Reconsidering Power in Community University Research Partnerships Through the Lens of Knowledge Cultures

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Abstract: In this contribution we explore the notion of knowledge cultures (KC) in the context of community university research partnerships (CURP), a particular institutional arrangement not previously examined in the literature on KC. Starting with a review of how KC have been conceptualized in various contexts, we develop an analytical framework that accounts for the tensions and conflicts that may emerge between CURP partners stemming from uneven power dynamics. Our analysis emphasizes the knowledge processes existing in diverse settings and geographical regions, extending beyond Western academia.

Keywords: knowledge culture, community university research partnership, community knowledges, institutional/organizational knowledge environment, knowledge setting/practice

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Introduction

A key global development of the 21st century was the shift towards knowledge-based economies where continuous growth relies on generating new knowledge from existing knowledge (Chorev & Ball, 2022). In parallel, we have witnessed a transformation of higher education and knowledge production, marked by the transition from a discipline-based model of scientific knowledge production, also known as Mode 1 (Gibbons, 2013), towards 'Mode 2' and 'Mode 3' research paradigms. The former is "socially distributed, application-oriented, trans-disciplinary and subject to multiple accountabilities" (Nowotny et al., 2006, p. 39), while the latter is based on the acceptance and fostering of a pluralism of different knowledge and research paradigms, "interdisciplinary thinking and transdisciplinary application of interdisciplinary knowledge" (Carayannis & Campbell, 2019, p. 21). These shifts in approaches to knowledge production have led to the emergence of *engaged research* –that is, research conducted *with* community for the purposes of mutual benefit. This approach, nowadays embraced by most disciplines, can be carried out through various methodological frameworks, including community-based research (Bishop & Jany, 2018), patient-oriented research (CIHR, 2015), participatory research (Martinez-Vargas, 2022), collaborative research (White et al., 2023), and participatory action research (Littman et al., 2021). Most engaged research initiatives share the goal of democratizing knowledge in its production, access, and application (Fontan et al., 2017). In this new space, where multiple epistemologies are accepted and knowledge is recognized in a variety of conduits and used as a tool to enact a more socially just and healthy world (Hall & Tandon, 2015), community university research partnerships (CURP) have expanded remarkably internationally as an effective approach for communities and-universities to co-create knowledge (Cornish et al., 2017, KFPE, 2014; Stevens et al., 2013; Winterford, 2017).

In the era of the knowledge society, CURP are a central component of the engaged research approach, as they provide an arrangement that brings university scholars into involvement with those in the community who are often the most disempowered (e.g., newly arrived immigrants, individuals experiencing homelessness, people living with disabilities, etc.) (Silka et al., 2008). CURP may be established to improve links between research and practice, facilitate interventions, ensure evidence-based policy, as well as in pursuit of shared interests or out of practical concerns such as jointly seeking funding (Aniekwe et al., 2012). Furthermore, national or regional policies may mandate or incentivise that universities establish formal partnerships with communities, reflecting perceptions around universities' social responsibility or their perceived role in social and economic community

development (Sathorar & Geduld, 2021; Murphy & McGrath, 2018; National Education Policy, 2020, Venugopal et al., 2024).

Notwithstanding the new-found enthusiasm for engaged research, it must be acknowledged that the embracing of the knowledge economy and society has also brought about fundamental changes in "the social relations associated with knowledge acquisition and use, along with the capacity to define and recognize socially or economically valued knowledge", to the effect that these relations "tend to be highly exclusionary and hierarchical" (Wotherspoon, 2012, p. 59). As the key site at the "cultural core of the knowledge society", the university today holds immense status and power-over all other forms of knowledge, including knowledge creation processes (Frank & Meyer, 2020, p. 63). These extant power disparities, prominent at the institutional level and among individual CURP representatives, are replicated and inherent in CURP. Power imbalances not only influence the role of partnership members in the entire research process, but also create hierarchies of knowledges based on existing institutional or socio-cultural norms and assumptions (Hall et al., 2011; Tremblay, 2015; Sullivan & Skelcher, 2002).

CURP have been presented as inter-organisational/institutional arrangements able to involve university and community partners in a mutually beneficial process, effecting positive social and institutional change (Hall et al., 2015). What seems often to be omitted are the structural and procedural conditions from and in which CURP partners operate; that is, the power inequalities existing in the research process, related to, for instance, roles and relationships, artefacts and discourses, partnership configurations and transformations over time, and partners' identities and status (Chouinard & Cram, 2020; Cornish et al., 2017; Zurba et al., 2022; Muhammad, & Wallerstein, 2015; Wallerstein, 1999). Failing to fully recognise the power dynamics and related tensions between university and community partners bears the risk of reaffirming and amplifying certain voices and knowledges while excluding others. When this occurs particularly involving those already marginalised and experiencing structural disadvantages, the real benefits that CURP can bring become – unintentionally – undermined (Cornish et al., 2017). We introduce here the notion of *knowledge culture* as a means to approach the more analytical and practical questions around how to address power inequalities between a wide range of stakeholders (some with divergent interests and values) in research partnerships. We conceptualize knowledge cultures as embedded in the traditions and history of both, their participating members and partnership configurations, and therefore including their own intra- and inter-organisational structures, alongside roles, division of labour, norms, formal and informal arrangements and mechanisms, collective beliefs, (im)personal interactions/relations and cultural forms – e.g., images, symbols, heroes, rituals, and vocabulary/language.

As an initial working definition, a knowledge culture can be understood as the set of formal and informal roles, structures, norms and practices, shared meanings, and cultural forms (e.g., language, symbols, rituals), which influence how knowledge is understood, valued, assembled, shared, and acted upon in a specific setting. In this paper, we specifically outline a theoretical framework for the notion of KC in the context of CURP, yet one not previously considered in the literature on KC. In the mainstream literature, knowledge culture is often defined in relation to a unified or single organizational arrangement to indicate, for instance, how organizational culture affects the way knowledge is valued and shared (Mas Machuca & Martínez-Costa, 2012), a set of organizing practices (Knorr-Cetina, 2007), or the internal sense-making processes and structures of meaning (Tsouvalis et al., 2000). CURP, however, are not necessarily structured by a singular organisational or occupational culture, nor are they constrained by organisational boundaries. Rather, CURP are made up of at least two organizations or entities, with typically distinctive structures, norms, processes, interests, and goals, which are called upon to co-create alternative knowledges drawing on local, community-based, and multiple epistemological resolutions (Hall et al., 2018; Tandon, 2005; Fransman et al., 2021). Likewise, CURP members may have an organisational culture in common alongside another unique occupational identity linked to the site of their primary affiliation.

In CURP, the boundaries between diverse forms of knowledge(s) are fluid or porous and the processes of knowledge production are either constraint or enabled by the rules, norms, and values in which knowledge is created (Tsouvalis et al., 2000). At the same time, there is an additional imbalance present in the extant power relations between Western 'expert' knowledge and 'other' forms of knowledges. It is these power imbalances that to date have remained largely unresolved in the literature on and applications of CURP, and which require a careful exploration of how the different knowledge cultures present in a CURP are conceived of and understood across and between partners.

Our work is driven by the believe that fundamental to building trusting and respectful knowledge partnerships in CURP is that all parties involved in the co-construction of knowledge recognise the differences in their respective KC. Failure to understand that the ways knowledge is validated and used differ in academic and non-academic settings contributes to a perpetuation of the power imbalances noted above and places a roadblock on the bridges to working together. The development of an analytical framework for the study of knowledge cultures in the context of CURP, especially when they involve organized communities (e.g., non-for-profit organizations) with a particular professional/practical expertise and body of knowledge, must thus provide the possibility to also study conflicts, tensions, and pow-

er inequalities, as they exist in CURP. We argue that the lens of *knowledge cultures* can contribute to a better understanding of the power relations at play in CURP, and eventually lead to transforming and redressing the extant hierarchies imposed on different knowledges. We further propose a shift in emphasis from viewing the organisational culture of CURP as holistic to a perspective that recognizes changing, dynamic, and conflicting interrelationships among varied sub-cultures and across different (micro, meso, and macro) levels. In turn, such a pivot will aid higher education institutions and community-based organizations to work together more productively and equitably, despite operating from different (even conflicting) worldviews.

To develop our analytical framework, we drew on several sources, and we structure this contribution in a similar order. We first situate our discussion of CURP on studies about occupational culture that offer new interpretations and bring to light the existence of subcultures within and across organizational boundaries, each of them with a unique body of knowledge that is required to perform a particular set of tasks. We then examine existing definitions of KC, primarily in the organizational literature but also in cultural and social studies, where the term knowledge culture is used productively. In recognizing the limitations of looking solely to the Western academic literature, we also review local literatures and community contexts from the Global South and the Excluded North.[1] Methodologically, this ensures the framework's ability to address how the diverse ways of knowing in communities, social movements, and community organizations are validated, when higher education institutions are otherwise seen as the place where 'real' knowledge is created. We then present our theoretical framework and conclude with remarks on future work to be done. A detailed application of the analytical framework presented in this article can be found in Lepore, Hall and Tandon (2024).

Structural and procedural conditions of CURP – Communities of practice and power

The notion of knowledge culture (KC) is typically equated with business culture in general, where existing knowledge cultures are deployed as mediators in the implementation of knowledge management systems and routines (Ahmad & Hossain, 2018) within a closed or limited system (Dickinson, 2013; Dilmaghani et al., 2015). Over time, the term knowledge culture has be-

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[1] The term *Excluded North* refers to marginalized or underrepresented regions or communities within the Global North (i.e., North America, Europe, and parts of East Asia). These excluded areas or communities (e.g., Indigenous peoples of North America) often face socio-economic challenges, lack of political representation, and limited access to resources and opportunities, similar to marginalized communities in the Global South.

come adopted as a key principle of knowledge management by most companies, as well as within the knowledge management literature (Miklosik et al., 2019), and across industries including the higher education sector (Dzisah & Etzkowitz, 2012). With Travica (2013), we observe a shift to explore the complex character of knowledge itself and its implications on how to conceptualize KC. He proposes the following basic definition: "Knowledge culture is a form of organizational culture that combines elements of individualistic, group and macro-organizational cultures to facilitate a heedful management of the entire knowledge management process" (p. 95). With this definition, Travica (2013) puts emphasis on a combination of micro-, meso-, and macro-cultural aspects that facilitate and represent knowledge activities (e.g., knowledge generation, validation, diffusion, utilization, and evaluation) and forms of knowledge that correspond to different types of organization (i.e., bureaucracy, decentralized companies, small business and universities, and project-driven firms). This broadened understanding and framing of knowledge cultures provides a useful heuristic to identify requirements for processes entailed in "managing" knowledge within organizations and aligns with our understanding that a knowledge culture entails values, beliefs, and assumptions while also depends on structural supporting factors. Travica's approach to knowledge culture, however, remains less suitable to capture the dynamics and particularities of knowledge processes within CURP, as this definition is developed for the economic domain and, importantly, from the view of the organization as a singular entity.

A CURP can be conceived as a group of people bonded together by shared expertise and passion for the same type of work. This bond is characterized by values, norms, identities and common meanings, a perspective also reflected in the notion of occupational communities or communities of practice (Wenger & Snyder, 2000; Kalliola & Nakari, 2007). Such a community generates, maintains, and reproduces a distinctive stock of knowledge – its primary 'output' – that provides members with identities and significant reference groups both within and outside their respective "home" organization, such as a civil society organization or higher education institution (Gregory, 1983; Wenger & Snyder, 2000). It is reasonable to assume that people doing similar work, such as co-producing knowledge within a CURP, share a common jargon, similar approaches to tasks, and a unique repertoire of routines and procedures, symbols, gestures and stories, which define similar attitudes and expectations related to the work to be performed and the context in which it is carried out (Kwantes & Boglarsky, 2004). A community of practice, like a CURP, certainly contributes to the development of collective identities. However, it might also hold the potential for conflict and power struggles between the different contributing groups or individuals within the CURP, given that status and control are negotiated between communities within an

organization and involved partners (Bechky, 2006). One potential source of conflict and power inequalities lies, for example, in the way some research partnerships assign university researchers the so-called 'expert' status, and in turn limit community partners' decision-making authority and control over equitable resource distribution (Fransman et al., 2021).

Insights from the literature of occupational cultures help shed light on the existence of sub-cultures within and across organizational boundaries, each of them with their own structures of meanings and different ways of developing and maintaining group identity among its members (Gregory, 1983; Kwantes & Blogarsky, 2004). The inherent values and ideologies – i.e., feelings that are often unconscious and manifested through practices or cultural forms such as symbols, heroes, and rituals – are at the core of any culture (Hofstede et al., 1990; Trice, 1993). In our case, we will refer to these as occupational and organizational (sub)-dimensions of knowledge cultures.

The related practices are, of course, carried out by individuals or groups of people, which may be seen as "a constitutive force that operates in the interface between political-economic efforts and individuals' agency" (Nerland, 2012, p. 27). Both, the academic and the community-based partner of a CURP each represent a site of practice where individuals learn as well as replicate and express their respective structures and processes used to organize knowledge and express themselves through shared practices.

We recognize that individuals on the university-based side of a CURP have recently been exposed to shifts in labour distribution and work conditions, along with intensified competition, in part due to the massification and internationalization of higher education over the past decades (Altbach et al., 2017; Altbach & Knight, 2007; Chan & Fisher, 2008). Now under increasing managerial controls and with the introduction of audit cultures, the university as an organizational site of research and scientific work has undergone significant transformation often in pursuit of key performance indicators, such as number of academic publications, rankings of journals in which they are published, and number of citations, to measure the 'value' of individual academic work (Acker & Webber, 2017; Aspromourgos, 2015; Olssen & Peters, 2005; Willson, 2018). Yet while these factors may pose challenges to academics engaged in CURP in terms of weighing priorities, they make mutually beneficial exchanges between communities and universities not impossible – provided that researchers identify, acknowledge, and balance power dynamics when partnering with communities (Nelson et al., 2015; Reed & Rudman, 2023). Unaddressed expressions of power inequalities easily persist in knowledge creation collaborations, especially in relation to structures and processes, roles and relationships, artefacts and discourses, partnership configurations and transformations over time, and partners' identities and status. These challenges are further complicated by issues of

gender, race, abilities, urban-rural differences, language, and social class, all of which may impact the way people engage with research and knowledge, potentially hindering the transformative promise of CURP (Chouinard & Cram, 2020; Cornish et al., 2017; Zurba et al., 2022; Muhammad & Wallerstein, 2015; Wallerstein, 1999). Our work and framework thus contribute to developing a definition of knowledge culture appropriate for CURP settings, with the aim to better identify such power differentials and leverage points to address them.

Defining Knowledge Culture

Review of Western literature

As a compound of two loaded words – i.e., knowledge and culture –, the term is in many ways fuzzy (Liebert, 2016). Adding to this vagueness, in some instances knowledge culture is used interchangeably with knowledge regimes, culture of knowledge, cultural knowledge, or also high culture – that is, the accumulated scientific knowledge of a specific topic or domain (Bartash, 2018; Harwood, 2019). From this richness of uses, we have extracted those theoretical groundings of knowledge culture as a concept in Western literature most applicable to CURP. For example, Oliver and Reddy Kandadi (2006) developed a framework to account for ten factors affecting the knowledge culture of an organization, including organizational structure, leadership, reward systems, and time allocation. Their key argument is that effective knowledge cultures must be nurtured through careful consideration of each of these factors, and that developing a knowledge culture requires sufficient allocation of time for learning, collaboration, and sharing, including supporting communication infrastructures. The findings of this study acknowledge some of the logistical and day-to-day contexts that either support or hinder successful collaboration between research partners. Knowledge cultures are actively created and upheld by both participants and infrastructures, an observation that we have found applies to the context of CURP.

Continuing from this argument, Svetlana & Jucevičius (2011) put forth that knowledge culture is a multi-level structure, combining "cultural features (culture), typical to organizations (organizational culture) that stress the importance of knowledge and its effective management (organizational knowledge culture)" (p. 533). The authors argue that knowledge culture as a concept also entails attributes at each of these three levels: i) artifacts, such as the physical environment, creations, and rituals; ii) espoused values, that is, the settled ways of accepted norms, attitudes, and beliefs; and iii) basic assumptions, understood as basic values accepted without proof. The co-con-

struction of knowledge in the context of CURP typically involves different structural/institutional levels, and these different spheres are not limited to either ideas and beliefs, or a physical infrastructure.

Mas Machuca and Martínez-Costa (2012) further explore the values that comprise KC, namely "trust, transparency, flexibility, collaboration, commitment, honesty and professionalism" (Mas Machuca & Martínez-Costa, 2012, p. 30). Specifically, they find that trust is the most relevant value in a KC, followed by transparency and flexibility. The authors observe that groups of values (called 'cultural factors') support people to share knowledge. The study shows that knowledge culture values do not exist in isolation but interact with each other, creating (or not) a trustworthy atmosphere. This is particularly relevant to the context of CURP, where stakeholders – with their own values, biases, and interests – engage with each other in typically power-imbalanced settings. With perceptions of trust, professionalism, flexibility, and transparency varying within an organization, differences in these value-driven aspects are even more pronounced where universities and community partners must open and share their respective knowledges to collaborate effectively and safely. Another relevant takeaway from this work is the observation that the term culture encompasses values, norms, and actions of the environment in which knowledge co-creation takes place.

A related notion to knowledge culture is knowledge governance, which suggests that "understanding rules around knowledge-based processes can help navigate complex relationships between science and practice" (van Kerkhoff & Pilbeam, 2017, p. 32). This concept explores how knowledge-based processes are shaped by formal and informal rules and conventions and, importantly, reaches beyond the limitations of the singular organization. The linking of knowledge creation practices to politics, history, and institutions aligns with CURP dynamics, through its consideration of the complexities inherent within governance arrangements aimed at "engaging actors in innovative ways of solving societal issues" (van Kerkhoff, 2013, p. 84).

The term knowledge culture is also used productively in the fields of social and cultural sciences and humanities. Studies in these areas further broaden the understanding of the processes that validate or replicate a KC. For example, Tsouvalis et al. (2000) examine the inherent rules of knowledge culture that structure what counts as 'legitimate knowledge'. The authors explore how the introduction of yield mapping technology in precision farming agriculture resulted in re-negotiations within and between the knowledge cultures of academics and farmers around representations of reality (i.e., the problematization of 'low-yielding' versus 'high-yielding' areas) and decision-making based on this new reality. In this sense, Tsouvalis et al. (2000) argue that "sense-making is a social activity […] suffused by moral judgements and power relations" (p. 922). Central to their conceptualization

of knowledge culture is the notion that this is not a theoretical or technical form of knowledge, but rather that it "provides a means for the interactions with others that instructs them about the cultural significance [an object, practice, or idea] has for the community of which they are a part" (Tsouvalis et al. 2000, p. 912).

Relatedly, Somers (1999) argues that "claims to knowledge and truth are [...] culturally embedded – that is, mediated through symbolic systems and practices" (p. 125). In her study, knowledge culture represents the conceptual sites holding both knowledge – i.e., that which is known to be true – and culture – i.e., the relational patterns of symbolic systems and schemas. A knowledge culture can thus be analysed by identifying "the degree to which cultural codes shape rules for including and excluding evidence, its epistemological divides and demarcations, and its modes of structuring temporal and spatial patterns" (Somers 1999, p. 127). Cultural structures consistently interact with, and imprint themselves onto, other political, social, or economic structures. Similarly, some knowledge cultures can achieve a degree of imprint to the subsequent exclusion of other knowledges or KC, an observation that reminds of the power dynamic challenges of multiple knowledge cultures within CURP.

Finally, Peters and Besley (2006) introduce the term knowledge culture in their work on higher education, knowledge, and economy. The authors specifically focus on social learning and development in the context of the knowledge economy/society. They define knowledge culture as "the cultural preconditions that must be established before economies or societies based on knowledge can operate successfully as genuine democratic cultures" (2006, p. 29). These preconditions include trust, reciprocal rights as well as responsibilities between different knowledge partners, institutional routines, regimes, and strategies. We agree with their understanding that knowledge cultures "embody culturally preferred ways of doing things, i.e., learning styles, processes, economies, and systems often developed over many generations" (Peters & Besley, 2006, p. 29). However, in the context of CURP, we stand for a conceptualization of knowledge culture that accounts for knowledge(s) as understood beyond Western academia and encompasses community or experiential knowledges that fundamentally differ from the view of knowledge as a commodity.

Community-based understandings of Knowledge Cultures

Our review of the concept of knowledge culture sourced from Western academic literatures and an overly Eurocentric knowledge base provide useful but limited perspectives and elements for the development of our analytical framework. To better reflect the reality and environment of the context of many CURP, and to build a more inclusive understanding of what may

constitute a knowledge culture beyond the preceding literature review, we felt the need to also draw from the vast wisdom of the diverse academic and non-academic communities in the Global South and the Excluded North. In our own work, we use the term *community knowledges* as a shorthand to differentiate from otherwise Western academic knowledge (see Lepore, Hall & Tandon, 2024). We intentionally use the plural term *knowledges* to recognise the significant role the millions of Indigenous peoples and local communities hold in sustaining the diversity of the world's cultural and biological landscape (UNESCO, n.d.). Our understanding of knowledge culture has been further shaped and deepened through studies of and learnings from traditional knowledge (Hiebert & Van Rees, 1998; Four Directions Council, 1996; Opheim, 2018), Indigenous knowledges (Dei, 1993; Battiste, 2002; Nakashima et al., 2017; Ndlovu-Gatsheni, 2013; Odora Hoppers, 2021; Kambon, 2020), Latin American ancestral knowledge (Chamorro & Sicard, 2021; Mendiwelso et al., 2020), African Indigenous knowledge systems (Wyk, 2012; Tella, 2007; Zhu & Ringler, 2010; p'Bitek, 1969; Genis, 2019), tribal knowledge systems in South Asia (Gangadharan, 2021; Reddy, 2011; NIRMAN, 2017; Kardooni et al., 2014; Saini, 2016), as well as concepts of tacit and experiential knowledge (Polanyi, 1983; Borkman, 1976; Pols, 2014).

Generally overlooked by the Western knowledge culture literature, these contributions make evident that community knowledges are unique to a given culture, group, or society, and form the basis for local-level decision-making in agriculture, health care, food preparation, education, natural resources management, as well as social, economic, and political organization. Their value stems in part from this localness, not only for the culture and context in, and from, which they evolve, but also for scientists and planners striving to improve conditions in local communities (Warren, 1991). The validity of community knowledges is demonstrated by the survival techniques that have been successfully used by countless generations over time within the local space. It does not, therefore, need to be further authenticated by using the criteria of modern occidental science (e.g., peer review publication processes).

Another key feature is that community knowledges are transmitted through a diversity of conduits: poems, proverbs, documents on land ownership and access, music and dance, practices (harvesting, hunting, housing, planting), religion, ceremonies, arts and crafts, governance, sacred sites, local languages, and more. These different channels and media are essential to form a particular knowledge culture. They contribute to building collective memory (Genis, 2019), instilling a sense of pride, and helping to establish an identity (Mvanyashe, 2019). They also foster the nurturing of relationships and the sharing of knowledge in ways consistent with traditional worldviews and cosmologies (Iseke, 2013), ensuring minimal livelihoods for local

people (Akullo et al., 2007), and supporting the resolution and management of conflicts (Jendia, 2019; Tshimba, 2015).

In the context of CURP, community knowledges may be represented in an organized format (e.g., through an Indigenous organization partnering with a university), or more informally/unstructured (e.g., through the participation of community-based individuals and families in a research project). Either way, their presence introduces a rich diversity and breaks open the notion of CURP as a self-contained, singular organization or one-dimensional community of practice, with only one KC. While communities around the world have begun to assert "a kind of cultural and intellectual sovereignty" (Marker, 2019, p. 1), community knowledges remain at risk of being appropriated, suppressed, or marginalized by Western academic KC, even in a CURP setting. Using the words of Kollmar-Paulenz (2016, p. 233), one core value of our framework is to ensure that non-European knowledge cultures "do not emerge out of their obscurity and come into existence only in their relation and response to the encounter with Europe." Our conceptualization of knowledge culture is thus grounded in the global diversity of understandings of knowledges. The foregrounding of the environment that facilitates knowledge production, use, and transmission allows knowledge and its creation to be understood as a set of practices that comprises aspects of the local environment and its social, political, and philosophical categories (Knorr Cetina, 2007). This perspective further reveals the existence of diverging epistemic cultures or practices, connected with creating and verifying knowledge, including in the context of CURP (Knorr Cetina & Reichmann, 2015).

A Conceptual Framework for CURP: Knowledge Culture as A Local Practice

Knowledge cultures in CURP settings

Our contribution to the understanding of knowledge culture in CURP contexts builds on the groundwork of Knorr Cetina, who defines the term as "the set of practices, arrangements and mechanisms bound together by necessity, affinity and[/or] historical coincidence" (2007, p. 363). This view is echoed in Connell's notion of a *knowledge formation*; that is, "a set of concepts, information and intellectual procedures that provides the framework for many specific knowledges and applications and knowledge [that is also] a socially realized episteme [that] involves the set of social practices, organizations and institutions through which the episteme is brought into being, sustained, and developed" (2022, p. 3). Similarly, Somers (1999, p. 132) identifies different varieties of knowledge cultures, that could describe cer-

tain practices: knowledge culture as the narrative structures that arrange relational elements in temporal and location patterns; knowledge culture as patterns of distinction or opposition, such as what criteria determine what is natural versus not-natural; and knowledge culture as metanarratives, that is, naturalized cultural forms no longer accountable to otherwise applied standards of rigor, and thus becoming "more foundational" knowledge than other knowledge(s).

Based on the factors and aspects of the various understandings of knowledge culture that emerged from the literature review as relevant to the context of CURP, we thus conceptualized **knowledge culture** as

> a set of local value-based practices, rules and beliefs, which, in a given organisation, community, area of professional expertise and/or discipline, create and reinforce shared meanings, expectations, identities and generalised rationales about knowledge production processes (creation, validation, dissemination, and use). A knowledge culture as it relates to CURP is embedded in the traditions and history of both, its participating members and its partnership configuration, and thus includes its own intra- and inter-organisational structures, alongside roles, division of labour, norms, formal and informal arrangements and mechanisms, collective beliefs, (im)personal interactions/relations and cultural forms – e.g., images, symbols, heroes, rituals and vocabulary/language. These cultural elements shape the way knowledge production is performed within and across organisations and/or communities in any given CURP setting (Lepore & Jenni, 2024, p. 30-31).

Analytical framework

Community-university research partnerships (CURP) typically contain a wide variety of sub-cultures, each with their own set of values, ideologies, and cultural forms. In addition, CURP are not necessarily structured by a singular organisational or occupational culture, nor are they constrained by organisational boundaries. Likewise, CURP members may have an organisational culture in common alongside another unique occupational identity. Our view of CURP organisational cultures thus holds the changing, dynamic, and conflicting interrelationships among varied sub-cultures and across different (micro, meso, and macro) levels. We believe that this shift allows us to recognise the aspects and practicalities involved in addressing power inequalities and differences in the co-creation of knowledge in the context of CURP. We conceptualise our **knowledge culture framework** according to three basic components that operate at different levels of analysis, as shown in Figure 1:

1. General Knowledge Environment;
2. Institutional/Organisational Knowledge Environment;

3. Knowledge Practice

The three components are nested, reflecting the directionality of influence from the outer and middle to the center sphere. The framework further distinguishes between structural and procedural aspects at each level of analysis. The different levels facilitate and represent both knowledge activities and forms of knowledge (Travica, 2013). This highlights that KCs are both temporally and locally stable and bounded, but also negotiated, evaluated, and sustained through relations and traditions. Each sphere contains both ideas and beliefs as well as structural and physical dimensions. Additionally, the power dynamics present in each of these spaces is expressed in the varied aspects of the KC, such as the means through which significance of an idea or activity is attributed (Tsouvalis et al., 2000). We discuss each of the three components in more detail below.
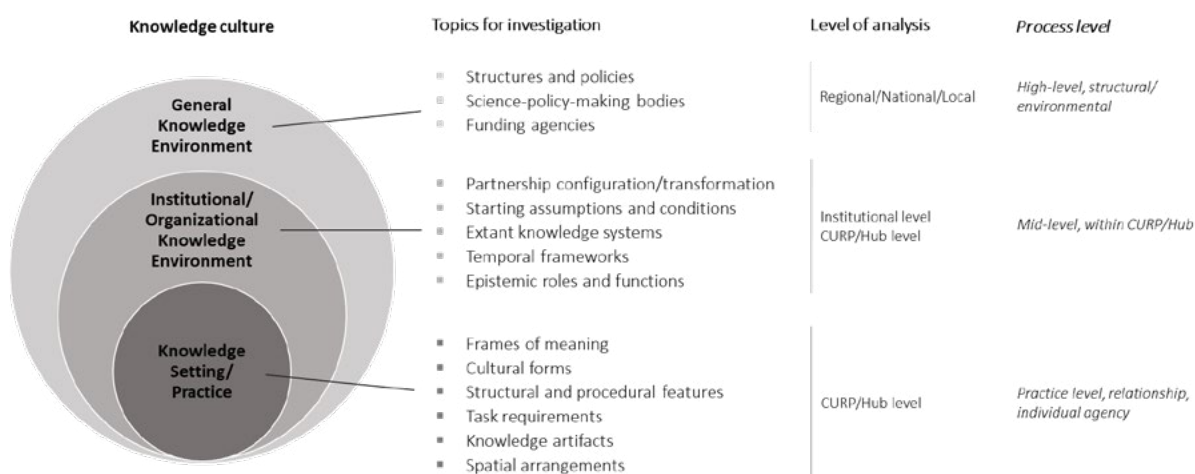

Knowledge culture	Topics for investigation	Level of analysis	Process level
General Knowledge Environment	▪ Structures and policies ▪ Science-policy-making bodies ▪ Funding agencies	Regional/National/Local	High-level, structural/environmental
Institutional/Organizational Knowledge Environment	▪ Partnership configuration/transformation ▪ Starting assumptions and conditions ▪ Extant knowledge systems ▪ Temporal frameworks ▪ Epistemic roles and functions	Institutional level CURP/Hub level	Mid-level, within CURP/Hub
Knowledge Setting/Practice	▪ Frames of meaning ▪ Cultural forms ▪ Structural and procedural features ▪ Task requirements ▪ Knowledge artifacts ▪ Spatial arrangements	CURP/Hub level	Practice level, relationship, individual agency

Figure 1 Knowledge culture framework

Outer sphere: General Knowledge Environment

The General Knowledge Environment exists at the regional, national, global, as well as local level, given that CURP cannot not be decontextualised from the broader historical and geopolitical places in which they are situated. KC have real political, economic and social effects that are not neutral with respect to social structures and interests or with respect to economic growth (Knorr Cetina, 2007). The General Knowledge Environment shapes how cultural and political differences are reflected in the way research is set up and conducted (i.e., how one cultural order translates into or influences another) and how expert knowledge is embedded in legal frameworks, ed-

ucation systems, schemes of citizen participation, and policymaking. In our framework, this sphere entails two aspects:

- *Structures and policies* that sustain or discourage certain epistemic outcomes; for example, national education, science and innovation policies, professional standards, education models (e.g., French, British, German higher education models). These structures and polices determine what counts as legitimate knowledge, or meets the social, political, or economic criteria to be prioritised over other forms of knowledge, and influence knowledge production processes.
- *National/Regional science policy-making bodies* and *funding agencies*, which have the political and financial capability to significantly influence the content and approach of knowledge production at national and regional levels –e.g., the supranational and national funding bodies of the European Union, like Horizon Europe, or the Tri-Council Agency of Canada–, which determine what type of research is eligible for funding and oversee grant administration responsibilities.

General Knowledge Environments hold the highest degree of legitimisation power and resemble 'espoused values' – i.e., the settled ways of accepted norms, attitudes, and beliefs – and 'basic assumptions'– i.e., the basic values accepted without proof (Svetlana & Jucevičius, 2011) – about knowledge processes that are 'naturalised' and beyond accountability in many instances (Somers, 1999). This core component of knowledge culture effectively governs over most other KC, or at least profoundly impacts the context and practice of CURP (van Kerkhoff & Pilbeam, 2017).

Middle sphere: Institutional/Organisational Knowledge Environment

This sphere encompasses the institutional arrangements and frameworks that direct co-producing, acquiring, exchanging and using knowledge in collaborative arrangements. We acknowledge that both 'sides'–the HEI and the community organisation (formal and informal)– bring their own knowledge culture to the CURP. While this sphere is more contained in its format or structure than the General Knowledge Environment, it is notably more difficult to navigate, and requires careful consideration. For one, it often sets specific temporal and local boundaries to how academic and non-academic partners – and their KC – interact with each other. The Institutional Knowledge Environment, although representative of a hegemonic model of knowledge production, is a site where more active negotiations take place. The 'artifacts' of KC, – the physical environment and locals, creations, rituals, etc. (Svetlana & Jucevičius, 2011)– and the 'logistics' of day-to-day interactions of CURP (Oliver & Reddy Kandadi, 2006) are worked out at this level. The social activities taking place here determine the meaning of those interactions and the significance of co-creation of knowledge for both the institution and

its members and partners (Tsouvalis et al., 2000). The framework thus considers the following aspects:

- *Partnership configurations and transformations over time.* For example, partners need to work out the assumptions and purposes of creating the CURP and which norms will be accepted for conducting research in a collaborative way. The role and status of each partner needs to be determined (e.g., who the 'experts' are), and how relationships will be maintained as the partnership changes in time and space.
- *Starting assumptions and conditions.* This element refers to the points of origin where the partnership was initiated by putting in motion a series of conditions and assumptions that will set the boundaries of the partnership itself. This may be influenced, for example, by previous research projects, participation in grant applications, events (e.g., networking and showcasing conferences), and discourses (e.g., around Sustainable Development Goals).
- *Extant knowledge systems.* This includes worldviews and ontological frameworks that provide the orientation or the set of beliefs about the world or reality, and how to act in that reality; related pedagogies (i.e., ways of knowing and learning); disciplinary approaches; social relationships that inform people's sense of themselves and their cultural values; and logical relationships that connect the content of knowledge to its value and utility (e.g., contribution to fields of practice, career advancement, problem solving, informing decision making, etc.).
- *Temporal frameworks.* This involves the pace of knowledge production at its different stages, which is usually different in community and university settings. For instance, community groups often have tight deadlines for action whereas academics may have years to develop a robust research project. CURP analysis and development must therefore consider aspects such as temporal requirements to efficiently produce and reproduce knowledge; the temporalities of knowledge and expertise; or simply the conception of time (e.g., cyclical versus linear).
- *Subjects with epistemic roles and functions.* Here, we refer to internal and/ or external actors with different roles in the various knowledge production processes. For example, journal peer reviewers have a validating role that determines what academic knowledge is acceptable for dissemination; boundary-spanners mediate between academics and community, facilitating knowledge translation; and Elders act as knowledge holders in Indigenous communities.

Inner sphere: Knowledge Practice

This sphere includes the whole sets of arrangements, mechanisms, procedures and principles that serve knowledge co-creation and which unfold

with its articulation within the CURP (Knorr Cetina, 2007). Thus, we switch from an understanding of knowledge as the representational and technological product of research to an understanding of knowledge as practice. The 'agency' of the individuals (and groups of individuals) who carry out these practices enacts and re-creates the wide variety and diversity of KC (Nerland, 2012). These actions require 'trust', 'transparency' and a willingness to be open and share with others (Mas Machuca & Martínez-Costa, 2012). At this level, the emphasis is put on the interiorised participatory processes of knowledge production in a CURP, and how they are framed, understood and executed. This allows for the observation of values and ideologies regarding knowledge 'practices' or cultural forms, as indicated by Hofstede et al. (1990) and Trice and Beyer (1993). Our framework considers the following aspects of this sphere:

- *Frameworks of meaning.* People enact their lives within frames of meaning shaped by the specific constructions of knowledge objects, particular ontologies of instruments, and models of epistemic subjects (i.e., "the thinker" and "the knower" as entities embodying knowledge capacities and activities). Within this domain, CURP members establish who or what are the epistemic subjects –those we traditionally think of as the agents in scientific practice and the authors of scientific findings– and their ways of relating to the objects of knowledge in research. Frameworks of meaning include terminology, jargon, generalised rationales, cultural beliefs and shared passions (common meanings), providing the underlying structure and context for sense-making, "a social activity […] suffused by moral judgements and power relations" (Tsouvalis et al., 2000, p. 922).
- *Cultural forms.* This aspect contains the rituals, symbols, heroes, ceremonies and stories of success/failure of co-producing knowledge that each member brings to a CURP. In some KC, knowledge may be primarily produced by experts or authorities following reproducible procedures, while in others, knowledge may be more decentralised and produced by a wider range of individuals and communities in a more informal way (e.g., sharing circles).
- *Structural and procedural features.* Within CURP, at least two sets of formal and informal hierarchical structure and rules meet, and along with them the (im)personal relations and ways in which knowledge processes are functionally organised and divided within and across partners. In other words, this aspect captures the allocation of tasks and responsibilities in terms of decision-making (e.g., research agenda setting and governance), funding (e.g., application, allocation and management), leadership (e.g., research design and implementation), validation (e.g., in terms of accuracy, usefulness for the partners and the relationship with existing

knowledge), influence (e.g., research communication, uptake and adaptation), and impact (e.g., research use).

- *Task requirements.* Knowledge practices also require a unique body of knowledge or expertise (e.g., storytelling, active listening, boundary spanning) to perform the particular sets of tasks and responsibilities related to knowledge production in CURP (e.g., access to community, trust-building, knowledge sharing and translation).
- *Knowledge artifacts.* The purpose of using a knowledge artifact is to share and transfer knowledge (Holsapple & Joshi, 2001). According to Newman and Conrad (2000), knowledge artifacts form the linkages between the activities and events that comprise knowledge flow. An artifact can be defined as a medium used to represent meaning and understanding. Knowledge artifacts come in a variety of forms and shapes, ranging from tangible items such as documents, videos, maps and pictures to intangible entries such as network nods and shared thoughts (Abuhimed et al., 2014).
- *Spatial arrangements.* CURP members need some form of physical manifestation to collaborate 'in the real world'. This aspect refers to the places where knowledge processes take place. This might include traditional benchwork laboratories, research centres (i.e., places where resources vital to a whole field come to be located), networks, but also locales within the community/territory or 'on the land' itself (Zurba et al., 2019).

Our theoretical framework differentiates the fundamental components of a knowledge culture and the processes taking place at each analytical level. Within the collaborative realm of a CURP, distinct enough knowledge cultures entities exist, even if the boundary of each entity remains flexible. In discussing knowledge culture as a concept used in cultural studies, Liebert (2016) identifies that it must have inclusion and exclusion criteria, governing not only the belonging of people to a KC, but also technologies, behaviours, and objects. This suggests that while the boundaries of a knowledge culture may transform through interactions, they are also clearly demarcated, even temporarily. Every knowledge culture contains axioms and assumptions that are not questioned, and it entails traditions that structure the recognized forms of storing, passing on, teaching, and learning, as well as evaluating specific knowledge. Knowledge cultures are thus both negotiated and self-referential, able to contemplate inwardly and outwardly (Liebert, 2016). Applied to the context of CURP, we recognize that community partners and universities both bring preconceived understandings of their respective and the others' knowledge culture to the table, but through the process of knowledge co-creation, one or multiple knowledge cultures may change. Recognizing which knowledge culture is valued higher and examining whose traditions of knowledge legitimization, creation, storage, and transmission

prevail will make implicit power inequities salient, providing opportunities to productively address and re-balance extant power dynamics.

Conclusion - Bridging Knowledge Cultures in CURP

The rise and development of CURP as a way to contribute to addressing and solving societal problems have neither been easy nor uncontroversial. One of the main challenges this approach to research creation faces is the difficulty of evaluating impact via strong evidence demonstrating how knowledge created in CURP translate into policy and actions (Lall, 2015). The claims for the effectiveness of CURP thus tend to be anecdotal, theoretical and/or conceptual, rather than empirical. This creates a considerable discrepancy between the acclamation and attention CURP receive in the literature, and the limited empirical knowledge and understanding of the processes and dynamics of partnerships' overall functioning (e.g., the process by which certain partnership conditions lead to various partnership-level outcomes). The literature also shows a strong bias that tends to depict research partnerships as relatively static entities within a linear understanding of research-into-practice, without paying enough attention to the complex reality within which such collaborative arrangements are embedded (Tremblay, Singh & Lepore, 2017).

In this article we have described an analytical framework for the study of knowledge cultures within CURP, aiming to better explain the intricacies of power dynamics in collaborative research initiatives. Firstly, the offered framework helps explain CURP conflicts and power inequalities by the heterogeneity of co-existing KC, each with their own system of meanings and identities. Not only do CURP members often compete for the same resources, but they also face the imposition of a guiding vision of how work should be organized, conducted, and judged within and between partner organizations. Secondly, our framework suggests that the study of knowledge cultures benefits from considering occupational and organizational dimensions of CURP to better understand and respond to power conflicts that emerge from diverging aspects between academic and community KC.

In practical terms, our framework offers a way to recognize and navigate the diverse knowledge cultures inherent in CURP. When CURP members meet for the purposes of knowledge co-creation, considering and understanding the coexisting cultural elements and sub-cultures in the partnership will go a long way toward reducing or resolving conflicts, especially where similar values may still lead to conflicting priorities (Gregory, 1983). Helping CURP members work more effectively across epistemological differences requires sensitivity to the co-existence of diverging values, beliefs,

ideologies, and cultural forms at various levels, which may otherwise bring research partners into conflict.

We do not believe that the task of those leading and coordinating research partnerships is to avoid conflict, but rather to know how to manage and hopefully resolve conflicts in a productive way. Our framework and conceptualization of knowledge cultures propose that this can be achieved by first acknowledging and embracing cultural differences within the partnership, and then forging workable compromises that allow (sub-)cultures to maintain their own identity, while formulating a distinct knowledge culture that strive for a balanced incorporation of diverse knowledges within the CURP. This view recognizes the dynamic and continuous processes occurring between individuals, partner organizations/entities (see Nonaka, 1994; Nonaka & Takeuchi, 1995), and their respective knowledge cultures as they open transitional spaces for co-creating knowledge. Paraphrasing the suggestions by Kalliola and Nakari (2007, p. 92) from the field of occupational cultures, the critical task for partnership coordinators and leaders is to build and maintain a sustainable system of shared meanings in the CURP as a whole, without losing sight of the wide variety of knowledge cultures – with their own values, ideologies, and cultural forms – existing within the partnership. We hope that our framework serves as a starting point for moving past the limiting holistic or homogenised view of CURP to recognize and embrace the changing, dynamic, and even conflicting inter-relationships among sub-cultures of knowledges that make up research partnerships. Making salient the inherent power dynamics of CURP is pivotal for harnessing the potential of their epistemological diversity.

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