

Probabilistic Obliteration and Formulaic Fabrication: Citational (In)justice in the Age of Generative Artificial Intelligence

Calgary Libraries in Action

30 April 2025

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Presentation Overview

1. Background
2. Issues That GenAI Creates for Citational Justice
3. Questions to Guide a Re-Engaged Citation Pedagogy in the GenAI Age

1. Background



Considering How Citation Guidance for AI can Support Student Learning

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Merton (1988, 622) on the dual function of the reference:

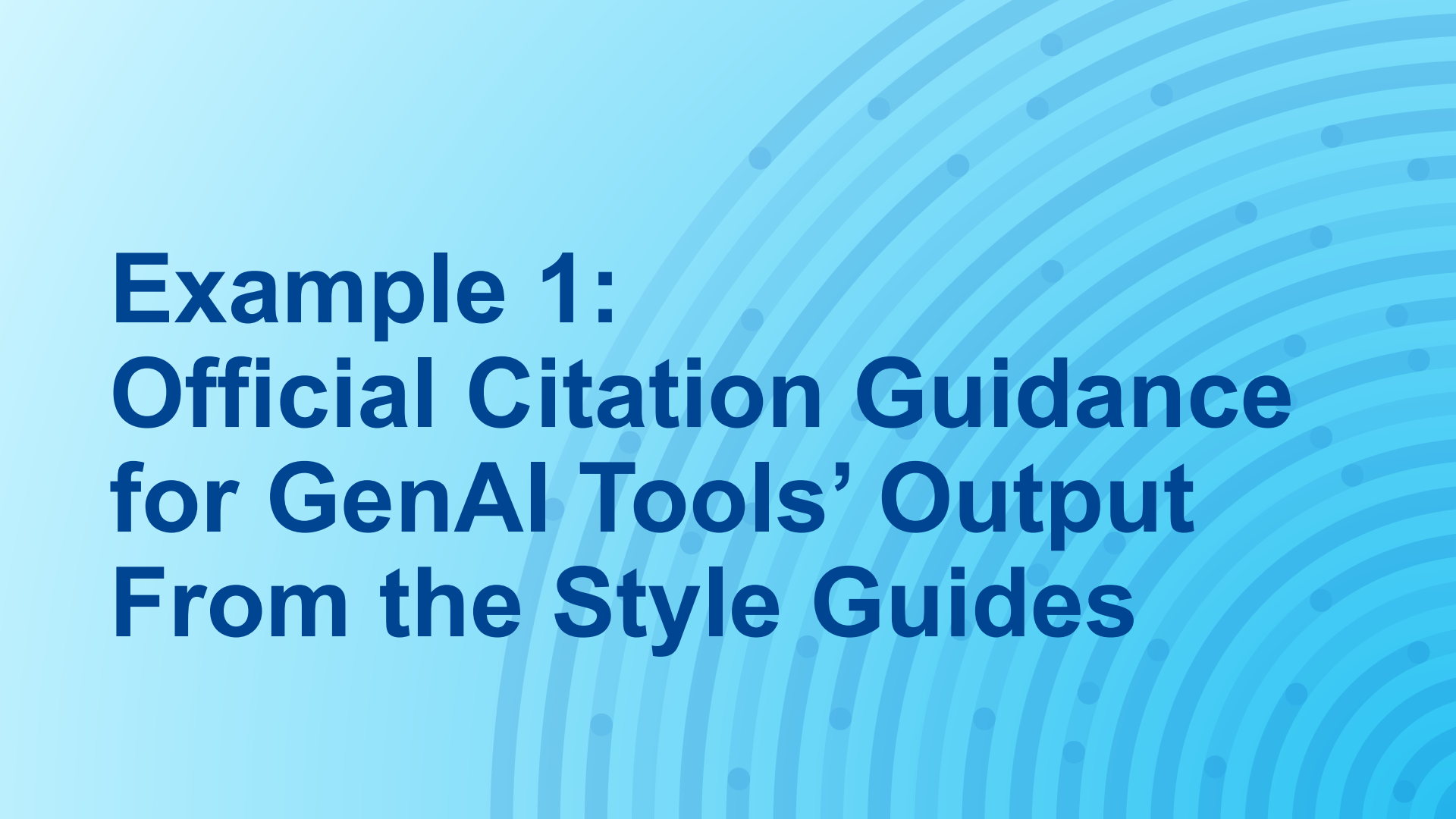
The reference serves both instrumental and symbolic functions in the transmission and enlargement of knowledge.

Instrumentally, it tells us of work we may not have known before, some of which may hold further interest for us; **symbolically**, it registers in the enduring archives the intellectual property of the acknowledged source by providing a pellet of peer recognition of the knowledge claim, accepted or expressly rejected, that was made in that source.

2. Issues That GenAI Creates for Citational Justice

Citational justice as defined by Kwon (2022, 569):

[S]tudies in bibliometrics have revealed persistent biases in citation patterns — women and people of colour, for instance, garner citations at lower rates than men do. **An increasing number of researchers are calling on academics to acknowledge the inequities in citational practices — and, by paying more heed to work from groups that are typically under-cited, take action to reduce them.** Some are referring to this idea as ‘citational ethics’ or ‘citational justice’.



Example 1: Official Citation Guidance for GenAI Tools' Output From the Style Guides

MLA (2023):

“Describe the symbolism of the green light in the book *The Great Gatsby* by F. Scott Fitzgerald” prompt.
ChatGPT, 13 Feb. version, OpenAI, 8 Mar. 2023,
chat.openai.com/chat.

APA/McAdoo (2023):

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. <https://chat.openai.com/chat>

Mills' template from a comment (on April 11, 2023) on
MLA (2023):

Unknown human authors statistically remixed by ChatGPT,
13 Feb. version, OpenAI, 8 Mar. 2023,
chat.openai.com/chat. “Describe the symbolism of
the green light in the book *The Great Gatsby* by F.
Scott Fitzgerald” prompt.

Merton's (1985, 218–19n) “obliteration effect”:

Naturally enough, most of us tend to attribute a striking idea or formulation to the author who first introduced us to it. But often, that author has simply adopted or revived a formulation which he [*sic*] (and others versed in the same tradition) knows to have been created by another. The transmitters may be so familiar with its origins that they mistakenly assume these to be well-known. **Preferring not to insult their readers' knowledgeability, they do not cite the original source or even refer to it. And so it turns out that the altogether innocent transmitter becomes identified as the originator of the idea when his [*sic*] merit lies only in having kept it alive, or in having brought it back to life after it had long lain dormant or perhaps in having put it to new and instructive use.**

Garfield (1975, 7) on the “obliteration effect”:

Obliteration—perhaps even more than an astronomical citation rate—is **one of the highest compliments the community of scientists can pay to an author** ... [I]f Archimedes were alive today, he could take comfort in the fact that his primordial paper on pi had been obliterated. It would mean that his contribution was so basic, so vital, and so well-known that scientists everywhere simply take it for granted. He would have been obliterated into immortality!

Example 2: Fabricated Citations Generated By GenAI



Great! Can you give me the full citation so I can look up these studies and learn more?



Sure, here are the full citations for the studies I mentioned:



1. Jung, C.K., et al. (2015). Clinical features and prognostic factors in poorly differentiated thyroid carcinoma: The results of a large population-based study. *European Journal of Nuclear Medicine and Molecular Imaging*, 42(13), 2004-2013. doi: 10.1007/s00259-015-3128-7.
2. Kim, M., et al. (2018). Prognostic factors and outcomes of poorly differentiated thyroid carcinoma: A systematic review and meta-analysis. *Thyroid*, 28(10), 1295-1303. doi: 10.1089/thy.2018.0018.
3. LiVolsi, V.A., & Baloch, Z.W. (2017). Pathology of thyroid carcinoma: Overview. *Endocrinology and Metabolism Clinics of North America*, 46(3), 427-443. doi: 10.1016/j.ecl.2017.03.001.
4. Song, Y.S., et al. (2020). Clinicopathologic features and outcomes of poorly differentiated thyroid carcinoma according to different histological subtypes: A retrospective cohort study. *Thyroid*, 30(9), 1304-1314. doi: 10.1089/thy.2019.0802.

Shah and Bender (2022, 222) and Bender (2024, 116)
re. irrelationality:

“language models are prone to making stuff up ... because they are not designed to express some underlying set of information in natural language; **they are only manipulating the form of language**” (Shah and Bender 2022, 222).

“**[t]he ‘knowing’ that we program into ‘AI’ is ... irrelational, that is, ostensibly abstracted from the web of relations within which we have all of these experiences** [of ourselves, our lives, and our world]” (Bender 2024, 116)

Popowich (2024, 207–8) re. irrelationality:

Large Language Models like the GPTs ... challenge a major assumption of capitalist education ... This assumption is that there is in fact a relationship between a student's output and their learning, that an output (essay, exam, etc.) directly reflects their learning, their internal experience with knowledge and language ... **ChatGPT may have the signal result of decoupling that particular signified/signifier pair and putting paid to a cardinal tenet of academic ideology leftover from pre-corporate days: that education is about internal transformation of subjectivity rather than about the generation of texts.**

3. Questions to Guide a Re-Engaged Citation Pedagogy in the GenAI Age

Questions!

- How can we take the opportunity that GenAI presents for our pedagogy to radically reimagine library instruction around the importance of attribution and relationality in academic work?
- What if—instead of teaching the mechanics of citation from a place of either rote, templated compliance or honour-code-scolding fear—we approached citation instruction with the explicit aim of humanizing authors, intentionally restoring some of their agency through acknowledgement, and, in turn, working to bolster the agency of aspiring student authors?

More Questions!

- How could we productively combine analyses of GenAI's material harms—such as the significant climate impact of LLM training and use or the exploitative labour practices involved in data cleaning and annotation—with critical analyses of GenAI's discursive or citational harms done to authors and other content creators?
- What would it mean to teach against the grain of a hegemonic style guide like the APA, and to productively disagree—emphatically and explicitly—with their official guidance in our own pedagogy and in our interactions with students and faculty?

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Thank you!

Questions?

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