

Transformative research as knowledge mobilization: Transmedia, bridges, and layers

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Abstract

Mainstream knowledge production and communication in the academy generally reflect the tenets of positivist research and predominantly embody hierarchical processes of knowledge transfer. In contrast, a transformative research paradigm is rooted in knowledge mobilization processes involving close collaboration between researchers and community actors as co-enquirers as a part of a broader agenda for progressive social change. They also involve strategic communication strategies that mobilize knowledge beyond those directly involved in the research process. We illustrate the cyclical pattern and transgressive potential of knowledge mobilization processes through a reflective case study of a participatory action research program in the Canadian Prairies. Based on this work, we present three key knowledge mobilization strategies. These include: using *transmedia* to exchange knowledge across a range of communication media; *building bridges* to invite communication amongst diverse knowledge communities; and *layering* to communicate knowledge at varying levels of detail. We critically examine our own practice as a contested and partial process in tension with the institutional and cultural durability of the more linear knowledge transfer paradigm. Knowledge mobilization strategies provide a framework to implement research methods, communication processes, and outcomes that are high in impact and relevant in struggles for a more just and resilient society.

Keywords

Participatory action research, knowledge mobilization, transformative research, alternative food networks, epistemic justice, local food

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Introduction: A transformative research paradigm

The 21st-century is marked by inequality, injustice and recurring crisis stemming from deeply uneven relations of power and privilege. There is an urgent need for cultural, social, and political change to address these “wicked” problems and for critically engaged research that directly facilitates progressive social transformation. However, the dominant knowledge and labor systems in academia (e.g. positivism, detached elite science, corporatization of universities, managerialism) reflect and even aggravate these wider hierarchies of power, knowledge, and privilege. Such uneven power relations are made durable in universities and other centers of institutional power (e.g. government agencies) through a range of discourses, systems, and relations that privilege one dominant form (e.g. knowledge producer, scientist, text) over a marginalized other (e.g. knowledge users, layperson, oral, or visual communication). These knowledge hierarchies underpin what has been referred to as epistemic or cognitive (in)justice where some knowledge systems and knowledge holders are systemically marginalized in ways that perpetuate inequality and uneven development (Fricker, 2007; Visvanathan, 2005; Wakeford, Pimbert, & Walcon, 2015).

This article engages with a longstanding tradition of critically examining how universities have been shaped by the “vested interest of class, business and state” (Thrift, 2009, p. 206; also see Giroux, 2007). We draw from a range of counter-hegemonic research paradigms, methodologies, and pedagogies that explicitly resist and subvert these knowledge hierarchies (e.g. Burawoy, 2005; Cameron & Gibson, 2005; Fuller & Askins, 2010; Greenwood & Levin, 2007; Reason & Bradbury, 2008; Smith, 1999). This work is rooted in a transformative research paradigm that includes critical variants of participatory and action-based methodologies as exemplified by community-based research, performative ethnography, participatory action research (PAR), and militant investigation (Brem-Wilson, 2014; Reason & Bradbury, 2008; Shukaitis, Graeber, & Biddle, 2007). These strategies all involve working with and for research participants as co-enquirers to pursue social justice, regenerate community, and foster resilience.

In this paper, we examine the emerging transformative research paradigm, which we articulate as a collaborative and political process of knowledge mobilization. In the next section, we present a critique of the dominant research paradigm, the concept of knowledge transfer, and the often-narrow framing of the concept of research impact. This we contrast with the need to build and strengthen the transformative research paradigm through power-equalizing knowledge mobilization processes that give voice to actors typically marginalized in knowledge transfer processes. We then illustrate these points through a reflective case study of a PAR program in the Canadian Prairies that exemplifies the virtuous, albeit imperfect and contested, cycles that underpin knowledge mobilization. In the discussion, we draw out three key knowledge mobilization strategies: using *transmedia* to exchange knowledge across a range of communication media; *building bridges* to invite communication amongst diverse knowledge communities; and *layering* to

communicate knowledge at varying levels of detail. These strategies can be used in any knowledge mobilization program to maximize the potential for progressive social transformation.

From linear knowledge transfer processes to cyclical processes of knowledge mobilization

Universities, science, and academic pursuit are predominantly framed as independent, neutral, and disembodied from the field(s) of study—this is often argued as essential in eliminating bias and producing valid knowledge. These positivist notions underpin the dominance of a *knowledge transfer paradigm* where scientists are believed to produce unbiased expert knowledge. Here, knowledge is transferred from knowledge “producers” to knowledge “users” such as practitioners, government, and industry actors and less often the lay public, who are all perceived as deficient in scientific understanding (Estabrooks et al., 2008). When knowledge transfer does engage with “downstream” actors, this primarily focuses on a professional class of knowledge users, for example, in health (e.g. physicians, public health authorities), governments (e.g. bureaucrats), industry (e.g. engineers), and business (e.g. corporate executive officers) where less powerful actors in civil society are rarely engaged.

Science is a privileged discourse, and often excludes competing views and knowledge systems, especially those of disempowered groups in society (Brook & McLachlan, 2005). As such, the knowledge transfer approach perpetuates what Fricker (2007) refers to as epistemic injustice, where groups and individuals are systematically wronged in their capacity as knowers and as creators of knowledge. By marginalizing popular, traditional, lived, indigenous, and subaltern epistemologies, the knowledge monopolies held by experts, universities, and other power-holders are reified (Chambers, 1997). Disempowered groups have little access to, input into, or control over processes of knowledge production and their situated knowledge systems are marginalized in favor of generalized, modern, and commercializable knowledge. Although mainstream research processes, and the resulting products of this research, often do have impact, the beneficiaries are largely those who already hold power and privilege in society (Pimbert, 2006). This is especially true in the context of an increasingly corporatized university where academic research is increasingly tied to the agenda of elites in government, military, and industry (Giroux, 2007; Slaughter & Rhoades, 2004).

In contrast, a transformative research paradigm critically rejects the hierarchies of knowledge as reflected in the knowledge transfer paradigm, focusing instead on processes of *knowledge mobilization* that are based on, “reciprocal relationships between researchers and knowledge users for the (co-)creation and use of research knowledge” (Social Sciences and Humanities Research Council [SSHRC], 2011). Through collaborative research processes, researchers work to valorize multiple

ways of knowing in the co-production of knowledge that is mobilized in intentional processes of social change. Academic researchers engage with community and social movement actors as co-enquirers through horizontal processes of research, learning, and action (Kemmis, McTaggart, & Nixon, 2014).

The discourse of *mobilization* resonates strongly with a transformative research paradigm because it normatively suggests that: (a) knowledge should be *mobilized* as a deliberate strategy for social transformation and (b) that knowledge should be *mobilized* democratically *with* and *by* citizens requiring the valorization and reconciliation of multiple ways of knowing. Thus, knowledge mobilization embodies what Visvanathan (2005, p. 92) calls cognitive justice, which asserts, “not only the rights of dissenting scientists within a dominant paradigm, but also the rights of alternative epistemologies and alternative sciences.” This struggle for cognitive justice and knowledge mobilization in the academy, however, exists in tension with the institutional and cultural expressions of the knowledge transfer paradigm.

Knowledge mobilization in the context of the impact agenda and academic capitalism

As neoliberal governance increasingly influences universities, there is a growing trend in academia to emphasize applied research that is directly tied to commercial potential (Greenwood, 2012; Slaughter & Rhoades, 2004). For example, in the UK, this has become institutionalized in what is referred to as the “Impact Agenda” and operationalized through the audit and performance management systems of the higher education sector (Rogers, Bear, Hunt, Mills, & Sandover, 2014). Currently, 20% of higher education state funding in the UK is allocated to universities based on their demonstration of institutional impact (REF, 2011, cited in Rogers et al., 2014). While this emphasis on real-world impact ostensibly provides opportunity to valorize applied outcomes of general benefit to society, including transformative research approaches, critics have raised two primary concerns.

First, issues of power, privilege, and cognitive justice are absent from the impact agenda (Pain, 2014; Pickerill, 2014; Slater, 2012) where questions related to who controls and carries out impactful research, and who the beneficiaries of such research will be, are rarely considered. Within the wider context of neoliberalism and social inequality, any research agenda that fails to explicitly incorporate a critical and reflexive analysis of power, privilege, and social justice into their choice of research questions and methodologies, will inevitably favor more powerful actors who are better positioned to shape and capitalize on high-impact research. The impact agenda thus risks reproducing and even deepening the inequalities that pervade wider society.

Second, the audit systems of the impact agenda are rooted in a knowledge transfer paradigm that obscures many of the fundamental practices, processes, and products of transformative research and excludes these from consideration

in the reward structures of academe (Slater, 2012). Many of the important processes of transformation unfold over long time scales and involve valuable but difficult-to-measure social and cultural impacts that are externalized through the narrow and rigid measurements of these audit systems (Pickerill, 2014).

These critiques exemplify how any commitment to knowledge mobilization is in tension with, and systemically marginalized, by knowledge transfer *systems* and *discourses*. First, academic audit, performance evaluation, and management *systems* privilege elite “scientific expertise, peer review, and non-interference” (Estabrooks et al., 2008, p. 1068), esoteric writing styles, obscure academic publications and applied commercializable research *on* rather than *with* knowledge users. These narrow disciplinary systems reflect institutional manifestations of the knowledge transfer paradigm that prevent community engagement in research processes. Second, these systems interact with entrenched *discourses* that are used to police the boundaries of legitimacy and to discipline academic labor by othering transformative research as being non-academic, lacking in theory, biased, or as lacking rigor (Gabriel, Harding, Hodgkinson, Kelly, & Khan, 2009; Herr & Anderson, 2014).

Although the knowledge transfer paradigm continues to dominate in academia, and continues to be reflected in the impact agenda, it has also been widely challenged and important gains have been made to open space for more engaged and democratic research. In Canada, for example, research located within a knowledge mobilization paradigm has been generously supported by funding through the SSHRC’s Community University Research Alliance program and now the Partnership Grants program (Heisler, Beckie, & Markey, 2011). Initiatives such as the Community-Campus Partnerships for Health and the American Sociological Association (ASA) have developed tools to support scholars in pursuing a knowledge mobilization approach (ASA Task Force, 2007). These counter-hegemonic discourses, methods, literatures, and communities of practice are fostering the conditions for more authentic and meaningful forms of engagement in the space between universities and civil society.

A reflexive case study

Our PAR project involved a diversity of contributors including: 35 community members, 11 undergraduate students, six graduate students, and two university-based researchers, each contributing in various capacities and forms to the hybrid research program. The research was based out of the rural town of Clearwater, located approximately 200 km southwest of Winnipeg in the Canadian Prairies. The formal PAR project builds on a longer standing relationship between a grassroots organization called the Harvest Moon Society and the Environmental Conservation Laboratory at the University of Manitoba.

PAR involves a spiral of cycles of inquiry that generally unfold based on the following phases: (a) Plan: identifying a problem and planning an action intended to bring about a desired change; (b) Act: acting to address the desired change;

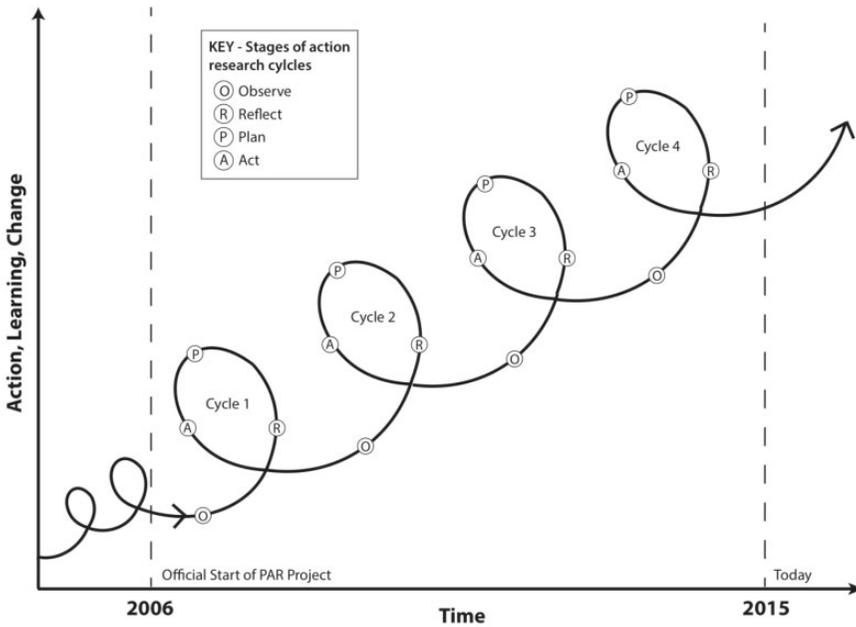


Figure 1. Each iterative cycle increases the knowledge and capacity for action as questions are identified, addressed, and resolved.

(c) Observe: observing the consequences of this action; (d) Reflect: reflecting on the meaning of these observations to inform the planning of future action (i.e. the next cycle of inquiry) (Kemmis et al., 2014). Each cycle emerges from and builds on the last, and over time leads to increased capacity for learning, action, and change. Our PAR project involved four main iterative cycles of inquiry, themselves made up of multiple sub-cycles of inquiry (Figure 1).

Cycle 1 examined how farm households responded to the bovine spongiform encephalopathy (BSE) crisis, or “mad cow” crisis in the Canadian Prairies, identifying direct farm marketing and cooperatives as important adaptations. In cycle 2, we developed a cooperative direct farm marketing and education initiative in southwestern Manitoba that emerged in part as a collective adaptation strategy to the BSE crisis. In cycle 3, we reached out to learn from, and share our own knowledge and experience with, similar initiatives. In cycle 4, we developed a political campaign to advocate for scale-appropriate policies and food safety regulations to support the development of local sustainable food systems.

While Figure 1 depicts a neat and smooth spiral of iterative cycles, these kinds of illustrations tend to hide the messiness and emergent nature of PAR research processes. Indeed, each moment in the research process involves a recursive

attempt to grasp issues that are only partially known in the moment but that become clearer, often retrospectively, through ongoing cycles of inquiry. In the following sections, we illustrate the relationship between these cycles, the range of participants involved, and the ways by which outcomes-products and process were mutually constitutive.

Cycle 1—Farm household adaptation to BSE in Canada. On 23 May 2003, the discovery of BSE in a single cow in Canada triggered a socio-economic crisis for Canadian farm families that extended over the following decade (McLachlan & Yestrau, 2008). In response, we developed a study to evaluate the impacts of BSE in western Canada and the adaptation strategies used by farms and rural communities. We used a mixed methods approach including a large-scale mail-out survey ($n = 826$), focus groups ($n = 12$), and individual interviews ($n = 27$). We found that direct farm marketing, cooperatives, and value-added niche food production were important adaptations. The study resulted in one peer-reviewed publication (Anderson & McLachlan, 2012a) but, importantly, provided the seed for the next cycle of inquiry and a point of departure for our next cycle of inquiry that would focus on developing the Harvest Moon Local Food Initiative (HMLFI)—a cooperative local food initiative that would increase opportunities for family farms to market directly to consumers.

Cycle 2—The HMLFI. In August 2006, as a part of an experiential learning university course, we toured three local livestock farms where we discussed our emerging analysis of the BSE crisis (from cycle 1) to explore the resonance of the analysis with local farmers (who had participated in the original research). Each of the farmers was minimally engaged in direct farm marketing and like many farmers in our large-scale research, attested to the importance of direct farm marketing and expressed enthusiasm over the growing urban interest in local food. However, they raised concerns that the time and resource demands of direct farm marketing were prohibitive. Based on these preliminary discussions, we began to work with these farmers to explore a farmer-led cooperative approach to local food.

We held an initial meeting with farmers, presenting case studies of potential models and findings from research on local food initiatives and different approaches were debated and negotiated. These planning sessions were carried out through a series of iterative participatory meetings with local farmers and community organizers and ultimately resulted in the formation of the HMLFI. As the HMLFI, our three goals were to: (a) *build local food economies* to improve farmer livelihoods; (b) develop *education, outreach, and training* programs related to sustainable agriculture and local food; and (c) to *share our experiences* to help other groups to develop similar initiatives (HMLFI, 2007). This stage of reflection and planning would provide the foundation for the successive rounds of action research and the diverse outcomes generated over the next six years.



Video 1. Launch of the Harvest Moon Local Food Initiative at the fall music and rural culture festival in 2008. (Available at: http://www.dailymotion.com/video/x8uv5e_harvest-moonlocal-food-initiative_people).

The HMLFI went through two subsequent sub-cycles of inquiry that involved the implementation of two different models of cooperative local food distribution. The first sub-cycle lasted from December 2006 to February 2010 and focused on selling wholesale products to restaurants and retail stores (Video 1). However, the initiative ultimately collapsed because of divisions within the group (see Anderson, McLachlan, McDonald, & Gardiner, 2014).



Video 2. Harvest Moon Local Food Initiative video (Available at: <https://vimeo.com/24041463>).

Applying the learning from the first round of inquiry, a second sub-cycle of inquiry led to a decision to re-establish the HMLFI in April 2010. In order to arrive at this plan, we considered the experiences and ideas of HMLFI farmers with models and concepts from the academic literature on food hubs, solidarity purchasing groups, alternative food networks, and research on similar groups. The HMLFI model focuses now on building direct exchange between farmers and eaters and the involvement of urban organizers in managing the initiative (Video 2). As of October 2013, the HMLFI involved 12 farm families and 11 buying-club organizers supplying over 90 different locally produced products. Each month, eaters place orders for food on-line (www.harvestmoonfood.ca) and orders are delivered monthly to over 435 families.

To reach the second HMLFI objective, *to develop education, outreach, and training*, our PAR group carried out an extensive education program to communicate our emerging PAR findings and to build capacity related to community organizing, sustainable agriculture, and local food systems in the province. From March 2011 to March 2013, we organized two 72-hour permaculture courses, 41 workshops, 24 fieldtrips, and two university of Manitoba travel courses. Importantly, these education programs involved both professional and non-professional educators and valorized local knowledge, especially of farmers. A university travel course, for example, focused on “local lived expertise” of farmers, indigenous people, and rural people in an immersive experiential learning environment where university researchers play a facilitative role and where academic knowledge (e.g. scholarly readings) is incorporated in minor yet strategic ways. Another program, InFARMation and Beer, involved five free events held at local Winnipeg pubs. These events blended celebration with education and focused on creating dialog with urban eaters on issues related to our PAR project and on promoting practical and political actions to support a more just and sustainable food system. Over a four-year period, 2454 people participated in these training and education programs (994 males, 18 years or older; 1089 females, 18 years or older; 160 males less than 18 years; 211 females less than 18 years).

Cycle 3—Linking, sharing, and learning. The third cycle of inquiry involved a series of case studies documenting other “civic food networks” across western Canada and the USA to inform the development of the HMLFI. As a part of this process, we drew from the academic, gray, and web-based literature to examine different dimensions and case studies of food hubs, buying clubs, and local food initiatives especially to inform the development of the second iteration of the HMLFI. From this review, we examined the successes, challenges, strategies, and concepts employed in other regions in relation to our own experiences and values to inform the next phase of development. Our PAR team visited Oklahoma Food Co-op—the longest standing on-line local food cooperative in North America—to learn from their experience and to exchange ideas. This horizontal exchange proved far more valuable learning than any support offered by expert business development specialists, and provided first-hand insight into new



Video 3. Oklahoma Food Cooperative (Available at: <http://www.youtube.com/watch?v=nz-ALOpAtrc>).

technical and social innovations used in Oklahoma. Our PAR team documented this study trip leading to a report with recommendations that resulted in the development of a new ordering and delivery system and substantial changes to the HMLFI governance structure. These changes were immensely successful and our sales volume tripled in the following year and the study trip continued to shape the development pathway of the HMLFI in the following years. We also generated a short documentary video (Video 3) that we screened at one of our InFARMation and Beer workshops to report back on our study trip and to generate excitement about the impending changes to the HMLFI. This visit to the Oklahoma Food Coop was documented as a part of a cross-case analysis along with three other civic food networks in a subsequent research report (Anderson & McLachlan, 2012b).

To reach the third HMLFI objective (sharing our story), we actively worked to assist others in developing similar initiatives elsewhere in the province and beyond. Our capacity to realize this objective was bolstered by the systematic reflection and documentation of our progress from previous PAR cycles. In 2012–2013, we organized six visioning and focus group meetings with rural agricultural communities in Manitoba to develop plans to support the development of sustainable local food systems in their regions. These workshops resulted in a report entitled *Sustainable Inter-Regional Food Systems* (Laforge & Avent, 2013) and generated one of a number of prefigurative networks that were mobilized in the next, more politicized, cycle of inquiry. We also advised a group of farmers in Saskatchewan as they developed their own farmer-driven local food-marketing group called Farmer's Table.

Cycle 4—The Real Manitoba Food Fight. The fourth cycle of inquiry emerged from a food inspection and seizure on the farm of HMLFI founding members, Pam and Clint Cavers. As a part of the University of Manitoba travel course discussed above in cycle 2, we were scheduled to visit the Cavers' farm. However, hours before the class was scheduled to arrive, government food safety inspectors arrived at the Cavers to "seize and destroy" their locally produced and processed and award winning cured meats.

After hearing news of the raid, the visit to the Cavers' farm tour was cancelled. However, with invitation from the Cavers, the first author arrived with two students who videotaped the confrontation (Video 4). The incident became the basis of further cycles of inquiry. Working with the Cavers and a group of students and farmer-teachers in the course we started a political campaign called the Real Manitoba Food Fight, which continued over the subsequent year. This campaign challenged the provincial food safety regulatory regime on the grounds that it benefited industrial agri-food systems and consequently marginalizes any alternatives (i.e. community, sustainable, small, fair, organic, just).



Video 4. The Real Manitoba Food Fight (Available at: <http://www.youtube.com/watch?v=HIF6sCPMIm8>).

The Real Manitoba Food Fight was launched on 31 August 2013, with the publication of an interactive website www.realmanitobafoodfight.ca. Over the course of six months, the website had 9180 unique visitors and was used to aggregate related news stories, to accept donations, to promote our social media presence (Facebook—578 friends), to gather signatures for a petition (804), and to host a short critical documentary video (Video 4; Anderson, Ventura, & Vanderhart, 2013). Between 7 September and 11 October 2013, we published

seven articles in the popular print media and also in on-line forms. The print-based versions of these pieces were circulated to 184,854 readers.

The resulting public pressure opened new opportunities for cooperation between farmers and the provincial government. On 18 October 2013, an initial meeting was held between the provincial government representatives, producers, and civil society representatives. As a result, the provincial government initiated a public inquiry through the Small Scale Food Manitoba Working Group made up of industry, government, and civil society representatives. The resulting report affirmed the need for reform by identifying the many problems related to agriculture extension, regulations, the quota systems, and the lack of representation in policy-making for small-scale farmers (Small Scale Food Manitoba Working Group, 2015). The report, co-generated by government and civil society actors, is already providing the basis for changes in policy in the province. We have since launched a group called, "Sharing the Table Manitoba" as a platform for farmers, processors, consumers, and other stakeholders to mobilize networks, conduct further research, and to advocate for sustainable local food systems in the province. This cycle was documented as the focus of an undergraduate honours thesis (Ramsay, 2014), which has been disseminated at international academic conferences and is now being written up for publication.

Knowledge mobilization strategies: Layering, building bridges, and using transmedia

In our efforts to transgress the borders between "academic" and "non-academic" knowledge(s) and spaces and to bring together a wide range of actors in our projects, we employed three key knowledge mobilization strategies. The first strategy, *using layers*, recognizes that the complexity, length, and technical language of most academic writing exclude many actors from the processes of knowledge mobilization. Layering involves strategically determining the level of detail, complexity, and language required to effectively communicate ideas and arguments with different types of actors (e.g. professional academics, farmers, policy makers, or the general public). However, layering does not endorse a hierarchy of knowledge based on an a priori assumption that scientific writing and communication is more valuable than applied and reality-grounded approaches. Rather, the question that should determine value, and indeed should create a new hierarchy of knowledge, is: to what use can this knowledge (complex or simple) be used, through processes of social transformation, to create a more just and sustainable world?

In this case study, examples of layering are best demonstrated in the fourth cycle, where we were primarily interested in engaging with the general public in discussions of the impacts of food safety regulation on local food systems and growers. While our interests were on deconstructing the power structures that existed between dominant regimes and grassroots actors, one of our community co-researchers asserted that these more complex concepts (e.g. regime, regulatory frameworks) were poorly suited for engaging with everyday citizens who might be

much less attuned to these issues. Accordingly, it was suggested using shortened text that focused on examples and stories and that employed familiar and accessible language (e.g. family farms and local food instead of regimes), all of which were adopted in our communication strategies. These layers, communicated, for example, in the form of opinion editorials, videos, and blog posts, were arguably far more effective than the more detailed, jargon laden, and lengthy pieces we had originally created. Another example included our use of short graphical and plain language “research briefs” (e.g. Anderson & McLachlan, 2012c). Our cross-linking of these high-impact pieces with the long-form and technical versions generated opportunities for actors to move back and forth among these layers to access a wider diversity of information as needed.

The second communications strategy, *building bridges*, recognizes that different knowledge mobilizers are separated by epistemological, discursive, and disciplinary divides. In order to work across these boundaries, it is necessary to employ key words, examples, metaphors, objects, and discourses that can create bridges between those with different politics, sensibilities, and interests. The use of bridges is especially important for marginalized actors whose ideas are often sidelined by more powerful discourses. For example, “Local Food” was used as a mobilizing concept and bridge early on in our research, which brought together a wider range of farmers and supporters than, for example, if organic agriculture was used which our co-researchers viewed as a more exclusionary discourse.

Using a bridge can draw individuals together into communicative and collaborative spaces and create new productive edges between groups and individuals that share an interest, for example, in rural community development, but whom otherwise might have little in common and rarely exchange ideas. In this space, new opportunities arise for participants to explore more holistic and subtle layers of understanding, opening up new opportunities for learning, knowledge creation, networking, and transformation. Our InFARMation and Beer program provides another example of a bridge and was largely successful because we built connections among individuals by creating an inviting space (e.g. in a pub) and a less structured and informal arena that drew individuals together in dialog around issues related to our research—most of the attendees would never have read an academic paper or attended a more formal conference.

Bridges are functionally similar to boundary objects, which are shared and shareable concepts or things that establish a shared context that “sits in the middle” (Star & Griesemer, 1989, p. 47) between social worlds. They are, “both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites” (p. 393). While boundary objects act to maintain, “coherence across intersecting social worlds” (Star & Griesemer, 1989, p. 393), these bridges are more experimental and less durable. Instead, bridges serve to catalyze moments of transgression and may (or may not) evolve into more durable boundary objects. Like boundary objects, however, these bridges can draw together actors from different social worlds to prompt new insight, innovation, knowledge, and products (Carlile, 2002).

The third knowledge mobilization strategy, using *transmedia*, recognizes that various knowledge users/creators will be more or less receptive to ideas presented through different communication forms and media (Scolari, 2009). A transmedia approach involves telling stories across multiple media where, “each medium does what it does best” and engages with a wider diversity of audiences in different ways (Jenkins, 2006). Gunther Kress (2004) argues that effective communication in the age of “new media” requires the strategic combination of multimodal forms of expression. Transmedia strategies have been highly effective in corporate entertainment franchising, take for example: *Pokémon* (Jenkins, 2006) and *The Matrix* (Jenkins, 2006), which used a wide range of media and forms (written, film, comics, on-line videos, etc.) to recruit and engage followers. While text generally has the effect of erasing the voice of research participants, video and other transmedia approaches provide opportunities for knowledge to be expressed through the voice of a wider diversity of research participants.

We used a combination of unidirectional and interactive transmedia approaches in our campaigns, which allowed us to mobilize knowledge with actors in ways that would have been impossible using conventional outputs only. For example, in the fourth cycle of inquiry (The Real Manitoba Food Fight), *the design* of the campaign name, website, and logo all embodied a transmedia approach. We embedded our critique of food safety regulations in a transmedia parody of the Manitoba government, replacing the provincial bison with a curly-tailed pig, since the focal point of the food fight had been the confiscation of some pasture-raised pork (Figure 2). We further built our case through the use of social media (Facebook), face-to-face meetings, on-line video, Op Eds., blogging, and academic manuscripts. When possible, we cross- or hyper- linked these media, for example, by directing viewers of the video to our website and screening the video on stage at a rural music festival, and finally by embedding the video in a number of forthcoming academic contributions (Anderson, Desmarais, & Ramsay, 2015; Laforge, Anderson, & McLachlan, 2015). Telling our story across media helped us reach a wide diversity of knowledge mobilizers and, when combined, transmedia approaches can simultaneously increase the reach and impact of research while providing a vehicle to give voice to a wide range of research participants.

From transfer to mobilization and back again

Our research program was based in a knowledge mobilization paradigm where we strategically worked to transgress the distinction between academic and non-academic processes and outcomes in deliberate acts of social transformation with a hybrid collective of university and community-based action researchers. We were able to valorize different ways of knowing and to collaborate effectively with a range of knowledge creators in and outside of the academy. However, these knowledge mobilization efforts were always incomplete and were often subtly or explicitly undermined in an academic culture increasingly shaped in the image of knowledge transfer.

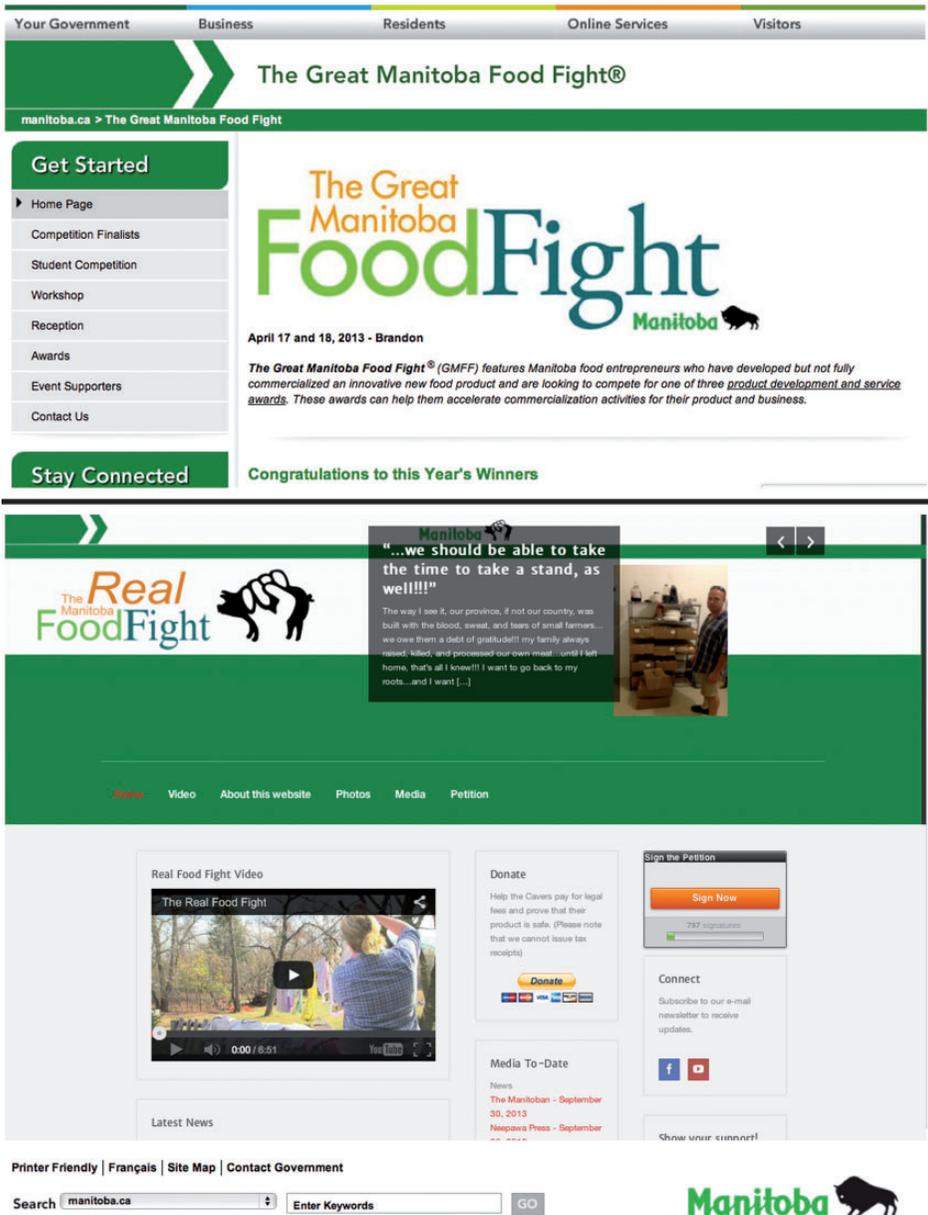


Figure 2. Top: Screenshot of the Manitoba Government's Great Manitoba Food Fight web-page with government logo in top right. Bottom: Political campaign website of the Real Manitoba Food Fight with parodic logo in top left.

Our practice of knowledge mobilization varied over time and space and evolved as our own insights into these different strategies grew. We have generally transitioned from an approach largely grounded in knowledge transfer to one that better reflects the tenets of knowledge mobilization. This transition reflects the reality that transformative research is most effective and meaningful when based on trust-based and organic relationships that are developed through ongoing collaboration over extended periods of time. Early on, in the first cycle of inquiry, our research was conventionally constructed, where university researchers initiated and shaped much of the research and where academic and non-academic activities and outcomes were much easier to distinguish. In the later cycles, a wide range of processes and outcomes were combined and iteratively put to use in and across academic and community spaces. Thus, unconventional scholarly outputs (e.g. videos) and traditional academic outcomes (e.g. presentations at academic conferences, peer review journal articles) were fused and informed one another so that they became mutually dependent and arguably inseparable.

Thus, the Op Ed. titled, “The Two Faces of Local Food” (Anderson, 2013a) drew from the more conventional academic methods and outcomes of the second cycle (unpublished survey and interview data) to locate the Real Manitoba Food Fight within a broader analysis of government policy and local food. The analysis developed through this, and other, popular writing, and video-making is now providing the foundation for a forthcoming journal article (Laforge et al., 2015) and has been further used to inform critical policy briefings (e.g. Anderson, 2013b). This cycle of inquiry was also tracked as a part of an undergraduate honors thesis (Ramsay, 2014) that is being used to inform the strategy of the social movement organizations featured in the report and to develop peer-reviewed academic outcomes (Anderson, Desmarais & Ramsay, 2015). These examples illustrate how products and processes from early cycles of inquiry (academic papers, videos, workshops, etc.) inform and become incorporated into, subsequent processes and products. In this way, the distinction between product and process is deliberately blurred and indeed transgressed over time.

We also employed a range of strategies to draw together *actors* positioned within and beyond the university. We endeavored to draw in and affirm a range of knowers and diverse epistemologies, thus decentering the privilege of academic voice and of science. This involved developing key research questions in collaboration with non-academics often irrespective of any consideration of gaps in academic literature. Through this process, university-based researchers were drawn into what is typically considered to be non-academic space and processes (e.g. coordinating political campaigns, administering a cooperative), to contribute their situated knowledges, professional skills, and institutional resources.

Similarly, community researchers were drawn in various ways into the spaces and processes typically considered to be “academic,” bringing with them their own knowledges and expertise, again creating transgressive moments, processes, and outputs. Academic papers embedded video clips that gave explicit voice to farmers and activists. These videos were further co-edited by academics, students, and

community members into stand-alone videos that circulate through both academic and extra-academic spaces (i.e. Youtube, screened at a festival, embedded in journal articles). In another example, farmers acted as the primary teachers in our experiential learning course. Jo-Lene Gardiner, a farmer and community organizer participated on Anderson's thesis advisory committee for his masters program, valorizing her knowledge and expertise. Gardiner also worked with another farmer (Wayne McDonald) to co-author one of the peer-reviewed journal articles with the university-based researchers (Anderson et al., 2014).

While these strategies were effective in breaking down the knowledge hierarchies that mark academia, we inevitably only achieved partial success. These hierarchies are systemically embedded in publication culture, academic performance evaluation processes, and other institutional and cultural structures that reify hierarchical knowledge transfer processes. The partiality of our efforts to valorize other knowers is, for example, reflected in this article where the outcomes discussed within are clearly claimed by Anderson, who features as the lead or sole author whereas community co-researchers often remain absent or secondary in authorship listings. This reflects the reality that academics have the time and privilege to carry out the labor of writing, but also because the reward structure of academia requires that academics claim ownership of ideas through writing to advance careers and ultimately to support their own livelihoods. Another barrier arose when Anderson transitioned from a Masters to a PhD program and Jo-Lene Gardiner, his community committee member, was disallowed from formally participating in his thesis advisory committee because she didn't hold a PhD degree.

These examples exemplify how the knowledge transfer paradigm often manifests in our own mundane, everyday and often taken-for-granted practices as we conform to the intuitional structures and cultural norms that reify these knowledge hierarchies. In this culture, there is professional risk that comes from working too far outside of the box where doing so often means forfeiting institutional privilege, professional advancement, and employability (e.g. Noy, 2009). More radical transformative research is relatively marginal, whereas most researchers are compelled to perform less threatening and more easily publishable versions of qualitative research.

It is also clear that the knowledge and knowers involved in this research were a reflection of our own embodiment of western knowledges and middle-class gendered privilege. Although this work included the voices of farmers and citizens who are indeed marginalized, we inadvertently excluded voices, epistemologies, and participants in ways that reproduced race, class, and gender-based injustices. To fulfill the full potential of transformative research, it is essential to reflexively address how knowledge mobilization strategies intersect with the broader landscapes of injustice. Indeed we are now exploring ways by which different knowledge mobilization strategies, including using layers, bridges, and transmedia, could provide more appropriate processes to engage with excluded actors including indigenous people and new Canadians (recent refugees and immigrants). Where it is very difficult to conceive of knowledge transfer processes that are more authentically

inclusive, a knowledge mobilization approach opens new possibilities for socially inclusive scholarship.

Final remarks

A transformative research paradigm emphasizes the mobilization of knowledge co-created by a wide range of actors in deliberate agendas for progressive social change. In this article, we critically examined our own knowledge mobilization strategies and processes and proposed three key strategies: layering, transmedia, and building bridges. These strategies disrupt the primacy of scientific communication and the privileged status of elite scientists as the sole transmitters of valid knowledge from the top down. In this way, transformative research becomes a platform for knowledge to be exchanged both horizontally, amongst research participants, but also from the bottom up through communication activities that give voice to those typically excluded from research. The latter may indeed be considered a process of knowledge transfer but represents a reversal of roles where scientists, government, and other privileged actors become the targets of knowledge transfer from the bottom up. However, these transfer processes are always couched as a step in a larger and cyclical process of knowledge mobilization where the ultimate goal is to enroll increasing numbers and diversity of actors when struggling to mobilize knowledge for social change.

Our research program was participatory, pragmatic, and reflective, thus creating opportunities to generate impact with those directly engaged in the research. For example, the farmer-driven civic food network from the second cycle continues today and has had a wide range of important social and economic benefits for participants. It has further been used as a model for similar start-up initiatives in different parts of Canada. Our use of these three knowledge mobilization strategies has enabled us to extend our project to a much broader and diverse audience (through the website, Op Eds., etc.). This also raised public awareness of our research and provided opportunities for drawing new stakeholders into our network and for enabling political change. Our strategic and intentional use of traditional and social media generated public pressure that prompted the provincial government to meet with a wide diversity of actors to begin to develop strategies to support local food systems.

Thus, our multi-dimensional PAR approach involved local processes of community development and network building that provided the basis for more explicit and political efforts to change policies and institutions. This strategic work helped to bridge government and non-government actors in achieving changes in decision-making and policy in the medium term, which is essential to the long-term goal of social transformation. Although many reports on PAR focus on short-term local projects, this medium-term bridging work can generate new opportunities to achieve broader impact.

At first glance, the transformative research paradigm appears to be gaining favor in academia (Burawoy, 2005; Greenwood & Levin, 2007; Kemmis et al.,

2014; Reason & Bradbury, 2008; Shukaitis et al., 2007). It is however clear that the structural and cultural context in the academy (and beyond) substantially discipline scholarly endeavor, promoting conformity to a hierarchical knowledge transfer paradigm that serves the dominant interests. While the growing emphasis on impact in academic research has the potential to open more space for transformative research, it often does little to disrupt the hegemony of scientific authority but rather provides another mode to legitimize the privileged role of professional scientists and elite institutions in having an impact on wider society. High-impact research is carried out in the context of inequitable capitalist societies and does little to question which actors or groups are best positioned to benefit from impact-oriented research and which are likely to be marginalized. Although, there is growing emphasis on such research, there is far too little questioning of impact on whom and by whom.

Any transition towards knowledge mobilization will require deeply reflexive practice that critically analyzes our own situated subject positions and the ways we might be (often simultaneously) complicit and subversive of these hierarchies. Transformative research is an ambivalent endeavor that requires intentionally forfeiting much of our privilege and status as experts and exalted knowledge holders. For university-based researchers, committing to transformative research paradigm will require challenging ourselves, our colleagues, and the institutions we are embedded within. The latter will require alternative evaluation tools that are directly tied to resource allocation (i.e. funding) including those related to impact evaluation, personnel reviews, student evaluation, and promotion and tenure. Within the context of hegemonic neoliberal governance (Greenwood, 2012) and academic capitalism (Slaughter & Rhoades, 2004), it is clear that we will need to act collectively and politically to challenge the institutions and discourses that limit the potential for social transformation.

Our research program, described in this article, is based on a long-standing collaboration among actors positioned both beyond and within the academy and has led to important moments of personal and collective learning and growth for those involved. Over time, our reflective action and iterative cycles of inquiry have incrementally led to greater potential for action, learning, and change. As we employed different and evolving knowledge mobilization strategies and challenged the hierarchies that divided different knowledge mobilizers, we built a robust research network and increased the transformative potential of our work. This has at times been incredibly challenging yet when we foreground social justice and community regeneration in our research endeavors, we are inspired to act collectively in a messy, difficult and partial, yet exciting and entirely necessary, process of transformation.

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