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Whose metaphor is it anyway?
Analysing AI metaphors from positionality and values of speaker and recipient

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Abstract

This article builds on our earlier work on metaphors of generative AI as a route to developing critical AI literacy (Gupta, et al., 2024). Using a duo-autoethnographic approach, we analyse metaphors we have encountered in workshops, classrooms, and informal conversations. We reflect on how our positionalities shape how we receive and interpret these metaphors. Where possible, we also consider the context and likely values of the speakers who used these metaphors, while recognising that our study does not include formal interviews and therefore cannot fully recover speakers' values. Rather than theorising metaphors in abstract terms, we examine the ethical and affective dimensions of specific examples, including "AI is stupid" and "AI as cane." Our analysis shows how such metaphors can reinforce or resist ableism, epistemic injustice, and uncritical adoption of AI. We conclude by suggesting classroom practices that invite students to surface and critically examine their own metaphors for AI.

Keywords: Artificial Intelligence, AI metaphors, critical pedagogy, educational technology, technological determinism,

Introduction

The ubiquity of AI in and beyond the classroom has made many forget the need to critically engage with data-driven technology. Amid the hype and excitement, our understanding can slip into blind admiration, as we let AI do things we once did ourselves. We risk subscribing to narratives that cast us as consumers of data, passive observers rather than active participants in our own understanding. We begin to say and hear things like, "AI is just like so and so." To counter this, we find it useful to

reflect metaphorically, analysing the metaphors we encounter around AI and what they reveal. Our perspective grows from our own experiences using AI and watching others interact with it. As an academic and an academically-oriented undergraduate student, our positionalities shape this stance. We see harm before benefit because we recognise the subtle ways systems of control operate. The narratives and myths surrounding AI often obscure the real consequences of its unchecked spread.

In an effort to analyse and ground our understanding, we emphasise the importance of critical AI literacy (Bali, 2023, 2024a; Ng, et al., 2021). Bali underlines the significance of this concept through a dual lens of criticality. First, it involves understanding how AI works, then questioning inequities, biases, and ethical questions about AI. Beyond analytical critical thinking, it incorporates principles of critical pedagogy by highlighting social justice issues and how systems may perpetuate, amplify, or introduce inequities. Additionally, it calls for evaluating the potential risks and assessing the trustworthiness and accuracy of AI-generated outputs, all while considering the interplay between these critical dimensions. All of this reflection and questioning needs to happen before we start considering whether there might be appropriate uses for AI at all. Thus, this paper selectively employs a duoautoethnographic methodology to analyse metaphors we have been encountering in both our personal practice and scholarly engagement. Building on previous work about metaphors and critical AI literacy (Gupta, et al., 2024), we also find it useful to further analyse some metaphors and consider how they might be deemed harmful or helpful from a classroom perspective. We ask these questions: who is repeating these metaphors? How do these metaphors serve us in the classroom? How do they shape the way we teach, the way we learn, the way we engage with our students? We examine the role of metaphors in shaping perceptions of generative AI by analysing how positionality and values of both speakers and recipients influence the interpretation and implications of these metaphors, and we both share stories on how AI metaphors may be unethically used in one context or another.

For example, I, Author A, am an undergraduate student and have seen how students increasingly outsource their thinking to AI, especially in group assignments. In Fall 2023, I worked with a colleague on a literature review. After merging our sections, it was painfully clear that the two parts were disconnected. My colleague had not engaged with my writing in any meaningful way. He did not read, synthesise, or respond. He simply handed off his section, assuming AI or some automated tool would fill the gaps. This is what misuse of AI does: it encourages detachment, fosters laziness, and cheapens intellectual labor. It enrages me as a writer because something vital is lost when we surrender our thinking to machines. It becomes an abdication of the human capacity to engage the world. I, Author B, teach undergraduates about AI and train them to question technology before using it. In my classes, we examine bias, equity, and misinformation, and students experiment with AI tools. At times, we also discuss the role of metaphors to deepen our understanding of these issues.

Radically, our understanding of 'metaphor' departs from traditional literary accounts. We do not follow scholars like Wilkinson (2002), who classify metaphors into types such as similes or proverbs. Rather than treating metaphors as embellishment, we examine how AI becomes objectified through comparison and how such comparisons shape the emotional and conceptual spaces in which AI is encountered. When someone calls AI an assistant, calculator, cane, or crutch, the suggestion is that it assumes the qualities of those tools. Our concern is not to list these associations but to consider the experience they produce. What does it mean when someone says, "AI is stupid"? What did it mean to us, and to the speaker? These questions shift metaphors from ornament to a site where knowledge, perception, and affect meet. Because comparison is central to human discourse, reflection of this kind helps reveal not only how AI is named but how naming creates an object. We hope this paper helps readers, educators, and students recognise and question the metaphors shaping AI discourse.

Literature Review

Why metaphors and AI literacy?

We propose that understanding the perception of AI through metaphor reflection necessitates a foundation in Critical AI Literacy (Bali, 2023, 2024a, 2024b), as 'AI, it seems, is everywhere now' (Costello, 2023,) and there are 'plentiful examples of bullshit in the non-truths that pervade contemporary social media-fuelled discourse' (MacKenzie & Bhatt cited in Costello, 2023), most notable around AI. Expanding on the work of Gupta, et al. (2024) and Selber (2004), we examine how metaphors are interpreted by both speakers and recipients. Selber (2004) identifies rhetorical literacy as a component of his multiliteracy framework, which also includes both critical and functional literacies. He describes rhetorical literacy as a combination of functional and critical literacies that enable students to critically engage with or design technologies. For instance, Selber (2004: 25) notes that 'rhetorical activities demand both effective computer use and informed critique'. Importantly, these categories are not rigidly distinct but often overlap and reinforce one another. Gupta, et al. (2024) extend this discussion by emphasising the need for supportive learning environments that foster critical exploration of AI's nature and ethics. They argue that students' literacy practices should accommodate the wide range of emotions and foundational questions they may have about AI. Such practices should prioritise students' sense of agency, encouraging thoughtful and student-centric decision-making rather than prescribing outright acceptance or rejection of AI tools. This approach to critical AI literacy can help address a significant challenge identified by Renz and Hilbig (2020: 17) as the 'lack of data understanding and insufficient data sovereignty' among potential users.

Metaphors provide a useful framework for examining AI in the classroom and noting observations in an accessible way. Ferreira, et al. (2023) explain why metaphors are particularly significant. They contend that metaphors are not simply linguistic flourishes; they are potent instruments that shift meaning, guiding what we see and what we do not. They create relationships

between ideas, not by merely linking them, but by shaping how we identify, classify, and assess the world. Each choice of metaphor carries with it a specific framework for understanding, one that positions us to think in particular ways. Take, for instance, the idea that technology will "have impact." This is not a neutral statement about potential - it is a framework that carries with it assumptions of inevitability, and more dangerously, neutrality (Ferreira, et al., 2023). This assumption becomes particularly troublesome when applied to educational contexts, where policymakers, funders, and educators hear and repeat it uncritically, and without gathering evidence to corroborate such impact.

Coterminous to these ideas is the conceptual metaphor theory (Lakoff & Johnson, 2003). They posit that the frameworks guiding our perception, movement through the world, and relational dynamics with others are inherently metaphorical. Methodologically, they rely on linguistic analysis to precisely uncover the metaphors that inform how we perceive, reason, and act. This perspective is concomitant with the work of philosopher Schön (1993), who introduced generative metaphor theory. Schön emphasises the creation of new metaphors as 'a process by which new perspectives on the world come into existence' (Schön cited in Jensen, 2006) through what he described as the transference of frames and perspectives across domains of experience (Schön 1993: 137). Lakoff and Johnson (2003) offer a compelling example to illustrate the dimensions of both conceptual and generative metaphor theories. They invite us to consider how we talk about arguments; phrases like "She won the argument" or "they defend their theory against his attacks" reflect a conceptual metaphor of arguments-as-war. This metaphor frames arguments as battles to be won and shapes our approach to them in adversarial ways that often degrade public discourse, particularly in the contentious environment of social media comment sections.

In practice, the influence of these theories extends across disciplines, including education. Lukeš (2019) identifies three primary functions of metaphor in education: as an invitation to participate, as a tool for engaging with knowledge, and as a catalyst for transformative understanding. However, he critiques the tendency of many educators to rely solely on the first function, noting that an invitation without deeper engagement rarely fosters meaningful learning. Explanation, another cornerstone of education, is often overemphasised to the extent that it becomes a stand-in for the entire educational process, despite being only one step within it. Interestingly, Lukeš (2019) observes that explanation frequently benefits the explainer more than the learner. He further critiques the historical misuse of metaphors and explanations by figures ranging from Socrates to Rousseau; his critique hinges on the idea that these tools are often misapplied in ways that hinder rather than enhance understanding. For a metaphor to succeed, he argues, the learner must have some prior knowledge of the target domain, while familiarity with the source domain is less critical (Lukeš, 2019). No matter how students approach metaphors, their engagement with them is not an intellectual exercise in abstraction. The objective is not interpretation for its own sake but sharpening their critical faculties in ways that resist passivity. To think critically is to recognise

the meaning of AI metaphors, every technological adoption, every pedagogical encounter. Anything less is an abdication of the responsibility that education demands.

Metaphors of AI as catalysts for understanding

Since metaphors are meant to 'enable the connection of information about a familiar concept to another familiar concept, leading to a new understanding where the process of comparison between the two concepts acts as generators for new meaning' (Jensen, 2006), it is important to question whether the comparison necessarily results in an accurate new meaning, or whether it might be misleading or hide underlying values that may be harmful.

We have observed the frequent use of metaphors to describe interactions with AI, including those that shape perceptions of its role. Anderson (2023) identifies three key metaphors: tool, collaborator, and ChatGPT. The collaborator metaphor acknowledges the significance of attributing ideas to their original sources. However, ChatGPT lacks the accountability inherent to a human author. Here, the idea of accountability is significant, as using ChatGPT requires transparency (Bali, 2024b). Its outputs are influenced by biases embedded in its training data, and it often neglects to properly attribute the original sources of the ideas it generates, or misattributes (Mills & Bali, 2024).

Nephew (2023) provocatively likens the use of ChatGPT to 'eating plastic for your cognition' - an example of a metaphor that invokes the harmfulness and fakeness of AI tools. While metaphors play a significant role in shaping perceptions of AI, Khadpe (2020) provides additional insight into how these metaphors influence our interactions with AI systems. The study explores various metaphors through the psychological lenses of warmth and competence, two central aspects of human social perception. By manipulating the metaphor used to describe a "Wizard-of-Oz" conversational agent, while maintaining consistent behavior, the researchers assessed participants' likelihood of using the system, their willingness to collaborate with it, and their overall assessment of its usability. Contrary to the widespread use of metaphors that emphasise high competence for AI systems, the findings revealed that metaphors associated with lower competence led to more positive evaluations of the agent. Through generative metaphors, the study also draws parallels between metaphorical choices and user responses and attitudes to past conversational agents.

Finally, other authors also contribute metaphors to conceptualise AI and large language models (LLMs) and offer vivid comparisons to highlight their limitations and functions. For example, Bender, et al. (2021: 8) characterise large language models as systems that 'haphazardly stitch together sequences of linguistic forms' from extensive training data, guided solely by probabilistic patterns, without any understanding of meaning or intent - thus likened to a 'stochastic parrot'. We also see other authors like John Warner (2023) discussing the idea whether ChatGPT is a calculator or not. Warner's comparisons are so striking. He believes that calculators are machines that replicate the same procedural operations students perform, albeit faster and more accurately. Prohibiting calculators restricts students from focusing on higher-order mathematical thinking, as they are

bogged down by repetitive, mechanical calculations. ChatGPT, on the other hand, does not replicate the same intellectual labor as a student engaging in writing. In his view, writing is inherently an act of thought—it requires crafting ideas for an audience, exploring a subject, and refining one's understanding through the process. While ChatGPT can generate text that mimics human writing, the process behind it is purely algorithmic and lacks the cognitive exploration that defines the human act of writing. We also posit that calculators are always accurate if you give them the correct input, whereas AI tools are not always accurate and produce different results when you re-prompt them. As such, using calculators as metaphors for AI can be harmful as it emphasises a similarity of automation while masking the differences between the cognitive process of writing versus mathematical calculation, and glosses over the importance of correctness or truthfulness in the output of the automation.

In brief, metaphors highlight how one interacts with an AI system, particularly an LLM, within a classroom setting. As we deconstruct how a metaphor is understood from both the speaker's and the recipient's perspectives, we create opportunities to explore perceptions and themes such as AI sentience, the moral and ethical dimensions of metaphors, and whether certain metaphors align with or diverge from critical AI literacy (Gupta, et al., 2024). This paper builds on previous research by focusing on several metaphors and closely analysing their implications. Our central question is: how are metaphors received and interpreted by both the speaker and the recipient? We also answer the following questions: what is the impact of using this metaphor, and crucially, what kind of harm can the metaphor perpetuate? Through this lens, we explore how metaphors influence perceptions, foster engagement, and shape the discourse surrounding AI in classroom settings.

Methodology: Duoethnography

Autoethnography is a participatory research methodology that systematically describes and analyses personal experiences 'in order to understand cultural experience' (Ellis, et al., 2011). Within this tradition, Duoethnography is a form of Collaborative Autoethnography (CAE) in which two researchers exchange stories, reflections, and analyses. Duoethnography, more specifically, employs paired dialogue to foster reflexivity, critical reflection, and inquiry, generating insights into a shared cultural context in which the participants may hold differing perspectives (Norris & Sawyer, 2012). In our study, dialogue was central to the process. Rather than engaging with metaphors of AI only through abstract theorisation or comparison with existing literature, we focused on metaphors we had encountered in practice and reflected together on how our own positionalities shaped our interpretations. While our methodology was dialogic, the paper itself is not written in a dialogic form. Instead, we present a synthesised account of our reflections, developed through critique, questioning, and systematic engagement that took place within our conversations.

We also discuss our own experiences of other people's uses of AI metaphors. Since we had heard these metaphors in person or during online workshops, we were able to explore further with

the person what they meant, why they used that metaphor, and therefore dig deeper into the ways the person's intersectional identity influenced their metaphor of choice (note: we did not need consent because the conversations were spontaneous). Our conversations with one another enabled us to reflect on how our own identities influenced how we received the metaphors. Being a man and a woman, a person with a disability and an able-bodied person, an undergraduate student and a professor, gave us different perspectives. However, being close friends and collaborators who share similar values, particularly on the importance of social justice in education, gave us a common ground.

Our duoethnography started with a series of WhatsApp messages and voice notes. We would each share a story about a metaphor we recently heard, who said it, the ensuing conversation, and ask each other questions and share the reflections with each other. This methodology aligns with Chandler (2025), who conducted a reflexive study on being in a WhatsApp group with doctoral researchers. For her, it fostered a sense of connection as an author. Similarly, our WhatsApp dialogic exchanges create a space where we can share reflections on AI metaphors in a low-stakes environment - one where we do not have to premeditate our responses. These discussions not only allow for spontaneous engagement but also open the possibility of revising our reflections, shaped by the depth of our conversations. We then decided to write this paper, posting our reflections on a shared Google Doc and editing it together with further reflections on the written version of our work.

We prefer autoethnography to other methodologies because it 'challenges the hegemony of objectivity or the artificial distancing of self from one's research subjects' (Chang, et al., 2013: 18). Positionality is so important in our research. Since researchers and interpreters are 'always already part of what is being interpreted' (Gadamer cited in Nixon, 2012: 33). Our conversations and reflections help increase our consciousness of our understanding of our own selves, and we were able to arrive at deeper conclusions together than we would have been able to reach separately. We ground this duoautoethnographic study in a critical interpretivist perspective. In this view, research is "interpretive" in its emphasis on understanding, meaning, and illumination, as opposed to prediction, control, or broad generalisation (Usher, 1996: 18). From such a standpoint, research cannot claim neutrality; rather, knowledge is created through the interactions between researchers and participants (in our case, what we have heard encountered), and the outcomes are acknowledged as partial and situated (Usher, 1996).

Methodologically, we take up the metaphor of the researcher as quilt-maker or bricoleur (Denzin & Lincoln, 2005). This image highlights the practice of drawing on whatever tools, approaches, and materials are available and appropriate in a particular moment, using what is accessible within the research setting to respond to the questions at hand (Denzin & Lincoln, 2005). As bricoleurs, we also attend to the ways our own histories, identities, and positionalities (such as gender, ethnicity, and cultural background) intersect with those of the people involved in the study

(Denzin & Lincoln, 2005). Our Duoethnographic reflections did not bring anyone, including us as authors, any risk or discomfort, and therefore no ethical issues arose as a result of our research.

Positionality: Author A

I, Author A, am an aspiring scholar in the field of education, a blind researcher, an undergraduate student, and a disability advocate. I occasionally co-facilitate workshops on AI with Author B, where we strive to offer a balanced perspective on the equitable and critical use of technology including AI. While the widespread, often uncritical use of AI is the norm for many, I bring a distinct experience: using AI as an assistive technology, such as the BeMyAI feature in the BeMyEyes app. Additionally, I offer the perspective of a student, shaped by conversations with my peers and both overt and covert observations of how others engage with AI in different contexts and with varying backgrounds. For me, metaphors are essential - they help me grasp the different ways people approach and understand AI.

Positionality: Author B

I, Author B, am an educational developer at the American University in Cairo in Egypt – my main role is to support other educators in their teaching, and I also teach an undergraduate course on digital literacies, AI literacy, and intercultural learning. I am also a public scholar and offer a variety of local, regional and international keynotes, workshops and sessions, during which I am often asked to talk about AI and I often conduct a warm up activity by asking what metaphors do/would people use for (generative) AI, which helps give me an indirect sense of people's real attitudes about AI. I have been collecting these metaphors over the past few years. When speaking of AI, it is important to share that my undergraduate thesis used machine learning (neural networks optimised with genetic algorithms) and then I later left the computer science field to do my graduate studies in education. I am a critical pedagogue and open educator, so the majority of my research on educational technology takes a social justice stance in general, and definitely my identity as an Egyptian woman working in a Westernised academic context has made me interested in feminist, decolonial, and anti-racist pedagogy. I was always also interested in accessibility, but my friendship with Author A (which precedes and supersedes our student-teacher relationship) has strengthened my interest in and knowledge about disability justice.

Findings: Analysing metaphors from underlying values and positionality

The analyses we generate after encountering, engaging with, or discussing a metaphor—or a set of metaphors—confront us with a range of feelings. In each of the examples below, we reflect on these reactions: the evocations, the provocations, the tensions that emerge. By this point, we have encountered Paul Ricoeur's perspective on metaphor theory and his discussion of rhetoric. He contends that 'Metaphor belongs to the language game which governs naming' (Ricoeur, 1976: 47).

Yet our analysis does not merely affirm participation in a language game, nor does it engage in a formulaic rhetorical breakdown of pathos, logos, and ethos. Instead, we distill our feelings, positionalities, and interpretations. Why? Because we are not engaged in a rote rhetorical exercise with texts generated by chatbots. If we were, we would be compelled to fixate on a static text for each metaphor, reinforcing a tradition in which rhetoric has 'fallen out of fashion' in discussions of AI-generated texts and the classroom (Majdik, 2024).

Thus, if our analysis is rhetorical, it is also troubled by the contradictions embedded in its very practice. Ricoeur (1976: 48) also argues that 'Rhetoric begins, then, where the lexical code ends'. But our criticality is not solely lexical; it is tethered to thought and feeling alike. The figurative meaning of a metaphor is not a tool we wield uncritically. Our work is situated in the classroom, in education more broadly, and as such, it demands a different analytical orientation. If we say, for instance, "AI is stupid," "colonising loudspeaker," or "Big Brother," we cannot confine ourselves to the symbolic or the strictly linguistic. A critical framing necessitates agility. It demands that, in classrooms, teachers remain attuned not only to the intellectual dimensions of metaphor but also to how students experience and feel its weight.

In this same vein, we also discuss AI as both a "crutch" and a "cane," metaphors that imply a relational identity with disability. Our critique allows us to question outputs generated by AI, their relation to disability and accessibility, and even the act of mentioning or enabling disability discourse through AI. This engagement aligns with critical disability theory (CDT), which Hall (2019) defines as an interdisciplinary framework examining disability within cultural, historical, social, and political contexts. Unlike traditional disability studies, CDT explicitly foregrounds lived experiences and seeks to dismantle oppressive structures through intersectional analysis (Ellis, et al., 2018). Some scholars, such as Meekosha and Shuttleworth (2009), use the term critical disability studies (CDS) to distinguish this evolving field from earlier frameworks that relied on binary oppositions, such as impairment versus disability or the British versus American disability studies traditions. They argue that while disability was once framed primarily as a social and cultural phenomenon, it has since undergone reevaluation. Earlier formulations of the social model drew a sharp distinction between impairment as a functional limitation and disability as a product of societal discrimination. However, feminist, cultural studies, and postmodern critiques (e.g., Hughes & Paterson, 1999; Shakespeare & Watson, 2001) have challenged this binary and contributed to tensions within disability studies.

The emergence of CDS reflects a shift beyond these dichotomies and incorporates insights from the humanities and cultural studies. This shift acknowledges that struggles for justice extend beyond social, economic, and political realms into psychological, cultural, and discursive dimensions. The institutional cooptation of disability discourse - particularly within rehabilitation and special education - has also reinforced the need for a critical approach. Hosking (2008) refines the social model by arguing that disability is socially constructed, shaped by the interaction of impairment, individual response, and environment, and sustained by systemic barriers that uphold normative

standards. Our engagement with AI reflects these social justice concerns. For instance, comparing AI to a cane can imply deficiency, while framing it as a crutch suggests overreliance—both interpretations ignore the diversity of access needs and reinforce ableist assumptions, contradicting the principles of critical disability theory.

Students who say, "AI is stupid"

The metaphor of "AI as stupid" struck me (Author A). I first encountered it during a writing group project in class. I have always been critical of using AI in academic settings, particularly when it comes to writing. My skepticism arises from the uncertainties, the unresolved and the not-yetness, surrounding AI's potential to shape the quality and depth of thought in writing. During the project, I shared my concerns with the group, and I strongly cautioned against the use of AI as each of us was tasked with a specific portion of the paper. Crucially, my hesitation was not an act of policing but an expression of care, rooted in a desire to safeguard authenticity and originality in our ideas.

In the midst of our discussion, a group partner remarked, "AI is stupid." When I asked why, she explained that God endowed us with intellectual capacities - our minds - to think critically, so why rely on AI? Her reasoning drew me into a broader conversation about the potential uses of AI, to which she admitted she didn't yet have an answer. The AI we discussed was of the obvious kind: platforms like ChatGPT and similar large language models (LLMs). Indeed, AI may well be considered "stupid," as my group partner suggested. It is a statistical model, one that operates through predictive mechanisms to generate outputs. It is stupid because it lacks sentience—it has no emotions, no consciousness—resulting in responses that often feel superficial, generic, or repetitive. It is stupid because the pre-trained data that fuel these platforms are overwhelmingly sourced from Western frameworks, thereby neglecting the subtleties and nuances of marginalised and underrepresented perspectives.

I, Author B, was interested that an undergraduate student at our institution said that AI is stupid - I do not know what the student's discipline is. I have seen computer science students who have a very clear-eyed view of the limitations of generative AI, because they understand how it has been created and trained, and also because they have experimented with using it for coding and debugging, and come up against its limitations for more complex coding. I thought the person Author A mentioned would say AI is stupid because it makes mistakes or goes off topic, not because they believed in a more fundamental notion of the importance of humans using their own brains and not delegating their thinking to a machine.

Whenever I hear people talk about AI being stupid, this concerns me, because I wonder, what would happen then, if platforms become better at what they do, in the same way that Google search for example became really good AI, would these people change their minds about it and start encouraging its use? However, if the reason some people resist AI is because they refuse to delegate their thinking to a machine, then AI's stupidity should be irrelevant. Does this argument hold,

historically? The fact that AI can play chess and beat chess champions has not stopped people from enjoying chess, for example. But the fact that calculators (and later more complex calculating machines) are widely available has stopped most humans from making complex calculations in their heads or on paper, after having gained a foundation in basic mathematics.

Students who say, "AI is my big brother"

I, Author B, have done a couple of sessions about critical AI literacy to high school age students, and the metaphor of AI as "my big brother" came up a couple of times. When I probed further to understand what the high school students meant by big brother, clarifying whether this was a good or a bad thing, the students said: "it's a good thing, my big brother helps me", "he knows more", and "he looks out for me when I need him". This was interesting, because these Egyptian students had made no connection whatsoever with George Orwell's Big Brother from the novel *1984*. They probably did not have this work of fiction on their radar, with its connection to surveillance and a dystopian future. They genuinely were calling generative AI a "big brother" of the loving and helpful kind, and not at all of the paternalistic, possibly oppressive/ controlling. I also thought it was interesting that they never once called it a "big sister" – do big sisters not also look out for their younger siblings? Why is AI a "brother"? As a woman and feminist, the term "brother" when used to refer to technology triggers me into thinking of the term "tech bro", which many in my education circles use in a derogatory manner. I had never looked it up, honestly, just knowing that it means those males who talk about technology in ways that imply they are clueless about education and the social world. I looked it up on the *Cambridge online dictionary* for the purposes of this paper, and the definition there says a tech bro is:

> someone, usually a man, who works in the digital technology industry, especially in the United States, and is sometimes thought to not have good social skills and to be too confident about their own ability.

I had always felt the connotation of their lack of social intelligence, but not so much lack of confidence in their own ability – to me, it was an inflated sense of their own power. I found two better definitions on Reddit, which align more with the way people I know use it:

> widely accepted immature masculine behavior in a tech companies corporate culture (think like frat house)
> hate it because can you imagine having to deal with that shit day in day out to put food on the table? even worse if you're female. (by Good_Behavior636, had 9 upvotes); And

> Tech bros are generally wealth[y] entrepreneurs who made their money in the tech industry.

> They are generally hated because they are disconnected from reality and see technological innovations as not beneficial to humanity but as another avenue to make money
> They ignore ethics, sense, and even sometimes the legality of a situation in order to make a quick buck. They also tend to but not always have an alpha "grindset" that is very annoying. (by zman245, had 8 upvotes).

In general, male students using AI as big brother (they were always male students) implies they believe that AI helps them, they believe that AI is benign, beneficent, beneficial, knows more, will protect and not harm them. It sounds like a very uncritical view of AI, and one can see how such a perspective on AI can be problematic in the long-term

AI as cane

I, Author A, have seen and heard people liken AI to a "cane." Before engaging with this metaphor, we must interrogate the assumption it rests on. A cane is not just a stick - it carries cultural, functional, and political meaning deeply tied to disability. Calling AI a cane risks perpetuating ableist thinking by reducing assistive tools to mere symbols of deficiency.

Unlike the crutch metaphor (discussed below), which is already fraught, likening AI to a cane flattens the nuanced role assistive technologies play in disabled lives. It aligns with a deficit-based view that sees disability as something to be "compensated for," contradicting the social model of disability, which locates barriers not in the body but in society (Lawson & Becket, 2020).

Canes, in reality, are not fixes for broken bodies. They are instruments of autonomy. I do not need fixing as a disabled person (Holly- LifeOfABlindGirl blog, 2024), but I need to be empowered. Canes, like many assistive tools, do precisely that by breaking down physical barriers and reshaping the environment to be more inclusive. To simplify AI as a cane, however, is to strip the cane of its profound significance by reducing it to a mere prop while leaving behind the vital context of support and agency it represents. More troubling still, such a metaphor perpetuates the narrative that disability is inherently an issue in need of external forces: an assumption as detached from reality as it is steeped in ableism. As such, we—disabled people in general, and I, Author A, in particular—do not and would not rely on a so-called digital cane, whether embodied in an LLM or otherwise. While AI has its merits in advancing accessibility and enhancing assistive technologies, it cannot replicate the tangible, empowering role of a cane. A cane is not merely functional; it embodies a sense of agency and independence that AI, however innovative, cannot fully replace.

I, Author B, as a sighted person, find the metaphor of a cane additionally troubling because it has the connotation of being a guide upon which the person can rely to navigate the world, whereas most AI platforms are not, at least at this moment in time, trustworthy supports, given how often they hallucinate and the kinds of biases they perpetuate. I have also come to understand from Author A the ableism inherent within the cane metaphor, and can see how a cane is empowering and offers

agency, whereas AI platforms are actually often the opposite of this for many: The uses of AI in some forms of education such as for personalising learning pathways, stifle agency and can be disempowering for learners and teachers, as decisions in the learning experience are automated by algorithms that are not transparent to any of the humans involved.

AI as crutch

We have both heard people use the metaphor of AI as a crutch. The implication, when exchanged among able-bodied people, is that it is something we use temporarily, only for a short-term disability like a broken leg. If you never let go of it, the idea is that you become too dependent on it, which may be acceptable in the short term but not in the long term, right, because over time you would lose your ability and agency to do things on your own later. However, this is a very able-bodied perspective on the topic.

In fact, disability and impairment are interconnected. "Impairment" refers to the physical condition, such as the absence or dysfunction of a body part, while "disability" is defined as the limitations or disadvantages imposed by a social structure that fails to accommodate individuals with physical impairments, thereby marginalising them from full participation in societal activities (UPIAS cited in Oliver, 2004). This distinction sets the stage for why a "crutch" is less likely to be an agreed upon and socially accepted metaphor for AI. I, Author A, believe that a crutch is considered a helper - a tool designed to assist those who are unable to walk or have motor impairment. When we then frame AI as a crutch, we assume that technology is a mere temporary aid for temporary limitations. However, this line of thinking overlooks the ways in which the need for such technology is not about temporary impairment but about the broader failure of a society to be truly inclusive. We are implicitly reinforcing the idea that those who rely on technology are deficient or broken, needing to "heal" or "progress" to a state where they no longer need these tools.

I, Author B, believe that if we take such a perspective, of AI as a "crutch" to make those who have an impairment "fit" into our socially constructed world, then we would start doing the following things with AI: we can make it acceptable, as some have, for people who are neurodiverse to use AI to help their writing sound more "normal" (i.e. neuronormative); or we can continue to use AI to "help" non-native speakers of a language write more like a native speaker. These are all ways in which we want those who are on the margins to become more like the dominant neuronormative person - a way to erase diversity rather than enhance inclusivity and acceptance of the "Other".

Conversely, if the "crutch" metaphor is used to imply that no one should depend too much on AI, we would also be ignoring the diversity among us all, where one use of AI that for an able-bodied person is a "take or leave it" type of use (e.g. using Google lens to help a sighted person identify whether a plant is a weed or a crop) may be for a disabled person an essential tool (e.g. to help a person who is visually impaired to identify an object in front of them).

Who is saying, "AI is a job stealer"

You would think the majority of people who say AI is a job stealer would be people who actually have jobs and are concerned it will steal their jobs. However, I, Author B, often see undergraduate students feel the threat of AI taking over their entry level jobs. Last semester, I invited my students to do an "AI in my profession" assignment. They would individually reflect on their initial impression of the role in their respective professions, then they would ask an AI platform about it, note that down, then go and interview a professor and a professional in their field, report back, then reflect on the entire experience. Almost every professional and professor told students not to worry, that AI would probably not replace them entirely in the workplace, but that there might be some shifts in the kind of work they did. Despite this balanced view, the majority of students continued to feel the threat of diminishing job opportunities. This, to me, implies that the discourses around AI in the media about how it threatens job security were stronger than the data they had collected in this research. They had already internalised this threat, and because it is already deep within them, and perhaps irrational and emotional. The rationality and logic of listening to people in their field telling them not to worry did not sink in deeply enough. It is unclear who benefits from spreading this kind of discourse and making students feel like their college education is not going to matter in the future.

We say "fahlawi"

Fahlawi is a colloquial Egyptian expression that we both came up with while working on a previous paper (Gupta, et al., 2024). As frequent experimenters with AI from Egypt, we tend to come up against many AI hallucinations and biases, particularly when we ask questions about our region's history and culture. Fahlawi is a term that describes a person who pretends to know more than he actually knows. Being Egyptians, we are aware of many people around us who do this - most prominently, people who give you inaccurate directions if you ask for driving directions, just because they don't want to say they don't know.

It also happens in other contexts, of course. As frequent experimenters with the limits of generative AI tools, we noticed that AI tools are almost always eager to respond, whether or not they have sufficient actual data to respond accurately - commercially available generative AI tools have no mechanism for ensuring a quality response, let alone necessarily a correct one. Newer versions of these tools now occasionally refuse to answer questions that they don't have any info on (particularly versions that search the web), but for the most part, if there is any breadcrumb of data they have on something, they will likely try answering anyway. Just like a "fahlawi" - perhaps the closest English expression for this is "bullshitter" but the fahlawi connotation is occasionally used in a positive way.

This contrasts very strongly with a "big brother" metaphor in the sense of being critical of the knowledge of the AI platform and also questioning whether it really cares about the recipient of the info, caring about misleading them. A fahlawi clearly does not care about whether you get to where

you are going when they give you wrong directions. They just care about seeming confident and knowledgeable, not about whether you get to where you need to go. Both of these metaphors are anthropomorphising, but in great contrast to one another in terms of showcasing the values and attitude of the speaker.

The question here is this: what would make someone change their mind about one or the other? If AI tools started to hallucinate less, would we stop calling them fahlawi, or would we still call them that, since we know it is kind of probabilistic that they get the correct answer, but never guaranteed, and it is also important to recognise that even if they get the right answer, it is not because the tool "truly understands" - as the fahlawi usually does not truly understand? Or will people keep believing the "big brother" is still their big brother even if he is "fahlawi", and interpret it as a kind of cleverness (which some Egyptians consider fahlawi people to be) or attempt at helping to the best of their knowledge? How do young people who call AI "big brother" react when they discover AI is giving them inaccurate or completely fabricated incorrect or misleading responses?

We say colonising loudspeaker

As much as the fahlawi metaphor emphasises the hallucination critique of LLMs, the "colonising loudspeaker" metaphor we co-developed with our co-authors (Gupta, et al., 2024), three of us being from global South countries, emphasises the epistemic injustice perpetuated by LLMs, which we feel that global North, white colleagues never emphasise enough. This metaphor aims to respond to a common statement by many that yes, AI tools are biased, but that is just the same as the internet is biased, as a lot of knowledge is biased. So, what is new? And the colonising loudspeaker emphasises that the new thing that happens with the biases in AI tools is that they amplify existing biases in ways that are potentially colonising, as more and more people start to use them not to find information (as with a Google or YouTube search, problematic as that is already), but to produce new knowledge from the perspective of colonialist epistemology.

Dismantling the epistemic injustice amplified by LLMs would be so much more complex than doing so with previous types of epistemic colonialism, because there is no particular individual or nation to hold accountable for this harm (Bali, 2024b). Many would suggest it is on the shoulders of the users of AI to remain vigilant of implicit biases in AI and try to mitigate them in their own uses of AI; however, the loudspeaker highlights how what comes out of AI is loud, amplified, and surrounds us, and therefore has that additional power to influence us, whether or not we intended to listen it in the first place. This is unlike choosing to open a webpage or read a book - a loudspeaker forces you to listen, and drown out other sounds, and represents the stifling effect of colonialist AI on those of us from countries whose cultures and knowledge are overlooked, diminished, or misrepresented by AI.

Discussion

The combination of metaphors we chose to unpack here shows how metaphors tend to emphasise a particular aspect of the thing they aim to explain and reveal the hidden implications of a metaphor. Some of the metaphors we used imply agency and are anthropomorphising: fahlawi and big brother are both human metaphors—the former implying a careless person willing to trick you, highlighting how AI hallucinates, whereas the big brother metaphor implies a caring person always trying to help you. The colonising loudspeaker is a non-human metaphor that emphasises the harmful ways in which AI reproduces epistemic injustice and centers the issue of bias in AI. The two metaphors of cane and crutch are tool metaphors that are particularly problematic for their insensitivity to implications from a disability justice perspective. The two metaphors of AI as "stupid" and as a "job stealer" are both anthropomorphising and emphasise pragmatic harm rather than abstract or emotional harm.

We wonder: if AI stopped being "stupid," would people then use it more? If AI were not hallucinating at all, or at least did so negligibly, would it become acceptable to use it more widely? If AI were not stealing jobs, would people become less scared of it? All of these questions are complex and therefore difficult to answer. Crucially, we have shown the importance of who is perpetuating particular metaphors, and how their identity shapes their view of AI, and how some metaphors are felt more by some (e.g. those from the global south, or those with disabilities) versus others. Metaphors of AI thus represent a point of view, a non-neutral perspective on how AI affects us, not just a pure explanation of how it functions.

In fact, when we analysed these metaphors across different themes and moments, we were not just categorising language; we were engaging in criticality itself- questioning when, where, and why AI is deemed appropriate. Our ethos is rooted in openness and trust, but those values mean little if they are not accompanied by scrutiny. We debated how each metaphor might be interpreted, both by the speaker and the listener, and we examined our own reactions to the terms we classified. For instance, I, Author A, reflected on the metaphor of "stupid." The word carries weight—historically, socially, and politically. It evokes sensitivity but also exposes the exaggerated overhyped promises of AI. When someone calls it "stupid," they invite us to stop and reconsider: What does it mean for a technology marketed by its creators as revolutionary to be perceived as unintelligent? What assumptions are embedded in that contradiction?

This kind of inquiry leads us to the classroom. How might teachers guide students to interrogate AI, rather than accept it as inevitable? How does criticality take shape in the presence of automation, especially that the world is moving into a fast-paced reality? And more importantly, who benefits when it doesn't? These are not only theoretical musings; they are foundational concerns of critical pedagogy. Stommel (2014) reminds us that critical pedagogy is an active stance, one of resistance, reflection, and disruption of oppressive systems. In digital spaces where AI also operates, critical digital pedagogy becomes vital. It asks how agency, identity, and participation are shaped

online, especially within platforms that blur the lines between liberation and control. Stommel (2014) highlights how hybrid learning spaces (physical or digital) act as portals, but questions whether these lead to dialogue or surveillance, empowerment or manipulation. Critical digital pedagogy, then, must be human-centered, rooted in community, collaborative across borders, open to multiple voices, and unconstrained by institutional boundaries.

In class, students will use AI regardless of instructional guidelines. Whether you encourage or discourage reliance on AI in assignments, you cannot be entirely certain that students will follow those instructions. Ultimately, you still have to trust them- because education should center on openness and trust. So, what should we continue to teach them? The answer lies in cultivating their ability to critically engage with digital literacy. What should remain fixed in their minds? Critical thinking. Bali (2019) highlights the importance of teaching critical digital literacies by encouraging students to critically engage with digital technologies: not only in how they consume and create content but also in how they communicate. This process involves making informed decisions about which tools to use, when to use them, and reflecting on the broader implications of their choices. The conceptual foundation for this approach draws from diverse perspectives on critical thinking (Bali, 2013), which vary across cultural and gendered contexts. Traditional understandings, often labeled "first-wave" critical thinking (Walters, 1994), emphasise reasoning, logic, skepticism, and structured argumentation—an approach institutionalised in many universities (Brodin, 2007) and exemplified in Facione's (1990) expert consensus. However, an alternative "second-wave" perspective (Walters, 1994) emerges from Marxist and feminist traditions, integrating social justice, 'critical action', 'intuition', and 'creativity' into the critical thinking process.

Theoretically, teachers should consider the deeper purpose of the learning they want students to engage with, while students should recognise the depth and rigor often absent from AI-generated texts or chatbot responses. Within these pedagogical spheres, our work is always informed by Critical AI Literacy.

Some AI metaphors can perpetuate bias

We have discussed metaphors like crutch, colonising loudspeaker, and cane, and we believe that they all carry negative connotations and biases. I, Author A, view this from a disability justice perspective, where likening AI to a crutch reflects ableist assumptions, as disability justice recognises that ableism is inseparable from racism (Sins Invalid, n.d.). Canes, too, are assistive devices that help blind and partially sighted people navigate the world independently. By comparing AI to both, we risk reducing the value of assistive tools and diminishing their importance, especially if that AI no longer supports the people who are at the margins. This reminds us of Treviranus (2022) who expresses concern about the potential "collateral damage" of AI for marginalised groups, especially individuals with disabilities. She notes that people with disabilities, who are "found at the edges of all other justice-seeking minorities," do not form a distinct data cluster due to their diversity but

collectively make up the world's "largest minority." Despite their significant presence, they are often overlooked in data sets, and AI systems may not fully account for their unique needs and experiences as they never belong to the "average". People with disabilities, especially those who are blind will continue to use canes, just like any other motor-impaired individual who uses a crutch. As such, the use of such metaphors is an outright way of ableist assumptions. It seems apt that tools that themselves have historically perpetuated biases including ableism (Gray, 2023) have metaphors for them that also perpetuate biases.

Since we also discussed the colonising loudspeaker, we are mindful of the implicit biases and stereotypes that AI may perpetuate. We developed this metaphor in our writing, thematising, and metaphor plotting (Gupta, et al., 2024), and we define it as follows: "Colonising loudspeaker refers to the way in which the prevalence of colonial perspectives in the training dataset for ChatGPT and other language models will tend to make its output reflect colonial viewpoints and language norms. Widespread adoptions of these models will spread these perspectives rapidly while creating the impression that they are neutral since they come from an automated system." (p12). I, authorA, have observed firsthand how generative AI, like ChatGPT or similar models designed for tasks such as creating alternative text, exhibits bias. Trained predominantly on Western datasets, these models often marginalise and misrepresent non-Western cultures. The "colonising loudspeaker" metaphor serves as a powerful reminder of how such technology platforms perpetuate white Western epistemologies and language norms, effectively silencing 'the language of missing people who do not have the global capital to increase the volume of their utterances' (Owusu-Ansah, 2023). I, Author B, have come across many examples of AI tools (particularly image-to-text, and OCR) misrepresenting Arabic text or photos beside Arabic text, and interpreting it to have Islamic connotations, when it does not at all, reproducing an orientalist vision of the Arabic language as necessarily tied to the Islamic religion.

We would not want to see more injustices emerging in writing simply because some people do not care about the equal representation of specific cultures, and we hope that the metaphor of colonising loudspeaker helps clarify this concern for people who are from different cultures and do not regularly notice these ethical and functional shortcomings of AI, or do not acknowledge the depth of their importance.

Conclusion

In concluding this paper, and as we have examined these metaphors thus far, our metaphorical analysis has revealed nuances that inform the pedagogy and perception of AI. The ongoing dialogue we have fostered about AI centers on honesty and trust, the trust we want between professors and students, between learning designers and their work, and across institutions as a whole. Misleading AI metaphors will always arise despite efforts to promote culturally responsive teaching and learning practices. Differentiating between receiving (hearing) and expressing (speaking) metaphors is

engaging and a hallmark of curiosity. It reflects positionality, background, cultural norms, education, learning quality, and a commitment to social justice.

To help readers understand our work and why we selectively employed certain metaphors and analysed their implications, we aim to show that GenAI is not merely a tool where one types input and passively waits for a response. Its risks extend far beyond that simplistic view. We therefore advocate for supportive learning environments when reading, deciding, speaking, creating policies, or teaching about AI. Wang, et al. (2023: 3) describe such environments, identifying 'facilitating conditions', such as access to technological resources, and 'supportive social norms', which reflect the encouragement students receive from mentors to engage with AI learning. Our approach involved sustained dialogue and honest reflection on each metaphor and a commitment to cultivate critical AI literacy. In the classroom, educators might ask students to select one or two metaphors and critically examine how each helps or misleads, and what values underlie its use. They could brainstorm related metaphors; for example, if AI is described as a "job stealer," what comparable metaphor differs in implication? Comparative activities, visual or written, and playful or gamified techniques can encourage criticality, reduce unconscious bias, raise awareness of inequity, and foster deeper understanding of AI.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work the author(s) used ChatGPT and Google Gemini in order to assist with the formatting of a limited number of references and working on shortening some phrases. In these instances, the sources were independently selected and verified by the authors, and AI was not used to generate or suggest source material. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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