Conceptualizing ‘Knowledge Equity’ for Global Collaborative Knowledge Infrastructures

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Abstract

‘Knowledge equity’, while central to Wikimedia strategy, is not well defined and has no established operationalization beyond measuring certain ‘gaps’ in coverage and participation. This project conducts an integrative review of both related academic literature and community voices to synthesize a notion of ‘knowledge equity’ to provide knowledge-infrastructure design guidance, assess sociotechnical knowledge systems for equity where coverage research is infeasible, and explain equity trade-offs among various stakeholders.

Introduction

The concept of ‘knowledge equity’ is central to the Wikimedia movement strategy (Wikimedia Foundation 2023) vowing to “focus our efforts on the knowledge and communities that have been left out by structures of power and privilege” and “break down the social, political, and technical barriers”. However, the strategy documents do not elaborate on how to identify those left out and the barriers they face. Some research (e.g., Redi et al. 2021) has addressed this, but applies predominantly to knowledge inequities in well-established Wikimedia projects. Guidance on how to design new and incipient projects and their technology in a ‘knowledge-equitable’ way seems lacking—particularly dire for projects where knowledge is highly formalized and abstract: Wikidata, Structured Data on Commons, and Abstract Wikipedia. Furthermore, existing research does not speak to the trade-offs in intervention and design inevitable when operating with limited resources.

Both scholarly research and community activism have, however, long addressed ‘epistemic [in]justice’ (e.g., Fricker 2007; Anderson 2012; Dotson 2012; Bacevic 2023) , ‘cognitive imperialism’ (Gehl 2010), ‘epistemic liberation’ (Masaka 2021) etc., potentially informing notions of ‘knowledge equity’.

This research aims to answer the following questions:

RQ1: What are the major themes in both academic and community discourse related to ‘knowledge equity’?

RQ2: What are the according notions of ‘knowledge’?

RQ3: Whom do relevant ethical arguments posit as the subjects (or objects) among whom equity is to be achieved?

RQ4: Can a ‘useful’ definition of ‘knowledge equity’ be synthesized so as to capture those themes, notions, and ethics?

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Related work

Redi et al. (2021) provides perhaps the most comprehensive look at ‘knowledge equity’ in the Wikiverse. Seeking to measurably operationalize it, they take a view of knowledge as mostly static and focus on ‘gaps’—“disparities in content coverage or participation of a specific group of readers or contributors” (ibid., p. 4)—but acknowledge that their framework is only “a way to spark conversations and motivate/mobilize” (ibid., fn. 3). The focus on measurability precludes guiding development of, or assessing, a system before its use and, regarding structured data, limits the framework to observing “differences in […] the *amount* of information that is organized […] in a machine-readable fashion” (ibid., §5.2.2, emphasis added) without asking about the quality or faithfulness of representation or who sets the conditions and constraints of this ‘machine-readable organization’.

Diverse voices on ‘knowledge equity’ have occasionally been highlighted within the Wikimedia movement and users have organized to make themselves heard: Kibelka (2019a) quotes Colombian Wikipedian Mónica Bonilla speaking to the supremacy of writing over oral traditions; Kibelka (2019b) quotes Ugandan Wikimedian Alice Kibombo regarding experiences with “experiential knowledge” representing diverse individuals and “*local* solutions”. Groups advancing critical views on ‘knowledge equity’ include the “Whose Knowledge?” Wikimedia user group (n.d.) and Wiki Movement Brazil (2023).

Methods

The integrative-review method (Cronin and George 2023; Oermann and Knafl 2021; Souza, Silva, and Carvalho 2010) is particularly well-suited to fusing insights from disparate academic disciplines and diverse community voices.

Academic-literature search will be conducted incrementally, starting with queries like “knowledge equity”, “epistemic [in]justice”, etc., while ensuring a geographically and culturally broad scope of the literature search—cf. ‘scoping review’ (Munn et al. 2018).

Community-voices search may proceed similarly, first covering pertinent Wikimedia events, WikiProjects, and groups like “Whose Knowledge?”.

Results may be charted using evidence maps (Miake-Lye et al. 2016; Hetrick et al. 2010).

Expected output

One major resource each geared toward (a) scholars and (b) more laypersons (‘average Wikimedians’):

a) open-access scholarly paper, a potential basis for further research, for high-level decision-making, and of design considerations among Wikimedia developers
b) publication suitable for dissemination in a variety of formats, translations, etc., presenting key findings in an accessible manner to facilitate community debate; conceivably in the form of a zine (digital, printable, available for community translations)

Risks

No external risks (e.g., to participant privacy) are expected based on the project’s nature.

An internal risk lies in results from RQ1–3 turning out incommensurable; synthesis of an overall unified notion of ‘knowledge equity’ (RQ4) may thus fail. Thus, outputs may fall short of providing clear-cut definition of ‘knowledge equity’ and partially remain problem statements, but should still provide insight via multiple, complementary perspectives (e.g., the ‘epistemic-agency view’ and the ‘intercultural view of knowledge equity’).

Community impact plan

Contributions from the community are actively sought through ‘literature’ research (cf. §Methods) and in-person and on-wiki outreach.

Wikimedians may get involved through the events of a local chapter (e.g., Wikimedia NYC) as follows:

- presentations informing about, and seeking input about, progress and results;
- ‘test drive’ of, or focus group to inform design of, the layperson-accessible publication.

The layperson-designated publication is expected to ensure wide-reaching community impact.

Evaluation

A self-contained definition of ‘knowledge equity’ and its successful conveyance to both scholars and average Wikimedians for them to build upon would constitute complete success. Otherwise, evaluation should appreciate results’ accessibility to the community more so than results’ strict coverage of *all* research questions.

Budget

[USD]

39,500 total; breakdown as follows:

30,000 researcher remuneration
3,500 open-access publishing fee
4,000 contract illustrator/graphic designer
2,000 conference/event participation

Prior contributions

Events by Wikimedia NYC have occasionally seen me give talks and facilitate discussions. With Provo et al. (2021), I co-facilitated a sociotechnically critical discussion about Wikidata. At WikidataCon 2021, I presented a graphical formalism questioning equal representation of all knowledges and ways-of-knowing in Wikidata (Koenig 2021). Koenig et al. (forthcoming) critically looks at ontologies and knowledge bases like Wikidata and considers some epistemological ramifications.
I am experienced in the Wikidata property-proposal process.

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