

Research Note/Note de recherche

Critical Knowledge Mobilization: Directions for Social Gerontology

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RÉSUMÉ

Le concept de mobilisation des connaissances (MC) occupe une place importante dans les cadres de gouvernance du financement octroyé par les trois Conseils de recherche du Canada. Cependant, des défis conceptuels et pratiques peuvent survenir quand cette démarche est proposée pour adoption dans de vastes contextes multidisciplinaires. Cette note de recherche introduit la notion de mobilisation critique des connaissances en vue concevoir la MC dans le cadre des grandes équipes multidisciplinaires et de la gérontologie sociale. L'article présente une esquisse de haut niveau des changements historiques dans la production et le partage des connaissances, une définition de la mobilisation critique des connaissances, ainsi que des exemples d'idées historiques et de tensions quotidiennes retrouvées dans la pratique. Sur la base de ces éléments, il souligne la nécessité de faire progresser et de transformer la culture de la mobilisation des connaissances, et de soutenir la recherche engagée en tant que moyen d'innovation. Il est suggéré qu'un processus réflexif de mobilisation critique des connaissances faciliterait l'innovation et promouvrait une culture de MC dans la gérontologie sociale canadienne.

ABSTRACT

The concept of knowledge mobilization (KMb) is prominent in governance frameworks of tri-council funding in Canada. Yet there are a number of conceptual and practical challenges when such ideas are proposed for adoption across large multidisciplinary contexts. This research note introduces the concept of *critical knowledge mobilization* as a way to understand KmB in large multidisciplinary teams and social gerontology. It begins with a high-level sketch of the historic changes in knowledge production and knowledge sharing, followed by a definition of critical knowledge mobilization and examples of historical ideas and everyday tensions in practice. Building on these, we propose the need to advance and shift the culture of KmB, and to embark on engaged research as a means of innovation. We suggest that a reflexive process of critical KmB can facilitate innovation and promote a culture of knowledge mobilization in Canadian social gerontology.

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Introduction

The concept of knowledge mobilization (hereafter referred to as KMb) is prominent in the governance frameworks of Canadian tri-council funding bodies such as the Social Sciences and Humanities Research Council, the Canadian Institutes of Health Research, and the Networks of Centres of Excellence. In these frameworks, KMb is articulated as one pillar that stands alongside academic excellence, transdisciplinarity, high-quality training, and commercialization (Network of Centres of Excellence [NCE]; 2015). Yet there are a number of conceptual and practical challenges when such ideas of KMb are proposed for adoption and integration across large multidisciplinary research contexts. The challenges experienced by large teams, however, are not only about disciplinary differences and traditions of practice nor practical issues of how best to share knowledge. Understandings of KMb, and the tensions that emerge in the shifting landscape of knowledge production, are also historically situated, social, and political. Challenges related to new modalities of producing and sharing knowledge play out in relation to historical approaches to knowledge and power among a range of actors, and through differential access to resources that may (or may not) exist.

This research note offers insight from participatory research on knowledge mobilization in a pan-Canadian network on aging and technology (Aging Gracefully across Environments using Technology to Support Wellness, Engagement and Long Life; Networks of Centres of Excellence [AGE-WELL NCE]). In Canada, KMb frameworks are intended to be interpreted and implemented at the individual research network or project level. This approach, aligning with principle-based regulation, gives research networks the autonomy to design a governance model, research and program infrastructure, and to implement KMb through day-to-day strategies that vary between networks and teams. Although flexible in design, broad-based frameworks such as that of the NCE mean that teams are being asked to adopt new practices, work together across disparate disciplines or fields of study (e.g., engineering, health, nursing, ethics, social sciences), and extend their reach beyond the walls of academic institutions – an exercise that some fields are more accustomed to than others. Consequently, the success of achieving the contemporary mandate for mobilizing knowledge requires research networks and scholars, particularly those with STEM backgrounds, to navigate uncharted waters amidst powerful institutional, organizational, and disciplinary practices. Our objective is to engage with past and current ideas of knowledge production and sharing as a means to better understand and provide direction for future KMb practices in gerontology.

This research note introduces the concept of *critical knowledge mobilization* as a relevant way to understand KMb in large multidisciplinary teams, and in social gerontology. First, we provide a high-level sketch of the historic changes in knowledge production and knowledge sharing throughout the 20th century, drawing attention to the theoretical and practical challenges that have emerged.¹ Second, we offer a definition of critical knowledge mobilization as a way to guide critical and reflexive research processes. Third, we highlight illustrations of the historical ideas and everyday tensions in enacting new KMb from our research. Fourth, we propose two intersecting directions for development: (a) the idea of advancing and shifting the culture of KMb; and (b) embarking on engaged research as a means of innovation. The suggestion made is that a reflexive process of critical KMb can help researchers grapple with practice pathways that facilitate innovation and promote a culture of knowledge mobilization in Canadian social gerontology.

Methodology: An Action-Oriented Study of KMb

Our research, conducted between 2017 and 2019, sought to explore and document experiences of knowledge mobilization in an NCE-funded team on aging and technology (AGE-WELL). It was situated in a team where the majority of participants and team leadership focused on science, technology, engineering, and math (STEM) or allied health professions. Our aim with this project was to understand how a team of researchers representing a range of approaches, disciplines, and fields conceptualized and enacted knowledge mobilization. Two sub-questions guided the inquiry: First, how did current understandings of KMb emerge in and across the Canadian landscape (i.e., What is KMb in this context? How did this set of ideas emerge in research on aging?). Second, what challenges and opportunities arise when this set of ideas is applied in a transdisciplinary and multisectoral network on aging and technology?

Our social science-led research was carried out through a participatory action-oriented study whereby data collection was intertwined with involvement in the larger NCE on aging and technology. This process allowed our team to explore the questions proposed by AGE-WELL as well as regularly share ideas and updates through encounters across the network. The project included a rapid review on knowledge mobilization, a study of the NCE and AGE-WELL structure, a review of proposed frameworks and definitions of KMb, casual unrecorded conversations and involvement in AGE-WELL activities and workshops, and 31 audio-recorded qualitative interviews.

This research note proposes critical knowledge mobilization as a concept for signaling a critical and reflexive practice of knowledge mobilization that can transform knowledge production and knowledge sharing across the NCE, and in gerontology. Although the focus of this research note is gerontology, the argument is potentially relevant to large teams crossing disciplinary boundaries and sectors such as policy, industry, and service.

Shifting Approaches to Knowledge Production and Sharing

In this first section, we sketch a broad high-level overview of developments in the science of knowledge production and knowledge sharing as relevant to KMB in the Canadian context, as well as within the multidisciplinary context within which we carried out our research (a STEM-situated team on aging and technology). That is, the overview is intended to be broad as a means of situating science and the broad strokes of change that can be identified by a range of scholars, irrespective of their disciplinary training or background.

Throughout the 1900s, scientific knowledge tended to be understood as the product of academic researchers and institutions, and was not considered to be ready (or appropriate) for public or everyday purposes. This understanding of knowledge production and knowledge sharing was known as the linear model of innovation (Godin, 2006) and was characterized by the differentiation of theoretical scholarship from applied fields of inquiry. In this understanding of fundamental research, “pure science” was perceived to be separate from “applied science”, and from the process of product development. In this model, the disjuncture between scientific discovery, knowledge dissemination, and research impact, were viewed as natural or unavoidable, rather than as undesirable as it is positioned in contemporary discourses. While this historical distinction between pure and applied science – or science and society – can still be seen, understandings of knowledge production have shifted significantly.

Over time, research and scientific discourses began to draw attention to the perceived gap between the production and sharing of scientific knowledge. Discourses that appeared in funding frameworks and agenda-setting efforts highlighted the distance between science and impact, and the need to lessen this divide, or to shorten the delay between discovery and implementation (Committee on Quality of Health Care in America, 2001; Morris, Wooding, & Grant, 2011). Here, the “ivory tower” metaphor was often used to highlight the gap between knowledge produced by scientific experts in privileged academic settings and understood by the

public (i.e., what is known as “lay knowledge”). Such discourses later led to metaphors that evoked similar tall, uniform structures, whereby the knowledge produced by experts was considered to take place in “silos”, and thus deemed to lack both the connection with the lay public as well as with other scientists or findings produced in different domains or disciplines of study.

A focus on the language and practice of national science policy since the year 2000 in Canada has revealed a shifting understanding of the relationship between knowledge production and knowledge sharing, and questions of *what counts as good research practice* more generally. Scientific discourses in this period made reference to historical ideas of the gap between scientific discovery and implementation (and the aforementioned separation of science and society), re-articulating the problematic nature of this gap. Strategies from the early 2000s also initiated changes in the understandings of science in Canada, altering the practices by which research was funded, conducted, and shared. For example, from the early 2000s, funding bodies began to emphasize the “removal of barriers” between academic scholarship and society, and the importance of developing infrastructure for knowledge co-production.

In the context of the Canadian Institutes of Health Research, changes to language and practice were discussed under the rubric of “knowledge-to-action” (Canadian Institutes of Health Research, 2008), and in the NCE, as “knowledge and technology exchange and exploitation” (KTEE) (Networks of Centres of Excellence, 2016). Alongside these frameworks, concepts such as “research translation” also emerged to describe (and enact) the transfer of new knowledge from (and within) academic institutions to recipients or end users (Grimshaw, Eccles, Lavis, Hill, & Squires, 2012). This language was later replaced by the concept of “knowledge mobilization (KMB)” (in the Social Sciences and Humanities Research Council) and “knowledge exchange (K-E)” (in the Canadian Institutes of Health Research). Notable here is that the change in language was also accompanied by the development of disciplines of study in their own right (academic programs and degree status), thereby revealing the intricate relationship between language, knowledge, and disciplines as practices of power. Together, these frameworks represented signposts for a new model of science whereby “good research” was to be developed and shared as a public responsibility (although the way to achieve this differed among funding bodies).

As new models of science and scientific practice developed, most notably since 2015, Canadian funding initiatives outlined the rationale for changing understandings of science and research by linking valuations of “good

practice” to accessibility and social or public engagement. Here, discourses about the production and sharing of knowledge shifted to ideas of open scholarship, the co-creation of transdisciplinary and multisectoral research, and public engagement as part of the formula to achieve success in major tri-council funding (Canadian Institutes of Health Research, 2015; Networks of Centres of Excellence, 2016; Social Sciences and Humanities Research Council of Canada, 2016). Although such forms of scholarship were taking place elsewhere, our attention here is on the ways in which they became integrated into the more mainstream discourses of knowledge production and sharing through the language and practice of funding bodies and larger research structures.

The changes witnessed in the Canadian funding landscape since 2015 were thus not only discursive but became part of the mechanisms for success in granting competitions and the subsequent receipt of public funds. Calls for funding began to mandate the engagement and empowerment of knowledge users, open access to academic resources, transparency of publicly sponsored research and development (R&D), and the achievement of socially impactful and financially sustainable research (Industry Canada, Government of Canada, 2014). Framed (and implemented) as such, researchers were asked to rethink practices of knowledge production as a co-constructed process. This ranged from including people in research advisory groups and research governance (e.g., Social Sciences and Humanities Research Council) to engaging with diverse groups of people who were sometimes framed as knowledge users (Canadian Institutes of Health Research, 2015). Yet these initiatives represented more than a request to do things differently: they also challenged the conceptual and structural hierarchies upon which research in fields such as STEM, health studies, and gerontology were (and are) based. And while such practices of engagement and co-construction were long established within critical traditions of the social sciences and humanities (see Smith, 2005), they were, for many disciplines, entirely new and different from existing sets of knowledge and practices those of KMB, are set against the existing ways of producing and sharing knowledge within disciplines and across a range of settings. This is perhaps particularly the case in disciplines that rely heavily on the sets of ideas associated with traditional science sketched earlier in this research note. For example, consider the challenges that arise with regards to the emphasis on public interest invoked as a justification for new standards and of “scientific research”.

A number of obstacles emerge when new models of research practice, such as practices. This emphasis on public interest may exert pressures for researchers to

focus on socially relevant topics and, in doing so, may reduce the scope of research to pre-conceived ideas that push a particular agenda forward and diminish research based on theoretical, independent, or lesser known areas of study (Whelan, 2018). At the same time, the scientific expert model is so entrenched that questions can be raised about the extent to which public consultation has occurred, or is even possible, within existing paradigms.

The question of how the involvement of groups is framed and carried out becomes an important critical question where powerful notions of knowledge production and sharing research with older people are concerned. Where there is a well-established set of scholarship on ethnographic research, participatory research, representation, and guidelines for meaningful engagement in the social sciences (see Smith, 2005; Madison, 2011; Vickers, Rankin, & Appelle, 1993; Whyte, Greenwood, & Lazes, 1991), this scholarship, and the set of practices that has been developed from it, are much less known in the STEM or health-related disciplines receiving funding through the Natural Sciences and Engineering Research Council of Canada or Canadian Institutes of Health Research, for example. Even “stakeholders” and “consultation”, terms that are used in networks such as AGE-WELL, seem jarring to social scientists familiar with a more critical set of scholarship on involvement. Tensions between disciplinary foundations and their presumed sets of knowledge and practice are furthered when researchers begin to question the extent to which the non-academic public has involvement in grant reviews, access to the knowledge produced, or opportunities to influence research agendas and meaningfully participate in the processes of knowledge production. Here, even attempts to challenge hierarchical models through processes such as research ethics guidelines have produced continued dependence on political commitments as well as the exclusion of particular groups (Gontcharov & MacDonald, 2016; Whelan, 2018). Explanations for such tensions can be found in the critical social sciences, the central argument being that scientific methods and research practices are acts of power, as well as ideologically and politically driven (e.g., Foucault, 2012; Habermas, 2015; Kuhn, 2012; Latour, 1987).

The changes in approaches to academic knowledge production and sharing reveal that the obstacles articulated in Canadian frameworks on KMB are not easy to alter because they are deeply rooted in social, historical, and political processes, as well as the everyday functions of academic and educational systems and disciplinary practices. A case in point is that even with ideas of social responsibility and public accountability which are mandated by funding bodies, processes of knowledge production across fields such as gerontology

continue to be dogged by persistent conceptual and institutional challenges as researchers attempt to bridge science, society, and older people's perspectives. Some philosophical and regulatory challenges can be addressed through revisions to research funding frameworks. The normalization process theory (May & Finch, 2009) notes, for example, that changes to cultural practice (i.e., culture change) only become integrated in social and political contexts through the (inter)actions of individual researchers and networks. More specifically, the process of normalizing or embedding new knowledge into existing socially patterned knowledge bases and researcher practices of existing networks can only be brought about by collective action and intentional implementation (May & Finch, 2009). If this is the case, there is a substantial leap to be made from current sets of ideas (even those from critical paradigms) to altered forms of research and practice and, more so, in teams which are accustomed to "traditional science". We now turn to the concept of critical KMb as a means to rethink and approach KMb in social gerontology in Canada.

Defining Critical Knowledge Mobilization (C-KMb)

In this second section of the research note, we outline the concept of critical knowledge mobilization as a reflexive practice, offer a series of questions to guide researcher and network engagement, and draw attention to challenges within a large Canadian team (see also Gontcharov, Kobayashi, & Grenier, 2020). In this section, and more generally in our work with the AGE-WELL network, we propose a critical and reflexive process that questions taken-for-granted assumptions, language, and practices of knowledge-generating institutions (also see Hibbert & Cunliffe, 2015). Critical KMb is intended to counter traditional "how to" approaches by focusing on taken-for-granted assumptions, and connecting actors across contexts, disciplines, and over time (see D'Cruz, Gillingham, & Melendez, 2007). We define critical KMb as *contextual and reflexive engagement in the production and sharing of knowledge that challenges the conceptual separation of science, technology, and society, and creates space for an open and inclusive research infrastructure where stakeholders can be both knowledge creators and contributors.*

In this sense, critical knowledge mobilization is very different from the process of knowledge transfer (KT), or what was traditionally referred to as knowledge dissemination. It is a process and philosophy whereby researchers must interrogate their assumptions to discover what they know (existing knowledge) and how they know it (D'Cruz et al., 2007). This includes rethinking the established boundaries within which we work,

the fields of knowledge production to which we are accustomed, and the set of organizational practices that shape knowledge, its production, and its distribution (D'Cruz et al., 2007; Hibbert & Cunliffe, 2015). In positioning knowledge mobilization as a critical process, researchers and stakeholders become situated as engaged and collaborative actors, and the production (and sharing) of knowledge is re-contextualized in a broader social and political space. As such, science, and the process of "scientific discovery", become understood as an institution that is subject to shifting policy priorities involving competing interests, methodological preferences or conventions, and power imbalances. Further, and interconnected with these powerful practices, sharing knowledge (within and between teams and with older people) becomes reconfigured as a social responsibility, an act of transparency, and a community-building process.

The following questions are illustrative of enacting a process of critical KMb and can be used to guide individual researchers and research networks in gerontology and allied fields:

- What counts as knowledge and knowledge mobilization in a given field, and why?
- What are the policy priorities and conceptual frameworks used by national, institutional, and disciplinary actors?
- How have various stakeholders been involved in the research process? At which points? And in which ways? Who is represented (or excluded) in the process of research? What does involvement look like?
- Who decides what knowledge is being mobilized and enacted? How does power and/or authority within a particular context influence the range of project decisions?
- How has the terminology for science, producing and sharing knowledge, and the various stakeholder groups changed over time (e.g., receptors to users; subjects to participants, translation to mobilization)? Why?
- How is research conducted or mobilized in single, inter-, trans-, and multidisciplinary teams or environments? What forms of knowledge sharing are used across sectors and contexts?
- What comprises social and economic impact in a given area or field of practice? How are social accountability, sustainability, and public responsibility understood and measured?
- How are project outcomes assessed and/or measured? Is there a fit between the measure and experience/insights of actors? Does this differ across contexts?

Insights from a Participatory Project within AGE-WELL

This third section of the research note draws on the lessons learned from our case study, and examines how emerging challenges can be understood as part of ongoing changes to ideas and practices about science,

knowledge production, and knowledge sharing. The case study of AGE-WELL, a Canadian NCE on aging and technology, revealed examples of shifting social practices as they were enacted in everyday research settings. This included tensions between disciplinary ideas and practices related to scientific discovery and product development, and questions or confusion regarding how to best integrate contemporary frameworks of KMB into a transnational, multi- and transdisciplinary, and multisectoral team. For example, in its original configuration (as depicted in research proposals and the website), the AGE-WELL network conceptualized and represented research as “research and development” (i.e., R&D), stages of “product innovation”, and depicted policy engagement through schematics for implementation and innovation. As such, the model reflected traditional, positivist, and linear understandings of scientific research, and earlier mentioned ideas about knowledge translation.

Yet at the same time as the actions and encounters of the team reflected embedded historical and disciplinary practices, engagement with the discourses and new models of KMB could be observed through everyday struggles about how to carry out such work within existing research contexts and teams. Here, conversations and encounters revealed tensions in understandings between researchers situated in natural or health sciences and the social sciences. Consider testing from within a critical perspective on KMB, which would begin when the idea is examined by the inventor, peers, funders, or research ethics boards, and involves older people throughout, rather than along the traditional stages of discovery, planning, development, followed by a period of testing with older people. Struggles experienced around testing and product development are exemplary of the challenges of integrating new models of KMB into existing practices. However, models of engaged research suggest that products can be viable only if they are relevant to the groups they were created for, and have a space within the social, economic, and political contexts within which they are launched. That is, they must be both commercially and socially viable, and as such, require early involvement from groups such as older people.

Our team, positioned as critical social scientists, reflected on power, our own taken-for-granted practices, and ways of engaging in knowledge production and sharing as part of our research process. Although our practices are more closely aligned with the discourses of engagement articulated in the social sciences, and appearing in new models of KMB, these can be experienced as challenging when they take place in a STEM-situated research environment that is firmly rooted in positivist R&D, scientific traditions of knowledge production, or commercialization. Social

scientists are, generally speaking, more accustomed to space for critique and critical engagement through practices such as reflexivity, and in distinguishing between claims to knowledge that are produced by experts and people with lived experience (see Madison, 2011). Yet most of us are not accustomed to the interconnected marketization of our research outputs or processes of developing saleable (and profitable) products. What emerges in a participatory study of a large NCE interdisciplinary team is not only that such research is characterised by power differentials between disciplines and fields, and where the social sciences, and in particular qualitative research, are often viewed as less valid (see Kontos & Grigorovich, 2018) but also, how encounters with transnational, transdisciplinary, and multisectoral teams can be experienced as frustrating, sites of misunderstandings, and/or seen as fraught with tensions and delays.

Social scientists, and particularly qualitative researchers, are more familiar with analysing power differentials between experts and older people, as well as the time investment that is involved in meaningful engagement. Experienced by researchers unaccustomed to these practices, engagement can be experienced as threatening or slowing down research or outcomes, which can also lead to a parallel threat experienced by social scientists who wonder whether a larger team provides the needed space to conduct conceptually solid research that is meaningful research with older people. The everyday challenges that arise within and around the engagement of older people, are thus better understood when contextualized in relation to historical disciplinary practices and resources, organizational and political mandates (which may be less appropriate for engaged models of practice), and the differential power of actors, stakeholders, and interest groups (industry, investors, older people) (see Powell, Davies, & Nutley, 2018). Engagement, from a social science perspective, is not simply ticking a box or having people present but enabling empowerment by ensuring that voices are heard and that changes are enacted as a result (Beresford, 2012; Ray, 2007).

Here, the illustration of measuring impact is particularly relevant to the tensions that emerge in large teams comprising a range of disciplines and a variety of stakeholders including industry and older people. Where scientific notions of impact, and the assessments adapted and recognised by funders are often articulated through standardized quantifiable metrics, such indicators can result in perverse actions such as counting people in a room, or the number of hits on a product webpage, rather than real social impact (on perhaps a small but relevant audience). Despite shifts in scientific discourse to include claims about involvement, engagement, and open scholarship, the measures by which

these are deemed successful (or not) often remain firmly embedded in linear and reductive models that are tied to former ideas about scientific process. A number of questions thus remain with regards to measuring impact, success, and the outcomes of publicly funded projects. Within the AGE-WELL project, we found promising areas of engagement and impact in the training and mentoring of students, research assistants, and trainees (referred to as highly qualified personnel). It could thus be argued that although other significant challenges exist, the training environment of AGE-WELL represents a unique opportunity to exchange ideas, foster mentorship and learning, encourage transdisciplinary and collaborative dialogue, and produce different understandings and ways of working that could have a substantial impact over time with regards to future leaders in the field.

Together, the lessons from our study of a large transnational and transdisciplinary team highlight the need to contextualize findings within larger shifts in the production and sharing of scientific knowledge, and to further draw upon insights from the social sciences as a means to develop engaged and reflexive processes of critical knowledge mobilization. Our findings suggest that there is work to be done regarding the development of reflexivity, building relationships with older people, and shifting the expectation and outcome measures to be more in line with new models of KMb. Critical reflexivity, for example, involves a focus on questions of how knowledge is generated, one's own influence and ways of being, and how relations of power affect the process of knowledge generation (D'Cruz et al., 2007; Hibbert & Cunliffe, 2015). A detailed focus on engagement means creating, fostering, and sustaining relationships between researchers and older people over time, developing responsibility for how older people's ideas are shared or applied, and employing different forms of knowledge to ensure accessibility and comprehension (Madison, 2011; Powell et al., 2018). Further, there is a need to reconsider and balance the needs and expectations of organizational mandates, disciplinary norms and conventions, and the involvement of differentially situated groups such as industry and older people to ensure that knowledge can be developed and shared in flexible ways (Powell et al., 2018). The questions for engaging in a critical practice of KMb as a collaborative exercise may thus be expanded to include questions about power, and the integration of uncertainty, shared or distributed resources, and partial (or shifting) states of knowing.

Critical KMb as a Reflexive and Engaged Social Act

Building on the above analysis, we now turn to the fourth part of this research note, the proposition that

engaging in critical knowledge mobilization is in itself a social act that holds potential to shift practice and produce change. We suggest two interconnected directions for individual researchers and multidisciplinary networks (and particularly those which are led or situated in STEM or "pure science" models): the first is to develop and advance a critical and reflexive culture of KMb which draws on insights from the social sciences about how to include and involve older people, and the second is that in doing so, critical KMb becomes an example of innovation in the area of knowledge mobilization.

Advancing a Culture of Critical and Reflexive KMb

The development of a vibrant, critical, and reflexive culture of knowledge mobilization is key to a successful network that achieves its desired impacts through meaningful involvement of researchers and a range of stakeholder groups such as older people. KMb, within the context of a large NCE and more broadly, is a general principle intended to be interpreted and enacted by individual researchers and research teams. Yet given that new forms of engaged KMb are mandated as part of funding proposals and project outcomes, there is a danger of KMb being reduced to a narrow set of formal practices that correspond with set criteria and metrics, and are measured through management offices, or specialized administrative units who are allocated the responsibility for KMb as per their disciplinary expertise. Advancing a culture of critical and reflexive KMb wherein knowledge mobilization is intrinsic to the culture of producing and sharing knowledge would alter the powerful practices that are enacted through linear processes of scientific discovery, traditional separations of science and society, and bureaucratic practices that prohibit meaningful involvement or social good.

If enacted alongside suggested modifications to practice (particularly those related to power between disciplines and between experts and older people), the vision of critical knowledge mobilization holds the potential to achieve the objectives outlined in national research policy frameworks, such as Canada's NCE program, while simultaneously creating meaningful engagement for researchers and stakeholders. A critical conceptualisation of KMb shifts the focus to building and sustaining a culture of KMb as achieved through principles of reflexivity, collaboration, community engagement, and inclusivity. The idea is that this cultural shift would extend throughout the network or organizational structure within which the processes of knowledge production and sharing take place. Although organizational units dedicated to KMb may play a significant role in helping to advance this culture, the adoption of a critical

practice of knowledge mobilization shifts the emphasis (and power) to the researchers, teams, and engaged communities (including older people) as agents of a new culture of KMb. As such, it involves processes of community-engaged and involved scholarship often described as a process of “collaborative knowledge generation by academics working alongside other stakeholders” (Greenhalgh, Jackson, Shaw, & Janamian, 2016). Advancing a critical and reflexive process of knowledge mobilization is thus a philosophy that embraces a plurality of knowledge that is co-created by academics and a spectrum of stakeholder groups, professionals, and older people.

Critical KMb as Process and Act of Innovation

Our suggestion is that adopting a critical practice of engaged and reflexive knowledge mobilization becomes, in itself, an act of innovation. That is, critical KMb comes to be a process of continuous and ongoing discovery where researchers can consider their own research culture and practices of engagement. The model is innovative in that it shifts the process of research and development from a linear process to one that unfolds across disciplines, contexts, sectors, and in collaboration with a variety of stakeholders such as older people. Rather than taking place through relatively fixed stages of planning, development, testing, and impact, critical knowledge mobilization shifts the focus to a collaborative, multistage, and fluid process that is not reducible to one end set of practices or outcomes. In this vision, the successful development, production, and sharing of knowledge becomes contextual, responsive, collaborative, socially engaged, and inclusive of all who have taken part in the co-development and sharing of knowledge. Accordingly, knowledge becomes a “social good” that involves (and takes into account) relationship building, confidence, trust, and a sense of belonging – processes that are not merely a by-product of research, but which should be acknowledged, appreciated, and prioritized as part of an engaged process.

Critical KMb is thus an ongoing reflexive and engaged process of innovation that emphasizes a holistic, inclusive, multidimensional understanding of research impact. This may be present, for example, when members of the network, who seek a deeper understanding of social and economic impact, begin to question and alter taken-for-granted practices, and whereby new groups may form as a result of meaningful connections and successful processes of collaborative and engaged research. However, there is more work that needs to be done regarding power differentials within teams, as well as structures of funding bodies and university settings, both of which must recognize and account

for time-consuming processes of engaged community scholarship, the co-creation of knowledge, and what it means to enact reflexive scholarship. The argument, however, is that creating mechanisms of support to ensure that the knowledge produced is co-created and shared with the “target audiences”, while at the same time recognizing the public for their participation in the processes of knowledge production can provide pathways to engaged models of practice. This could occur, for example, through attention to appropriate levels of compensation for older people as advisors, research participants, or product testers.

Conclusion

With this research note we have attempted to engage with the idea of critical knowledge mobilization as part of an academic ethos of reflexive, community-engaged, and socially responsible research. We explored the context for knowledge mobilization, and sketched changes to approaches that challenge innovation and everyday ways of working in social gerontology and large NCE teams such as AGE-WELL. Further, we offered an initial definition of critical knowledge mobilization as a way to understand the processes of producing and sharing knowledge in the Canadian context, and presented a series of critical questions for researchers, teams, and all knowledge users to employ as a means of engaging in reflexivity. Next, we set out two interconnected possibilities for social gerontology: advancing a critical and reflexive KMb culture as a social practice, and in doing so enacting a practice of innovation in KMb. Embarking on a critical process of KMb can create an infrastructure that shares (rather than directs) the flow of knowledge for social, economic, and intellectual impact in ways that seamlessly integrate new knowledge and discoveries with the everyday lives and input of older people.

The proposed concept and practice of critical knowledge mobilization thus offers a critical and reflexive practice that may help overcome barriers between science and society. Although the interpretation of the critical approach will vary across teams and projects, features such as contextual relevance, inclusivity, and openness are likely to enhance its reflexivity and responsiveness. In adapting a critical model of KMb, individual and research teams become better equipped to understand their role as socially situated within transitions in knowledge production and sharing, as well as within broader institutional, historical, and social structures. Our suggestion is that even within large multidisciplinary teams where large gaps exist between traditions, practices, and norms, such reflections may prompt altered and transformed practices that could, for example, shift emphasis from expert power-based models and unidirectional knowledge

transfer to practices of broader public participation, continuous engagement, and inclusive community-engaged research. It is precisely this challenge of taking up these new forms of practice that now faces individual researchers, the field of social gerontology, and large teams in the Canadian context. The questions are: will (and how will) Canadian funders, researchers, and teams respond? Under which conditions will this occur? Who will set the agenda? Who will be involved and included in the process (and how)?

Note

1 This research note was written with the purpose of engaging a large multi-disciplinary audience working in aging and technology, many of whom are situated in STEM and applied health professions (rather than only a social science audience), and to draw out lessons for KMB in Canada. To do so, it intentionally employs the language of “science” and the associated taken-for-granted terms such as “stakeholder” or “commercialization” that operate in this network. The hope is that starting the conversation from a shared terminology (the assumptions or understandings of which, may or may not be shared) and recognized space of “scientific practice” will evoke critical questions among social scientists (who may be more familiar with the critiques) and those working within fields more typically characterized as “pure science”. There is a large body of critical social science literature, drawing on feminist theory and qualitative research, that highlights the problems associated with “science” and “scientific knowledge”; objective claims to science through rational, objective, quantifiable measures; and the lack of diversity within Canadian public policy (see, for example, Madison, 2011; Smith, 2005; Vickers, Rankin, and Appelle, 1993). Our hope is that once the conversation is established, we can further draw on these works to inform future debates on scientific knowledge that is being generated on aging and technology in Canada, as well as policies of practice of knowledge mobilization more generally.

References

- Beresford, P. (2012). *Social care, service users and user involvement*. London, ENG: Jessica Kingsley.
- Canadian Institutes of Health Research. (2008). *Knowledge to action: A knowledge translation casebook*. Retrieved from https://cihr-irsc.gc.ca/e/documents/kt_casebook_e.pdf
- Canadian Institutes of Health Research. (2015). *Health research roadmap II: Capturing innovation to produce better health and health care for Canadians: CIHR strategic plan 2014–15 – 2018–19*. Retrieved from <https://cihr-irsc.gc.ca/e/documents/CIHR-strat-plan-eng.pdf>
- Committee on Quality of Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, D.C.: National Academies Press.
- D’Cruz, H., Gillingham, P., & Melendez, S. (2007). Reflexivity, its meanings and relevance for social work: A critical review of the literature. *The British Journal of Social Work*, 37(1), 73–90. <https://doi.org/10.1093/bjsw/bcl001>
- Foucault, M. (2012). *The birth of the clinic: An archeology of medical perception*. In London, ENG, and New York, NY: Routledge.
- Godin, B. (2006). The linear model of innovation: The historical construction of an analytical framework. *Science, Technology, & Human Values*, 31(6), 639–667. <https://doi.org/10.1177/0162243906291865>
- Gontcharov, I., & MacDonald, L. (2016). Alternative models of ethical governance: The 2016 New Brunswick–Otago declaration on research ethics. *New Zealand Sociology*, 31(4), 56–81.
- Gontcharov, I., Kobayashi, K., & Grenier, A. (2020). Knowledge mobilization for an engaged researcher. In A. Sixsmith, J. Sixsmith, A. Mihailidis, & M. Lan Fang (Eds.), *Knowledge, innovation, and impact in health: A guide for the engaged researcher*. Cham, CHE: Springer.
- Greenhalgh, T., Jackson, C., Shaw, S., & Janamian, T. (2016). Achieving research impact through co-creation in community-based health services: Literature review and case study. *The Milbank Quarterly*, 94(2), 392–429. <https://doi.org/10.1111/1468-0009.12197>
- Grimshaw, J. M., Eccles, M. P., Lavis, J. N., Hill, S. J., & Squires, J. E. (2012). Knowledge translation of research findings. *Implementation Science*, 7(1), 50. <https://doi.org/10.1186/1748-5908-7-50>
- Habermas, J. (2015). *On the logic of the social sciences*. Hoboken, NJ: Wiley.
- Hibbert, P., & Cunliffe, A. (2015). Responsible management: Engaging moral reflexive practice through threshold concepts. *Journal of Business Ethics*, 127(1), 177–188. <https://doi.org/10.1007/s10551-013-1993-7>
- Industry Canada, Government of Canada. (2014). Digital Canada 150. *Seizing Canada’s moment: Moving forward in science, technology and innovation 2014 – Summary*. Ottawa, ON. Retrieved from https://www.ic.gc.ca/eic/site/113.nsf/eng/h_07658.html
- Kontos, P., & Grigorovich, A. (2018). “Sleight of hand” or “Selling our soul”? Surviving and thriving as critical qualitative health researchers in a positivist world. *FQS Forum: Qualitative Social Research*, 19(2), Art. 25; <https://www.qualitative-research.net/index.php/fqs/article/view/2990/4239>
- Kuhn, T. S. (2012). *The structure of scientific revolutions*. Chicago, IL: University of Chicago Press.
- Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.
- Madison, D. S. (2011). *Critical ethnography: Method, ethics, and performance*. Thousand Oaks, CA: Sage.

- May, C., & Finch, T. (2009). Implementing, embedding, and integrating practices: An outline of normalization process theory. *Sociology*, 43(3), 535–554. <https://doi.org/10.1177/0038038509103208>
- Morris, Z. S., Wooding, S., & Grant, J. (2011). The answer is 17 years, what is the question: Understanding time lags in translational research. *Journal of the Royal Society of Medicine*, 104(12), 510–520. <https://doi.org/10.1258/jrsm.2011.110180>
- Networks of Centres of Excellence. (2015). Networks of Centres of Excellence program guide. Retrieved from http://publications.gc.ca/collections/collection_2015/rce-nce/NS1-24-2015-eng.pdf
- Networks of Centres of Excellence. (2016). Resource manual: Best practices for governance and operations. Retrieved from https://www.nce-rce.gc.ca/_docs/BestPractices-PratiquesExemplaires/BLNCE-RCEE_eng.pdf
- Powell, A., Davies, H. T., & Nutley, S. M. (2018). Facing the challenges of research-informed knowledge mobilization: 'Practising what we preach'? *Public Administration*, 96(1), 36–52. <https://doi.org/10.1111/padm.12365>
- Ray, M. (2007). Redressing the balance? The participation of older people in research. In M. Bernard & T. Scharf (Eds.), *Critical perspectives on ageing societies* (pp. 73–88). Bristol, ENG: The Policy Press.
- Smith, D. E. (2005). *Institutional ethnography: A sociology for people*. Lanham, MD: AltaMira Press.
- Social Sciences and Humanities Research Council of Canada. (2016). *Strategic plan to 2020: Advancing knowledge for Canada's future: Enabling excellence, building partnerships, connecting research to Canadians*. Retrieved from https://www.sshrc-crsh.gc.ca/about-au_sujet/publications/strategic-plan-strategique-2016-eng.pdf
- Vickers, J., Rankin, P., & Appelle, C. (1993). *Politics as if women mattered: A political analysis of the National Action Committee on the Status of Women*. Toronto, ON: University of Toronto Press.
- Whelan, E. (2018). In praise of value-interrogating sociology. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, 55(2), 322–324. <https://doi.org/10.1111/cars.12203>
- Whyte, W. F., Greenwood, D. J. & Lazes, P. (1991). Participatory action research: through practice to science in social research. In Whyte, W. F. (Ed.), *SAGE Focus Editions: Participatory action research* (pp. 19–55). Thousand Oaks, CA: Sage. <https://doi.org/10.4135/9781412985383>