



Decolonising information: comparing Western conceptions of information to Indigenous Knowledge and Indigenous Knowledge Systems

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Abstract

Introduction. This paper investigates how Western and Indigenous epistemologies conceptualise information, with a focus on the contrast between cognitive-oriented and relational understandings. Western information science has historically defined information as a measurable ‘thing’, while Indigenous Knowledge and Indigenous Knowledge Systems view information as relational, embodied, and inseparable from land, community, and spirit.

Method. The study undertakes a comparative analysis of theoretical frameworks, drawing on Bates’s (2017) typology of information concepts and Indigenous epistemological literature, including works by McGregor (2021), Wilson (2008), and Absolon (2010).

Analysis. Key themes were identified through interpretive textual analysis of these sources, emphasising both differing and similar assumptions about the definition of information in either context.

Results. Findings reveal that dominant Western definitions privilege rationalism, subjectivity and control, whereas Indigenous frameworks define knowledge as reciprocal, lived, and land based. The analysis also identifies emerging models of reconciliation, such as Two-Eyed Seeing and Knowledge Co-production, which promote respectful coexistence of knowledge systems.

Conclusion. Reconciliation in information science requires recognizing Indigenous Knowledge Systems as self-determining epistemologies and shifting from managing information as an object to sustaining it as a living relationship grounded in reciprocity and respect.

Introduction

One of the most debated subjects in the field of information science is the very concept of information. As information scholars often come from various disciplines, each with its own understandings and definitions of what is (or is not) information, the meaning of the term remains highly contested. While there is currently no universally-adopted definition of information, over the years, several scholars have attempted to define this term and the different concepts of information which have evolved out of the information disciplines themselves (Buckland, 1991; Rowley, 1998; Bates, 2017). While many of these definitions remain valid and important contributions to the field of information science, the majority reflect Western, Euro-centric, and colonial conceptions and understandings of information.

This paper addresses the Western bias embedded in widely used, dominant definitions of information within the information sciences by comparing Western definitions of information with those of Indigenous Knowledge and Indigenous Knowledge Systems. It begins by summarising the main conceptions of information outlined by Bates (2017) in her chapter 'Information' in the *Encyclopedia of Library and Information Sciences* (4th ed.). While not exhaustive, this chapter highlights the definitions most commonly adopted by information scholars and educators and which have significantly shaped the discipline's intellectual foundations. The paper then examines Indigenous Knowledge and Indigenous Knowledge Systems, exploring how these relational and lived understandings of knowledge differ from dominant Western, cognitive-oriented models of information while acknowledging similarities between Indigenous Knowledge, Indigenous Knowledge Systems, and recent Western scholarship promoting social-oriented, embodied and qualitative interpretations of information. In doing so, this paper contributes a comparative analysis of the definition of information by making explicit the distinct assumptions that underpin Western object-based and Indigenous relational perspectives. Finally, it proposes possible paths toward reconciliation, resurgence, and the inclusion of non-Western, and particularly Indigenous, epistemologies within information science in order to advance a relational understanding of information that emphasises respectful co-existence and self-determination rather than integration.

The author recognises that Western information scholarship is internally diverse and has increasingly challenged purely rationalist and objectivist paradigms, most notably through constructivist and embodied approaches to information (Savolainen, 2008; Cox, Griffin & Hartel, 2017; Kitzie et al., 2022). That said, this paper focuses on critiquing those rationalist and objectivist conceptions that continue to play a foundational role in shaping mainstream understandings of information within the discipline. Likewise, although understandings of Indigenous Knowledge and Indigenous Knowledge Systems vary across Indigenous nations and knowledge traditions, this research situates its discussion within the context of Indigenous communities from the Great Lakes region, such as the Anishinaabe, the Mississaugas of the Credit, the Seneca, and the Huron-Wendat, recognising these perspectives as place-based and non-universal.

Defining information

In the *Encyclopedia of Library and Information Sciences*, Bates (2017) identifies seven categories for the various conceptions of information which have been central to the understanding of this term in the information sciences: 1) communicatory or semiotic, 2) activity-based, 3) propositional, 4) structural, 5) social, 6) multi-type, and 7) deconstructionist. Communicatory or semiotic information is rooted in semiotics, cybernetics, and communication theories with a focus on the rational transmission of signals and meaning through processes, outputs, and meaning making. Activity-based information, also described as event-based information, emphasises the event by which a person becomes informed and draws on phenomenology, psychology, and individual cognition. Propositional conceptions of information are adopted from the fields of analytic philosophy and logic which define information as propositions or claims about the world, often

requiring truth to count as information. Structural understandings of information claim that it does not have a meaning unto itself, but rather, that information lies in the way data is patterned and organised. Information is also seen as socially constructed and embedded in practices, contexts and power relations which shape information and an individual's understanding of it. Multi-type definitions group the previous conceptions of information in order to create a broad, integrative view of information in an interdisciplinary context which recognises that information can exist in many forms at once. Finally, deconstructionist conceptions of information challenge the attempt to define information and its dominance as a contract concept. Rather, these scholars suggest that the focus of study should shift away from information and towards the practices, discourses, and communications which produce it (Bates, 2017).

Bates also discusses the impact of the Data-Information-Knowledge-Wisdom (DIKW) pyramid, a model which is often used by educators when introducing the concept of information to students or to scholars outside the information science field. This knowledge hierarchy places information as the second tier of the pyramid, between data and knowledge. Based on this model, information has been defined in different textbooks as '*formatted data*' (Jessup & Valacich, 2003, p. 7), '*data that have been shaped into a form that is meaningful and useful to human beings*' (Laudon & Laudon, 2006, p. 13), or even '*data processed for a purpose*' (Curtis & Cobham, 2005, p. 3). While these definitions are vague, they all agree that information is made up of data which has been retrieved for a given purpose and imbued with meaning.

While these conceptions have provided the foundation for modern information science, they also reflect a distinctly Western epistemological tradition that privileges rationalism, objectivity, and the pursuit of universal truths. Information is treated as something that can be abstracted, categorised, and measured. It is a discrete 'thing' rather than a lived process. This empirical orientation has shaped information science around ideals of control and efficiency, positioning information as an object to be managed rather than a relationship to be experienced (Day, 2014). The 'knower' in Western conceptions of information is typically imagined as an autonomous, individual subject who encounters information in isolation, reinforcing human-centred and often Eurocentric assumptions about cognition and meaning.

At the same time, information science has long engaged with subjectivity and the importance of context in meaning-making through qualitative, interpretive, and relational approaches, particularly in research on information behaviour and socially situated information practices. However, even when social context is emphasised in Western scholarship, information often remains treated as a human-centred construct that is produced, disseminated, and interpreted among people rather than within a broader web of relationships that includes land, spirituality, and the more-than-human world (Wildcat et al., 2014). This paper does not seek to dismiss qualitative or subject-centred traditions within Western information science, but rather to highlight how object-based and cognitive models of information continue to shape many dominant definitions and institutional understandings of information within the discipline. Recognising these limitations invites a broader rethinking of what counts as information.

Indigenous Knowledge and Knowledge Systems

If Western paradigms have defined information as something that can be extracted and possessed, Indigenous Knowledge and Indigenous Knowledge Systems instead understand information and knowledge as relational, dynamic, and inseparable from Indigenous people, their history, their culture, and the land. Indigenous Knowledge and Indigenous Knowledge Systems see information and knowledge not as a 'thing' but as a way of living inseparable from the people and systems that sustain it (McGregor, 2021). As such, information cannot exist on its own, and the term Indigenous Knowledge is used to encompass both information and knowledge, rather than differentiating between them. Indigenous Knowledge is, at its core, relational, land-based, ceremonial, and embodied.

A central principle of Indigenous Knowledge Systems is that knowledge exists within relationships and cannot live apart from them. Knowledge is generated through ongoing relationships among people, the land, ancestors, and the more-than-human world. Indigenous Knowledge Systems *'represent a way of life, something that has to be **lived** (as a verb) in order to be known, understood, and practiced'* (McGregor, 2021, p. 2) rather than 'information' or 'knowledge' as nouns or concepts, as they are understood in dominant Western definitions. This relational approach means that information carries ethical and social responsibilities and that knowing something entails being accountable to that knowledge and to the beings it concerns. Wilson (2008) similarly describes Indigenous research as 'relational accountability', emphasising that knowledge cannot be separated from the relationships through which it is produced and shared. Within this worldview, information has meaning only when situated within a living web of reciprocal connections.

Indigenous Knowledge is also inseparable from land and place. For Indigenous peoples, land is not merely a backdrop from which information can be observed as data and given meaning. The land is instead a co-creator and source of knowledge in Indigenous Knowledge Systems thus differing from Western, cognition-centred approaches to information. Indigenous Knowledge is *'derived from the immediate ecology, shaped by local lands, and expressed through language and practice'* (Battiste & Henderson, 2000, p. 41). Similarly, Cajete (2000) argues that Indigenous ways of knowing emerge through lived experience with the natural world, where learning is an embodied process rooted in observation, participation, and ceremony. McGregor (2021) stresses that disruptions to these land-based relationships through colonisation, displacement, or environmental degradation represent not just the loss of territory but the erosion of entire knowledge systems. Thus, to understand information through an Indigenous lens is to recognise the land itself as a holder, transmitter, and co-creator of knowledge who works in relation with the 'knower'.

Finally, Indigenous Knowledge is embodied and often expressed through ceremony, storytelling, and lived practice. These ways of knowing are not supplementary to Indigenous Knowledge Systems, but constitute central modes through which knowledge is generated, validated, transmitted, and sustained across generations. Absolon (2010) notes that Indigenous Knowledge is not something to be learned or interpreted in abstraction but rather to be lived through one's relationships and spiritual commitment. Knowledge is transmitted through the body, the senses, and communal participation, thereby connecting generations across time. Ceremony, in this sense, is both a method of knowledge sharing and a way of maintaining balance within the knowledge system itself (Simpson, 2017).

In Western information science, recent discussions of embodied information have increasingly emphasised the role of the body, affect, and lived experience in information practices, including work grounded in feminist, queer, and critical traditions that foreground marginalised and non-normative embodiments (Kitzie et al., 2022; Huttunen et al., 2019). This emerging research has meaningfully challenged purely cognitive models of information by emphasising emotion, identity, vulnerability, and situated knowing. While these approaches expand understandings of information beyond text and cognition, they often continue to frame the body as a site of expression, performance, or interpretation within predominantly human-centred epistemologies.

By contrast, Indigenous embodied knowledge is not primarily performative or expressive but ontological. It is a way of being and knowing that arises from reciprocal relationships with land, community, ancestors, and spirit. The body is not merely a medium through which information is conveyed, but an active participant in the creation, stewardship, and ethical governance of knowledge. Knowledge cannot be accessed or transmitted if relationships are out of balance, and embodiment extends beyond the individual to include collective, land-based, and more-than-human relations (McGregor, 2021). This distinction highlights how Indigenous epistemologies, such as ceremony, storytelling and oral traditions, and Western embodied information research

may come into dialogue without collapsing their differences, and while underscoring the unique ontological commitments of Indigenous approaches to embodiment and knowledge.

Reconciliation

The contrasting worldviews of Western information science and Indigenous Knowledge Systems reveal two fundamentally different orientations toward what it means to know. Western traditions, rooted in rationalism and positivism, tend to define information as an abstractable object, whereas Indigenous Knowledge and Indigenous Knowledge Systems understand knowledge as relational, dynamic, and lived. They are inseparable from the people, lands, and spiritual systems that sustain them. From this perspective, information is not a thing to be managed but a relationship to be maintained through reciprocity and responsibility. Recognising this difference challenges the epistemological assumptions that underpin the information sciences and invites a profound re-examination of how knowledge is conceptualised, classified, and shared.

While Western information science has begun to acknowledge social and embodied understandings of knowledge, such perspectives often remain limited to human-centred or cognitive frameworks. In many cases, these approaches continue to prioritise individual experience, meaning-making, and human interpretation as the primary sites of information, even when the body, affect, or social context is foregrounded. Even within recent research that explores embodied information, the body is often viewed as a site of expression or performance, a means of transmitting meaning rather than a participant in its creation. Indigenous epistemologies extend embodiment beyond the individual to include relationships with land, community, and the more-than-human world. Knowledge arises through ceremony, lived practice, and ethical accountability, not through detached observation or interpretation. Bridging these worldviews therefore requires more than the inclusion of Indigenous concepts within Western frameworks but rather the recognition of Indigenous Knowledge Systems as self-determining and complete epistemologies in their own right.

McGregor (2021) proposes several pathways for reconciliation between these distinct traditions of thought through what she terms ethical engagement. She identifies frameworks that respect the integrity of Indigenous Knowledge Systems, including Two-Eyed Seeing (Etuaptmumk), Braiding or Weaving Knowledge Systems, the Two-Row Wampum, and Knowledge Co-production. These approaches emphasise co-generation rather than integration, privileging relationship-building and reciprocity over synthesis. In this context, reconciliation does not involve the merging of knowledge systems and understanding of information into a homogenised whole, but rather the establishment of respectful, ongoing relationships grounded in Indigenous governance and law. Reconciliation therefore operates as a relational and ethical orientation that allows Western and Indigenous conceptualisations of information to coexist in respectful parallel, without subordinating one to the other. Achieving reconciliation in information science thus requires a shift away from universalising and extractive models of information toward approaches grounded in ethical engagement, co-development, and Indigenous authority over knowledge. Such an orientation reframes information not as a neutral object to be managed, but as a relationship that carries responsibilities and accountability.

This reconceptualisation of information has direct implications for information behaviour and information seeking research. If information is understood not merely as a cognitive object sought by autonomous individuals, but as a relational and embodied process grounded in place, community, and accountability, then prevailing models of information seeking require reconsideration. This includes rethinking assumptions about individual agency, neutrality, and universality in information behaviour, as well as considering collective, land-based, and more-than-human dimensions of knowing. For information science, this shift invites methodological approaches that prioritise relational accountability and community-defined information needs around what knowledge may be sought, shared, or withheld. Ultimately, Indigenous Knowledge

challenges long-held academic assumptions about what information can mean, advancing a view of information as lived, land based, and embodied. Reconciliation in the information sciences should therefore not be achieved by incorporating Indigenous Knowledge into existing paradigms, but by supporting the integrity and self-determination of Indigenous Knowledge Systems as equal and essential foundations for understanding and sharing information.

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