study that is both scientifically meaningful and practically relevant. I would like to say a few more things about this

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<sup>1</sup> While there are important differences between and among terms, I am using a number of terms synonymously: knowledge translation, research utilization, research implementation, implementation science, innovation diffusion.

article. It is not a perfect article about a flawless study — there are, of course, no such things. This team encountered what researchers working in clinical settings encounter every day. They report on it forthrightly and tell us what they have learned — and what we can learn. We would do well to heed these lessons. Lars Wallin taught me to respect how difficult this kind of work is — I watched him struggle throughout his postdoctoral fellowship with complex and messy data from a complex and challenging study. He taught me to have high regard for this kind of work. Rashotte and colleagues — you will see if you read their discussion carefully — raise critical points for both future refinement of design and future clinical studies in this area. Their work also raises questions about who should conduct such research and under what circumstances. These are questions that we as a discipline need to grapple with. Finding workable solutions to the difficulties inherent in real-time clinical work will not be easy, but this does not mean that we can avoid it.

Echoing Kitson's call nearly 10 years ago (Kitson, 1999), one of the most fundamental requirements for the translation of knowledge into action is social interaction. We have a number of articles on this topic in the pages that follow. McWilliam and colleagues, reporting on a pilot study, engage in an empirical discussion of an area of increasing importance in knowledge translation — social interaction. We will be reading more about social interaction. In addition, these authors are working in what will be a defining area for investigators over the next three decades in Western countries — a predictably and steadily aging population that will peak in 2031. Conklin and Stolee also write about research in the area of aging and about social interaction through networks. We will be reading much more about networks as well. Social network analysis, actor network theory, and sociometric and bibliometrics areas are robust, active fields whose proponents are increasingly turning their attention to knowledge translation.

We also have contributions that will challenge readers to think outside of their usual comfort zones. They are published deliberately in this issue of *CJNR* because it is important for us to think broadly and creatively. We have a strong review of “appreciative inquiry” by Kavanagh and colleagues. This knowledge translation intervention will not suit everyone, but it is being used in some centres and shows some potential; it should be put to the tests of science — traditional and non-traditional. Poole offers a much-needed feminist critique within knowledge translation science. Mason discusses theatre as a possible mode of intervention. Estey offers a perspective on Aboriginal knowledge translation — an area noticeably absent from the mainstream knowledge translation literature. If any of these contributions makes us uncomfortable, then the authors

have done their jobs well. If we had received a class analysis relevant to knowledge translation, we would have published that too. A thoughtful class analysis or series of class analyses is long overdue, and is of particular relevance to nurses working in the rigidly hierarchical systems still found in hospitals and other health-care organizations.

Gibbons (1999) argues that we are in the midst of a far-reaching renegotiation of the social contract between science and society. The arguments of Gibbons and colleagues (Gibbons et al., 1994; Nowotny, Scott, & Gibbons, 2001, 2003) form a backdrop for the emergence of knowledge translation or implementation science — perhaps (finally) as a legitimate field of scientific inquiry. Gibbons and colleagues argue for what they term “Mode II knowledge production.” Mode II knowledge production involves non-hierarchical relationships among stakeholders who collaborate on a research issue in a specific health-care context. It is based on the needs of end users in the health-care system and is argued to be a particularly socially accountable form of knowledge production. Gibbons and colleagues’ “Mode I knowledge production” reflects the traditional, academic norms of scholarship found in disciplines and institutions (e.g., academic tenure and promotion based on high-impact, peer-reviewed publication (Gibbons et al., 1994; Nowotny et al., 2001). Its foundations rest on principles of scientific expertise, peer review, and non-interference. It is important for nurse scientists in particular to realize that knowledge production and knowledge translation are being reshaped by political will and funder policy and turned explicitly to Mode II production. While the forces that have led us to this point were in place before the end of the Cold War, certainly the legislation that created the Canadian Institutes of Health Research in 2000 was an index event, with its clear emphasis on knowledge translation as well as knowledge production. There is much in the following pages and elsewhere in nursing literature and practice that can be characterized as activity more aligned with Mode II forms of knowledge production or translation. The challenge as I see it is to find an appropriate *balance* between Mode I and Mode II activities and to realize the full implications of embracing a Mode II agenda. Mode I science has, after all, given the world some glorious discoveries and betterments. Mode II science, while holding much promise, is unlikely to be any more of a panacea than Mode I was for all of our problems. Let us hope of course that it too will give us its share of glorious discoveries and betterments.

As we move to this Mode II world, measured caution is probably a wise approach. We would also do well to heed a recent reminder: “Our biggest challenge in this field of research is to avoid rushing to solutions and certainty and to resist the belief that there will be straightforward replicable explanations” (Kitson, 2007, p. S2).

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