CHAPTER TWO

Generative AI as a 'Precipitant' of Challenges in Doctoral Supervision: A Dialogue Among Supervisors

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Abstract: The role of supervisors has become more problematic since the rise of generative Artificial Intelligence (GenAI) in higher education and the disruption it has caused to teaching and research practices. This contribution employs a collaborative autoethnographic approach to articulate the various ways in which AI can act as a "precipitant" of challenges intrinsic to the position of PhD supervision in contemporary global academia, from the perspectives of four experienced supervisors based in the UK and South Africa. Drawing on their own experiences as PhD students, researchers, and supervisors of doctoral candidates, the authors shared possible answers and tensions using agreed-upon prompts to generate discussions that included the principles of academic integrity and ethical research practices that supervisors aim to cultivate in PhD students in the age of GenAI. Potential factors mitigating the misuse of the technology were discussed as part of this autoethnographic exploration, which coincidentally highlights the relational and chronological dimensions of the PhD, rather than the current hegemonic focus on "rushing to the end" and the final output.

Keywords: Higher education, doctoral supervisors, doctoral students, GenAI, precipitant.

1. Introduction

With doctoral candidates occupying a liminal space between being students and being researchers (Keefer, 2015), the role of PhD supervisors can be seen as shaped by the competing expectations of guiding candidates through the institutionally driven process of earning a degree and facilitating their socialisation into discipline-specific discourse communities (Benmore, 2016). This complex task has become even more problematic since the rise of generative Artificial Intelligence (GenAI) in higher education and the disruption it has caused to teaching and research practices (Sardana, Fagan & Wright, 2023). As both 'teachers' and 'peers', supervisors need to assist their supervisees in navigating a landscape of diminished integrity and meaning-making rules, where new practices are yet to emerge and become established as normative.

There are certainly aspects of using GenAI as an assistive technology that hold promise for optimising doctoral supervision processes and outcomes. Dai et al. (2023, p. 84) found that "student independence [was] enabled by ChatGPT [and] allowed for a more proactive and autonomous approach to postgraduate research, where students were to take ownership of their

research, gaining confidence and motivation." Dai et al. further conclude that the "ChatGPT-assisted research process encouraged the transformation of students from being passive apprentices to autonomous researchers" (2023, p. 84), a position that aligns with the recommendations of some leading publishers who advocate for the partial integration of GenAI into research writing (see, for example, Taylor & Francis, 2025).

At the same time, the increased use of GenAI tools for doctoral writing has coincided with a rise in academic misconduct cases (Cowling et al., 2023), reinforcing Badenhorst and Guerin's (2016) conclusion that writing and critical thinking are complex, nuanced, and interdependent processes. Furthermore, with regard to breaches of academic ethics and integrity, there are unresolved contradictions embedded in the very design of the technology itself: GenAI-assisted tools are trained on a vast amount of publicly available data harvested from the Internet (UNESCO, 2023, pp. 9–11) and recycled without proper attribution or a traceable pathway that can help identify the provenance of individual information items (Bowman, 2023). This sets an uncomfortable precedent for how others' words and ideas should be approached and integrated into research writing, making it difficult for supervisors to model good practice regarding academic-integrity compliance. In response to the ethical challenges intrinsic to GenAI tools and their outputs, Cowling et al. (2023) recommend that policy safeguards be established to ensure researchers can mitigate the lack of context and ethical framework, data bias, and equity concerns. Similarly, Wright (2024) urges greater clarity to address heightened weariness among academic staff who struggle with the wide-ranging implications of GenAI tools for their practice, in the absence of clear strategies for how to embrace or ban the technology.

The emphasis on increased productivity, which GenAI use seems to encourage (Watermeyer et al., 2024), aligns well with the need to augment the number of postgraduate qualifications in certain countries, such as South Africa, and to improve the quality of supervision practices (Govender and Markus, 2025). However, there is a danger that productivity will be framed in purely reductive terms as "generating outputs" (Becker & Lukka, 2023) at the expense of intellectual maturity and growth. Accelerated output generation is likely to compromise quality, which often comes from slow research (Kuus, 2015; O'Neill et al., 2014) and is essential for cultivating graduate attributes (Manathunga, Pitt & Critchley, 2009) that are and should remain at the heart of doctoral education.

In light of the above discussion, it follows that the literature remains ambiguous about the value of GenAI as a reliable assistive technology that can foster holistic postgraduate research development. We use this conclusion as a point of departure for our discussion in the present chapter, which intends to unpack some real and pressing concerns associated with the use of GenAI in doctoral education. To achieve this, we will employ a collective autoethnographic approach to articulate the various ways in which AI can act as a "precipitant" of challenges that are integral to the PhD journey in contemporary global academia, from the perspective of four experienced supervisors based in the UK and South Africa. For us, the technology is not solely

a source of new issues, as it is often framed, but rather a factor that highlights existing structural dysfunctions in research and supervision.

Drawing on our own experiences of pursuing PhDs, working as researchers, and supervising doctoral candidates, we will share and comment on critical incidents that have shaped our perceptions of GenAI use in the context of doctoral education. Building on this, we will articulate answers and tensions related to prompts collectively agreed upon by all the authors. Through our choice of approach, we have aimed to avoid a simplified consensus on multifaceted problems and have instead constructed a dialogic narrative which, we hope, will serve as a catalyst for further academic conversations and the sharing of best practices.

1.1 Research questions

The study had three research questions:

- What are the supervisors' critical incidents involving AI that illustrate problems relevant to PhD supervision practice?
- What are the principles of ethical research that supervisors would want to cultivate in PhD students in the age of GenAI?
- What is the role of supervisors in developing PhD students' research skills in the era of GenAI, and whose responsibility is it to educate PGRs about the affordances of the technology?

2. Methodology

The authors of this article, who knew each other through previous contact, were brought together by their similar professional pathways as educators and doctoral supervisors, as well as a shared interest and concern about the role of GenAI as a disruptive technology, reconfiguring the landscape of research and doctoral supervision in their respective countries and globally. When commencing this study, we agreed to meet and explore the impact of GenAI on our scholarly and teaching practices, hoping to make a better, collective sense of the latest "technological creep" (Anderson, 2024) and the often subtle yet potentially fundamental effects it has on knowledge production and ownership. We also believed that by formally recording and disseminating our dialogue, we could offer prompts for further reflection to other colleagues in academia who are grappling with similar challenges and dilemmas.

The decision to engage in meaning-making conversations as a group led to the choice of methodology—collaborative autoethnography (CAE) (Chang et al., 2013; Chang, 2022)—which provided a suitable framework to capture all elements we deemed significant for our process. CAE is a form of qualitative enquiry in which the researchers are the participants in the study; it aims to capture individual experiences while calibrating these against the experiences of other researcher-participants and the existing literature on the problems under discussion (Chang, 2022; Lapadat, 2017). It allows for individual voices to emerge and be preserved as offering

unique perspectives while forming a joint narrative that represents a collective experience and shared knowledge.

Our study is situated within the social constructionist paradigm, which privileges the human viewpoint in its framing of reality and conceives of knowledge as a dynamic process of collective meaning-making, whereby individuals interact within distinct sociocultural contexts (Crotty, 1998, pp. 52–57). Our collaborative autoethnographic method exemplifies the ontology and epistemology of social constructionism (Chang, 2013; Chang, 2022) and aligns well with our initial choice of topic, philosophical beliefs, and preferred mode of engagement as a group of researchers. CAE is a variant of autoethnography (AE) (Lapadat, 2017) or, more precisely, individual autoethnography (IAE) (Chang, 2013; Chang, 2022), and therefore conforms to the fundamental principles of the latter, such as the importance of lived experience as data and the choice of reflection and self-examination as analytical strategies (Adams et al., 2022). As CAE involves two or more participants/researchers, it offers an advantage over IAE by allowing those involved to access a wider evidence base for their conclusions and gain richer collective insights into the relevant issues (Lapadat, 2017).

With its multivocal nature (Lapadat, 2017), CAE is an apt choice for examining layered global phenomena, such as the impact of GenAI on doctoral education, as it accommodates a plurality of critical perspectives in a non-hierarchical manner. Among the unique strengths of this approach is that it facilitates a shared understanding and the co-creation of a joint narrative while preserving the distinctness and authenticity of individual voices and identities. As we are four doctoral supervisors and researchers from diverse backgrounds, institutions, and geopolitical settings, we felt it was important to find a framework that allows us to come together in our differences, which should be recognisable in our research output rather than hidden behind a uniform authorial persona, a standardised argument structure, and tone.

Our team was formed in response to a call for contributions to an edited collection, which was shared between two of the co-authors who decided on a preliminary topic for the chapter. This was then shared with the other two researchers, and a collaboration was forged to refine the thematic focus and submit an abstract to the editors of the collection.

Once the abstract was accepted, the four co-authors met to discuss and agree on a process for conducting the research and producing the written output. A joint decision was made that the study would comprise several online and hybrid discussions structured around collaboratively formulated prompts, reflecting the co-authors' shared experience and interests in the topic. In line with this plan, the co-authors met via MS Teams over nearly three months, first to negotiate and subsequently to explore the prompts through dialogue. The meetings were videorecorded and transcribed, using the MS Teams functionalities, to document the collaborative meaning-making and co-construction of knowledge that occurred as part of the study. The transcriptions

were circulated among the co-authors, who used them as a basis for jointly writing the text of this chapter.

3. Findings and Discussion

The chapter's findings are presented and discussed under three prompts, following the research questions agreed upon during the early stages of the study.

4.1 Prompt 1: Critical Incident involving AI that illustrates problems relevant to PhD supervision practice

Luca: Ok, since I have a very recent and clear example, allow me to go first: we were doing the workshop with you, Dimitar, and I was interrogating ChatGPT, going quite deep into my specialism. It was trying for some "deep cuts" in the literature and history of the discipline, and the machine was keeping up quite well, though in the form of annoying bullet points. But there was still something that felt a bit off to me, and I couldn't really put my finger on it. Then we were discussing unfair advantage, and I asked it to draw an image of a very successful researcher, effectively cheating or fabricating research using AI to publish a lot more than others (as discussed by Majovsky et al., 2023). I had to ask for a satirical take to overcome its initial refusal, and it showed me an image of an old white-bearded man in a lab coat. And that's when I got it: that's how this machine writes, like the stereotype of the academic. I have nothing against this person, and I might be another white European man, but I don't write like that person; I know I can contribute something different. And my PGRs DEFINITELY don't look like that; they come from completely different experiences.

So, for me, that was a clear image, a blunt representation of epistemic injustice (see Fricker, 2017, for a discussion of this evolving concept). AI can provide a lot of information, but it can't take a stand. It always goes for "neutrality", which means it upholds the status quo. It's a bit of a ray of hope, really: while we need to acknowledge the hegemony of that stereotype in terms of academic writing, there's a lot more richness, a lot more diversity of voice that we can contribute and cultivate in PGRs.

Nompilo: Thank you for sharing what you took out of it, Luca. It's helped me rethink what I actually wanted to say. So my incident is actually from earlier this week. I'm writing a paper and was looking for a theory to help me frame the data I'm presenting. I tried searching in my existing theory toolkit, but couldn't find something that was a good fit. So, I started looking for a theory that would bring integrity and agency together.

I struggled quite a bit, but eventually found one – a newer theorist who is still writing to expand her theory. It turned out it had been a while since I read into a new theory for the first time. And you know how our theories are – and our theorists, usually abstract and often difficult to engage with the first time around (Jones, Bradbury & Le Boutillier, 2011). So I was struggling to understand it, but I could tell that this could be a really good fit for the data. Because I was

struggling to grasp the theory's main tenets, I thought to myself, let me check my friends' [GenAI tools] and see what they say. Maybe they can explain it to me.

So I went to four of my friends and asked - so dudes this-and-this theory, help! The responses varied from simplified explanations to short, sometimes unintelligible summaries. Some, however, were a little helpful in clearing up the fog. I closed my laptop in a bit of a mental slump, questioning my philosophical intelligence. The next morning, I went back to the encyclopaedias that had introduced the theory to me, and it started clicking better, but maybe because I'd also given my brain time to process it. I then realised that my friend Chat had lied to me – slight inconsistencies that add up to a falsehood.

My biggest takeaway from this critical incident was understanding how students get into a theory by first of all figuring out what theory they need to use for their study, and then getting to a point where they understand it well enough to use it. Some challenges that students experience with learning to use social theory are linked to a mixed and sometimes conflicting explanation of what theory actually is or isn't – and therefore what comprises effective use in research (Abend, 2008; Hew et al., 2019; Sutton & Staw, 1995). Also, I experienced how GenAI tools could/could not assist in that regard – and the disciplinary expertise someone needs in order to ask useful prompts and critically interact with GenAI outputs.

Dimitar: Similarly to Nompilo, the critical incident I wish to reflect on arises from my own research practice – specifically, my experience of writing for publication. I had submitted a co-authored research article to a top-ranking international journal in education, and, after a long wait, I received the standard two peer-review responses. Reviewer One was succinct and extremely positive, requesting only a few minor, mostly technical changes to the text, while the proverbial Reviewer Two had produced copious feedback and a long list of major revisions. Upon closer inspection, the second reviewer's response seemed unnecessarily verbose and tautological, which only added to the disappointment and frustration any author would experience when having to rework their research output. Feelings aside, my collaborators and I worked very hard to address the reviewers' criticisms and resubmitted a rewritten article to the journal.

Then, as I was preparing to deliver a workshop on GenAI uses for research, the same workshop that Luca mentioned in his response, I realised that ChatGPT can produce a critique of any piece of writing that a user uploads, including a research paper. So, I tested this feature by using a randomly selected journal article, and the output I received looked very similar to the feedback of Reviewer Two, which was still fresh in my mind. Both texts had a similar layout, which included numbered headings highlighting standard points of an article critique, e.g. originality, focus, structure, etc., and sounded repetitive and verbose. Furthermore, the reviewer's feedback contained a peculiar orthographic symbol, an overly long dash, which is impossible to produce with a standard computer keyboard and which I had only seen in ChatGPT outputs. For

illustration, I am copy-pasting the ChatGPT dash from another output, "challenging—even," which you can compare with a standard dash "–" and a hyphen "-" (all in bold). As you can see, the ChatGPT dash is longer and almost touches the words it links, a feature which sets it apart from the other two similar symbols.

Now, I know this is all circumstantial evidence, but I have no doubt in my mind that Reviewer Two had used GenAI to write, at least in part, his feedback. I don't think that the entire review was GenAI-produced, as it contained well-targeted recommended readings, but the very fact that some of it was shows the ubiquity of the technology in research practice. To be clear, the publishers of the journal, Taylor and Francis, permit limited use of GenAI in reviews – "to assist with improving review language" (2025) – however, a troubling thought persists that the reviewer had gone further than that. And even if they haven't, given the repetitiveness of the review, GenAI had not been taken full advantage of.

I thought it was important to share this experience because it reflects well the research landscape our PhD students will have to navigate henceforth: a brave new world where GenAI will provoke fresh challenges and anxieties, but also offer opportunities for different, perhaps better, ways of doing research.

Israel: I have mixed encounters with GenAI, which are not necessarily critical incidents. My first encounter was after encouragement from a good colleague in another faculty to explore the potential benefits of ChatGPT. That came after successive discussions about the emerging trends in education and, generally, in life, and the associated concerns. The 'tech-savvy' colleague even presented scenarios in which GenAI was abused in the medical and law professions, and the costly repercussions that followed. However, when he illustrated the way he uses ChatGPT almost daily, and the manner in which I could benefit from utilising it, that made me ponder whether I was neither too rigid nor too difficult for myself. Thereafter, my overall experience, drawn especially from supervision, is that GenAI's responses are quite generic; they demand contextualisation. This confirms Wright's (2024) stance that, adding in nouveau complexities of contract cheating, Artificial Intelligence using ChatGPT is a game changer and disruptor in HE; academic weariness is heightened as many universities try to better understand AI and ChatGPT. The vastness and implications of these AI tools are not clarified for most staff, with few policies or clear strategies in place to work with it, against it, embrace it, or ban it. Interestingly, Dai, Lai, Lim, and Liu (2023) found that Australian postgraduate students believed ChatGPT enhanced the quality and pace of their work. As such, my approach to using GenAI is two-faced: reluctant but motivated by the desire to stay 'informed' and ahead of, especially my students, and I believe that has benefited me proportionally.

However, can I also briefly comment on your critical incidents? So, for both of you, Luca and Nompilo, you received outcomes that were/are not reflective of your ontological and epistemological orientations. But then, I am not sure whether such outcomes have anything to

do with the quality of the questions prompted, which, of course, relate to the follow-up questions. The reality is that asking different questions may yield different outcomes, but again, as I said earlier, my experience has been that most outcomes are not very relevant when the responses required come from unfamiliar cases. Cowling et al. (2023) recommend that policy safeguards are needed to ensure research responses address a lack of context, data bias, equity concerns, and a lack of an ethical framework. In my view, however, the good friend GenAI relies on the quality of data available at any given time, and this data is incrementally being fed into the system at an alarming rate due to technological advancements and what looks like a contagious global interaction with GenAI. This is in sync with Wright's (2024) orientation that HE institutions are currently challenged to provide guidelines/best practice for supervisors because of the advancement in the speed of machine learning. By the time a document is written and released to staff, AI has galloped on, leaving academics in its wake.

4.2 Prompt 2: Modelling ethical research practice (authorship, ownership of ideas, originality, contribution)

Nompilo: Speaking to the point regarding our interactions with GenAI tools (or other human resources), I've had long discussions with my doctoral students about this. If you look at the fact that the thesis itself has a reference list, we know those are not the only books or articles that the student has read. The student has had to read much, much more, maybe double or triple, or even five times more than what they actually include there, which has informed their thinking and has influenced the direction they've taken in their research. Sometimes you find a bibliographic list, but even then that's not a complete list. So what does that say about what we can and can't reference? Should GenAI tools be included?

Another issue is the fact that our institution now has guidelines on what you need to do if you use any GenAI tool in your research, in your writing assignments, and so on. There's a little table that you complete about what you used, what you used it for, and what that means for the authorship of the document. Is it still yours? How is it still yours? And I'm thinking of things like Grammarly and NVivo, and language editors and so on – all these AI, technical, and human resources have helped me make my work better in some way. But I've hardly seen mention of their use in published or other research work. So how do we decide what to include and what not to include, or who to include and who not to include?

The writing process is complex, and the thinking behind it and what adds to that thinking is also quite complex and very nuanced (Badenhorst & Guerin, 2016). So we're asking questions without answers, I think. And there's clearly still much more we need to think about as universities and as supervisors.

Dimitar: Supervisors are perceived as mentors in good research practice, including ethics and integrity, and should ensure that PhD students comply with institutional and disciplinary norms. Although seemingly straightforward, the reality of observing ethics and integrity rules can often

be subjective and ambiguous. A concise yet telling example is the often discretionary nature of knowledge attribution in academic writing. As an operational principle, common knowledge within a discipline does not normally require attribution; however, there is no clear consensus on which knowledge is owned collectively and which individually (Shi, 2011).

I believe that the contested nature of ownership and, by extension, authorship of ideas, about which we, as supervisors, need to educate our PhD students, is compounded further by the adoption of GenAI for research. It is a well-known fact that AI-assisted tools are trained on vast amounts of publicly available data harvested from the Internet (UNESCO, 2023, 9-11), which is recycled without proper attribution or even a traceable pathway that can help identify the provenance of individual information items (Bowman, 2023). The design of the technology itself is thus a major disruptor of our understanding of shared or individually authored knowledge and what constitutes ethical behaviour in navigating intertextuality in academic meaning-making.

With GenAI being adopted as a multi-purpose research tool, our long-standing principles of authorship are being redefined or rendered obsolete in multiple other ways. One among many examples is the use of the technology to explore ideas or generate plans, outlines, or early drafts, which then feed into the researcher's textual output. This practice is both already established amongst PhD students (English et al., 2025) and recommended as pedagogically sound by UK education advisory bodies such as the Quality Assurance Agency (QAA) (May 2023) and JISC (2023). For me, the process of idea generation and development with GenAI is problematic in terms of our current understanding of authorship, as it constitutes an active intervention into the creative aspect of research (see also Angelov, 2025 – forthcoming). Incorporating pre-fabricated argument segments into your writing, even if retrospectively referenced, is similar to co-authorship which remains unacknowledged. Perhaps, in the future, such co-creation between human intelligence and AI will become the norm, as Eaton's idea of "postplagiarism" suggests (2024); however, this would require a redefinition not just of the concept of authorship but the entire knowledge economy which is underpinned by legal categories based on identifiable provenance and ownership of ideas, such as copyright and intellectual property.

Luca: Thanks Dimitar, and I want to say that I completely take your point about the issue of ownership. I am not the biggest fan of intellectual property, but I am a stickler for genealogy (in the Foucauldian sense) - so while I would like a complete shift in the political economy of academic publishing, where GenAI is really a strong precipitant for disruption, I would still want to know who wrote something, in what socio-historical context, and from what standpoint. In connection with this, the modelling point for me is very interesting, because of the approach to supervision that I saw here in the UK and in South Africa, vis-à-vis what I experienced in Italy (for a more in-depth discussion of different PhD models, see Dominguez-Whitehead & Maringe (2020)). Here, I haven't worked with PGRs on projects or on teaching: full-time PGRs spend most of their time on their individual projects, and part-timers barely have the time to do their project and their daily job, so I don't have many opportunities to "model", to constitute that

"genealogy" that I mentioned above in terms of the evolution of thought. It's something which I am honestly a bit sad about, not having that ongoing collaboration and conversation.

But for me, it loops back again to enabling different styles of writing, looking different from what is established and from what I myself write - to push the boundaries of the thesis in terms of both content and style. I was thinking of Fanon's "Black Skin, White Masks", which might well be in the top 10 most influential books of 20th-century social science, and was rejected as a thesis.

There was (and there still is much) structural racism, but it's about what is considered acceptable in terms of new knowledge. I don't think these tools can help us push these boundaries in that same way - by definition, they can only replicate. And we know that undergraduates, PGRs, supervisors (and even reviewers, as we have seen!) use them, because we all have deadlines, and we see that we can rely on these tools to get through them, because we are all tangled up in "generating outputs" and productivity demands (as discussed by Becker & Lukka, 2023) that only tangentially have to do with advancing knowledge, with continuing the genealogy that I was referring to.

The more I think that these tools could help us with the core drive of our work, the more I feel that this core drive has been warped. If one can use these tools to be what counts as a successful scholar nowadays, then I have serious problems with the notion of a successful scholar - again, there's an ontological break with the genealogy of thought. And of course, I need to put food on the table, so I have to be that person to a degree. But I still can say, "look, maybe this is not the right direction".

Israel: To my students, I'm saying, do you know the fundamentals? Do you know if I would ask you to do this without this 'assistant'? Would you get it right? You know you can't continue to develop students the 'traditional' way if they have other ways. Supervisors often engage with their students based on their own prior experiences as postgraduate students (Govender & Markus, 2025). I'm supervising many students. So, as they present me with some work, I'm asking, is this their work, like I'm asking? And when I'm asking them a few clarity-seeking questions to establish whether they can respond as anticipated, at least to my satisfaction, based on the stage and level of study, some of them are getting challenged. So, I'm then also querying how they arrived at presenting to me something that they struggle to at least articulate. I have realised that ChatGPT has a particular way of expressing itself, coupled with its out-of-context responses, a pattern which I established in some of my students' writings. I mean, I don't know for sure what the good friend gives them, but for some of them, it is coming out that there is no coherence in their submissions. This experience contradicts findings by Dai et al. (2023, p. 84) that "student independence enabled by ChatGPT allowed for a more proactive and autonomous approach to postgraduate research, where students were to take ownership of their research, gaining confidence and motivation. Moreover, by addressing technical tasks

independently, students had more time to engage in deeper critical thinking and plan for the bigger picture of their research project. The ChatGPT-assisted research process encouraged the transformation of students from being passive apprentices to autonomous researchers." So, I'm always engaging some of them, saying I'm not hearing your voice, or you don't seem to be owning up to your work. This aligns with Govender and Markus (2025) who argue that the pressure to increase the number of postgraduate qualifications in South Africa has intensified the need for quality supervision within universities.

That has led me to conclude that they are going all the way to use this good friend, but then they are not going back to do what they're supposed to do. Therefore, this is the centre of some of our ongoing group conversations with the students I supervise, with one strong recommendation of the need to set self-limits on choices of how to benefit from using GenAI, with a key priority to remain as the authors and owners of their individual work. That is, the human part must remain human, with evidence of its existence in the work, and understanding that machines will continue to be machines, just putting it bluntly.

4.3 Prompt 3: Supervisors' role in developing research skills (how to write with GenAI; who has the expertise and should be responsible for educating PGRs about the affordances of the technology)

Israel: The question is how can/do we as supervisors take our students forward during these unprecedented times? Because sometimes as supervisors, we are also, you know, sceptical. Yet, sometimes these students are way ahead and they may have all this information. So at the end of the day, I ponder to say, do we have to limit them, and how? If not, then, (how) do we support them to ethically use this AI? This, to me, is the maze in which supervisors find themselves enclaved by GenAI. So, we are saying this AI has precipitated the challenges that supervisors are facing. Wright (2024:480) also raised the same, asking, "With the advent of ample search engine opportunities, GenAI technology, and adhering to proper academic integrity processes, how can supervisors navigate these complexities, unsupported by solid procedures, due to the rapidly changing nature of AI?"

In recent years, there have been considerable examples of substantial cheating in doctoral studies (Cowling et al., 2023). Such conversions need to continue to be discussed in academia with the understanding that knowledge expansion and advancement must be real. AI enables a student ethically cleared to unethically complete a thesis/dissertation, from chapter one development to the final chapter, in less than three months. Or to start and complete a systematic literature review paper in a couple of days or so. But, is that authentic knowledge production? Even after critiquing the work, sometimes this problem of artificial knowledge production escapes the tentacles of supervisors or reviewers. Hence, I continue to emphasise the need to respect the academic space by understanding that at the doctoral level, or any other level for that matter, contribution to knowledge and defending one's space within a discipline illuminate the ultimate

definition of a doctor. In one study, Caillaud and Skec (2024) found that a subset of interviewees cautioned against treating GenAI as a mere "search engine" and expressed their doubts regarding the quality of output for literature review, attributing their concerns to the quality of the sources employed in training the GenAI and the potential for "hallucinatory" content.

So, sometimes it is important to close out technology and go back to (literally) doing it manually, because I want to demonstrate to them how they have to get from the first step. I'm saying, do you know the fundamentals? I keep on thinking about what the students could do without AI, and what they could do with AI. That is the launchpad of my next questions to my students: How much do you know if I were to ask you to do this without the assistance of this machinery? Can you explain how you would approach it, and when you get what you get, would you be able to critique it? And how? Would you be able to establish whether it is correct or wrong? Chauke, Mkhize, Methi and Dlamini (2024)'s study recommends the immediate development of an innovative policy on the ethical use of AI at South Africa's historically disadvantaged universities. This policy should emphasise ethical guidelines for postgraduate students when utilising AI tools such as ChatGPT to ensure responsible and effective integration into their academic success.

However, my view is that the policy ought to apply across South Africa's higher education sector. In line with such a position, just to be careful whenever my students present some work to me, I'm always asking myself if it is their work or another victimisation by AI, and then, let me use the simplest way to be convinced that they own the work. Cowling et al. (2023) posit that although expectations are significant on the ethical conduct of research students, this is not always the case, and effective detection will be needed to respond to a minority of students using the AI tool incorrectly. So, from my point of view, I am consistently indicating that we should continue asking ourselves: how far can we go without AI, and how far can we go with AI? Caillaud and Skec (2024) suggest that, rather than seeking to prevent PhD students from utilising such tools, supervisors should equip them with the knowledge to utilise these new GenAI resources effectively and ethically. However, as a prerequisite, supervisors themselves must become familiar with the diverse functionalities offered by GenAI research tools and attain proficiency in their application. For me, this seems to suggest that to be helpful in assisting with GenAI, supervisors have to be a step ahead of the students. But is this not an extra layer of supervisory responsibilities, and how much more can supervisors contribute to developing students' acquaintance with AI, as we also have our own challenges, and we also have to draw the line as supervisors?

Luca: I like your questioning, Israel, and in fact, I think that a lot of the issues you raise would be less urgent if academic cultures (and the metrics we sadly have to live by) weren't so writing-centric and more about real conversations in real contexts. Maybe it's an excessive position, and I am going to sound like Socrates, when (as narrated in Plato's *Phaedrus*) he argued that writing is going to ruin knowledge. Maybe I am already an old man rambling about what kids do nowadays, but I struggle to see the link between GenAI and research skills, or "doctorateness,"

whatever we take that to mean (and I agree with Wellington (2013) that we always need an ongoing debate on that matter), and therefore I don't think it falls within my responsibilities as a supervisor to teach them about the technology, if not in negative terms.

This is because I just don't see how these tools can help the PGRs get to "doctorateness," which I personally see as the professional capacity to make value judgments—effectively, to take a justified, rigorous public stand, which of course includes a matter of voice and positionality, something that I touched upon during my critical incident (in doing this, I subscribe to a version of Hekman's (1997) standpoint theory).

I mean, of course AI can help in technical ways, in the same way that we are using a technological tool now to have this conversation at a distance. And of course the choice and affordances of the platform shape it in some way (Vidolov, 2022), but it is not in itself the conversation, the knowledge-generating dialogue itself. Or an even worse example: I can use a microwave to quickly heat lunch, and that will save me time to focus on my PhD; it will help me towards it in a real sense, but I wouldn't say that the microwave per se helps me get to "doctorateness," and therefore that I should teach PGRs how to use a microwave.

So to summarise, I don't feel like these tools can help, if not with some of the logistics, and I don't feel that it necessarily falls upon me, as a supervisor, to take care of that (though of course I am happy to help and share what I do, for example, in terms of managing references).

Nompilo: So, prior to November 2022, I looked at the things we'd talked about in our postgraduate supervision workshops. We talked about things like academic writing, an ethical mindset, criticality and a whole range of skills and knowledge – the graduate attributes (Manathunga, Pitt & Critchley, 2009). These attributes comprise the identity that doctoral students should have by the end of the degree, and I still think that is the responsibility of the supervisor – enabling the development of those attributes. But now there's the aspect of GenAI and the tools in that space. Already for me there's a tension there. Most of the tools are not actually supporting the development of any of those graduate attributes at doctoral level. They are supporting the development of a particular output. However, the output itself needs to be a demonstration of the attainment of the graduate attributes.

So for me, I see the challenge stemming from our almost exclusive focus on the product – rather than the process. As soon as students come in, we already start demanding certain outputs from them which will start to demonstrate that they are developing doctorateness or the doctoral identity (Trafford & Leshem, 2009). In the workshops I run with postgraduate students, I try to avoid demonstrating GenAI tools and rather focus on the principles of ethical research – and the possible 'arrested development' depending on how they use GenAI to support the production of outputs that we demand of them.

Dimitar: It is great that we have different takes on this prompt, which is revealing of our individual approaches to supervision, but also of the intrinsic ambiguities of the supervisor-supervisee relationship. I share Luca's scepticism when it comes to the use of GenAI to bolster the neoliberal discourse of productivity in higher education, a problem that has already been identified by scholars interested in the research uses of the technology (Watermeyer et al., 2024), and I agree there is a real danger that accelerated output generation will compromise quality, which often comes with slow research (Kuus, 2015; O'Neill et al., 2014). However, if GenAI is here to stay, it will inevitably transform the process of research and writing, which will require the development of new skill sets geared towards the production of co-created research outputs. Regardless of the exact practical and ethical implications of this transformation, I believe the successful researcher of tomorrow will need a different type of digital literacy that combines advanced technical and critical thinking skills.

Going back to the original prompt, I find it difficult to separate research skills from the intellectual work that goes into a PhD thesis, as the latter is very much predicated on the former. In fact, I believe that supervisors always teach skills, albeit implicitly, when they give feedback on formal aspects of students' writing, e.g. argument organisation, sentence and paragraph structure, or style, which I am sure we all do. The key distinction to bear in mind here is between implicit and explicit teaching of these skills, which, again, is a grey area in the remit of the supervisor's role. How much explicit support for research skills development is fair to expect from a supervisor who is first and foremost a subject expert and may not have relevant pedagogical or technical expertise?

ChatGPT is bringing this problem into sharper focus for me as it works as an amplifier of students' skills-development needs. If the technology is a game changer and its expert use will determine the professional success of future researchers, shouldn't we all be teaching our students how to unlock its full potential? Personally, I feel I will be short-changing my students if I don't do so. Furthermore, and this goes back to doctoral studies being degree programmes, we need to bear in mind that the PhD thesis is, after all, an elaborate piece of coursework which is submitted for assessment. In recent years, there has been a concerted effort as part of the Scholarship of Teaching and Learning to educate students about the assessment tasks they are required to complete; in other words, to develop students' "assessment literacy" (Price et al. 2012). I find the concept of "assessment literacy" to be extremely helpful as it draws attention to the often tacit knowledge, skills, and competencies involved in performing an assessment task, which are either absent from consideration or neglected in favour of subject knowledge. If a fair approach to teaching involves educating students about these technical and procedural elements of assessment, then teaching them how to use GenAI for research should be an integral part of doctoral training and supervision.

4. Conclusion and Recommendations

When teasing out common threads in our critical incidents and in how we model academic roles and support the development of doctoral capabilities, our discussions have consistently highlighted pre-existing points of tension and grey areas between different stakeholders: the growing, output-oriented productivity emphasis in academia (Niyazova, 2021); the lack of formalisation in the role of the supervisor; and the complexities of modelling an evolving role for PGRs (Guarimata-Salinas, Carvajal & Jimenez-Lopez, 2024); and the inequality of ownership and authorship in publishing (Hart & Perlis, 2021).

While all of these predate GenAI, our conversations have also revealed how GenAI technology is quickly bringing these pre-existing issues into much sharper contrast (Bozkurt, 2024). With the ongoing radical change in academia's meaning-making matrix, the question arises as to whether a breaking point is approaching. Although the narrative of "fast social change" has been rightfully subjected to strong critique and scrutiny, including for its reactionary overtones (Lawson, 2014; Kavanagh, Lightfoot & Lilley, 2021; Ballard & Barnett, 2021), our narratives seem to frame the advent of GenAI in academia as a one-off case of "a frog in boiling water" (Steffan, 2024), which has the potential to elicit radical critiques and reactions (McQuillan, 2022).

There is thus an opportunity for transformative potential in engaging in conversations about GenAI in HE: by identifying the technology as a "precipitant", we highlight both a historical continuity in connection with existing structural dysfunctions and a radical acceleration in how these are experienced and technologically mediated in our supervisory practices. In doing so, we can envisage ways of mitigating some of the most impactful effects, and hopefully, securing a stronger position to articulate and raise awareness of those structural issues in our supervisees.

Potential factors for mitigation were therefore discussed as part of this autoethnographic exploration, which highlight the relational and chronological dimensions of the PhD, rather than the current hegemonic focus on "rushing to the end" and the final output. In line with this, we can draw a few potential recommendations for supervisory practice from our conversations, all pertaining to "staying with the trouble" (Haraway, 2016): not neat solutions of reconciliation with technology or of recuperation of one-sided epistemic authority, but rather plural aspects of the ongoing, more modest, but more pervasive processes of "getting on together" (ibid.) in a troubled academic ecosystem. These are as follows:

- As Nompilo suggests, recovering a more process-oriented thinking around the PhD by limiting instrumental strategies that seem to funnel candidates into a long series of discrete outputs would weaken the "pull" that GenAI technology exerts. This approach echoes Manathunga et al.'s (2021) critique of the focus on efficiency and outputs, as well as their warping effect on doctoral temporalities.
- Emphasising once again the relational dimension of doctoral study, both Israel and Luca affirm the value of actual, back-and-forth verbal conversations and questioning with supervisees, and more broadly with the academic community and the general public. This

explicitly pertains to recovering the embodied character of knowledge production, which is historically, geographically, and culturally contextualised, and opposing a "gaze from nowhere" approach that is often insidiously inherent to algorithmic production (Haraway, 1988).

- Finally, and again in connection with enhancing the capacity of doctoral candidates to engage productively in academic discourse, Dimitar highlights the importance of cultivating assessment literacy, including how GenAI can (and cannot) address the formal requirements of the PhD. This will involve developing a dynamic awareness of the inevitable transformations that AI technologies will bring to how academic integrity and academic identities are framed and perceived (Hellaway, 2025).

Ultimately, there appears to be a potential way to positively address and mitigate the heightened challenges brought by GenAI in doctoral supervision: create relational spaces where we, as a community of supervisors and postgraduate researchers, acknowledge the thesis and "doctorateness" as an emergent property of conversations marked by shared understanding and co-creation of a joint narrative. This approach echoes African philosophies such as Ubuntu, which highlight collective knowledge creation(see Kgari-Masondo et al., 2024, for a specific discussion in the context of doctoral authorship), while preserving the distinctness and authenticity of individual voices and identities in their respective and distinct roles within this process.

5. Limitations and Future Research

In choosing to engage in CAE, we accepted the limitations that come with this methodology. Firstly, the number of participants in a collective autoethnographic study is limited compared to other qualitative methods, starting from as few as two (Lapadat, 2017; Chang, 2022). However, what might be perceived as restricted breadth is typically offset by the depth of the research data—collected over iterative conversations—and the agency that participants gain when actively participating in the co-creation of knowledge as co-authors.

Secondly, CAE makes it difficult to safeguard anonymity, and we made a conscious decision to disclose our identities when reporting on our individual experiences and beliefs. A similar approach was taken by many other collaborative autoethnographic studies (e.g., Guerrero-Nieto & Quintero-Polo, 2024; Hernandez et al., 2015; Sheridan et al., 2020). In doing so, we also aimed to communicate our cultural and gender positionality, which is an intrinsic part of our professional and life stories. We are aware that by foregoing anonymity, we have created a certain vulnerability for ourselves as researchers, but also for others who may be implicated in our narrative (Chang, 2022). To minimise any possibility of negative exposure, we have followed "the ethical principle of 'do no harm'" (Chang, 2022, p. 62) to anyone involved by withholding personal identifiers and potentially compromising information. In future studies, other

researchers may want to use anonymised data to investigate high-risk topics, such as the intentional misuse of GenAI in both doctoral and research writing.

Finally, we acknowledge the disciplinary limitations of our scholarly and teaching practice. As social scientists specialised in education, we can speak for a particular academic community, but we recognise that colleagues from other disciplines may have different views and identify different challenges in relation to GenAI use in doctoral education. We hope our conversation provides insight and prompts others to critically reflect on the adoption of this technology in the meaning-making and knowledge-production practices of their disciplines.

6. Declarations

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