

Is the Human IS Researcher Dead? Long Live the AI Researcher

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Abstract

AI like ChatGPT sparks public concerns. These emerging technologies raise questions about what it means to be human and to what extent they will support or replace existing jobs. As scholars, we are also forced to reckon with what it means to be a researcher and how AI influences our identity and profession. We address the latter questions based on an extensive interview with ChatGPT and its self-assessment of research capabilities based on the Researcher Development Framework. The assessment shows expert-level capabilities within some areas, but is open to divergent interpretations. We suggest the AI user, the AI prompter, and the AI sidekick as potential future roles that we may assume. We discuss whether the human researcher is dead and the implications of AI for our researcher identity. We suggest research questions that will help us prepare for the future, maintain agency, redefine our identity, and influence future AI development.

Keywords: Professional identity, ChatGPT, Researcher identity, Researcher competence, Generative AI.

1. Introduction

Since ChatGPT became publicly available as a “research preview” on November 30th, 2022, it has sparked widespread interest and debate about AI and its societal implications. There are many examples of how powerful AI has become, and there are many predictions of its short- and long-term applications and implications. ChatGPT has, for example, been reported to have passed the US medical licensing exam (Brueck, 2023) and AI is believed to radically change how diseases like cancer are treated (Gregory, 2023). It may also help us to address complex issues such as climate change (Mastroia, 2023). Climate change poses an unprecedented scientific challenge due to its intricate complexity and multitude of variables. AI like ChatGPT can aid in accounting for evolving climate factors, enhancing our predictive accuracy regarding environmental shifts and enabling timely deployment of mitigation strategies. Despite its potential, the introduction of ChatGPT has increased the perceived

risks of an uncontrollable and technology-determined future. Many industry experts fear an AI “arms race” (Chow and Perrigo, 2023) and a 2022 survey claimed that half of the participating AI researchers believe that there is at least a 10% chance that we will be unable “to control future advanced AI systems causing human extinction or similarly permanent and severe disempowerment of the human species” (Mitchell, 2023). As a result, more than 1000 tech leaders, researchers, and other stakeholders have signed an open letter calling for a moratorium on AI development because the technologies pose “profound risks to society and humanity” (Metz and Schmidt, 2023).

The existential risks to humanity aside, there is a strong sentiment in public discourse that professional identities are under threat by LLMs and other developments within AI. Even before LLMs became part of the public discourse, the consultancy company McKinsey predicted that “about half of the activities (not jobs) carried out by workers could be automated” (Manyika and Sneader, 2018). In fact, their research found that around 15 percent of the global workforce could be displaced by automation by 2030. More recently, Goldman Sachs economists have estimated that as “many as 300 million full-time jobs around the world could be automated in some way by the newest wave of artificial intelligence that has spawned platforms like ChatGPT” (Toh, 2023). Importantly, while historical examples of automation have primarily replaced manual work, AI is predicted to also replace tasks performed by knowledge workers. No profession, in other words, will go untouched. This outlook underscores the need for research into how technology shapes and threatens professional identity. Professional identity refers to who you are and what you do as a professional (Strich et al., 2021). Across knowledge professions, identities and self-images will be impacted by AI and the role these technologies assume in carrying out various tasks. This is confirmed by a recent survey that the ZipRecruiter job search platform conducted after the release of ChatGPT, which showed that “62 percent of job seekers said they were concerned that artificial intelligence could derail their careers” (DePillis and Lohr, 2023). AI may threaten and transform professional identities at both individual and

collective levels (Goto, 2021). For example, AI is perceived as a threat to medical professional identity to the extent that the technology challenges physicians' expert status and their role as an autonomous care provider (Jussupow et al., 2022).

Within our research community, an immediate concern has been how to distinguish AI from human authorship (Dwivedi et al., 2023), and everyone from journals to universities is scrambling to formulate policies around the use of ChatGPT and similar technologies. As Sven Laumer argues in a recent editorial, "the resistance to this technology that I've observed aligns with the user resistance to IT that has been documented for decades, and it is a clear indication that a digital transformation of academia is underway" (Dwivedi et al., 2023: 25). As knowledge workers and researchers, we are forced to reckon with how AI influences our identity and profession going forward.

In this paper, we address the issue of how ChatGPT impacts our professional identity as IS researchers. Therefore, we ask the following research question: *To what extent will our identity as IS researchers be impacted by AI like ChatGPT?* To approach this question, a natural starting point is to investigate whether AI possesses the capabilities to replace human researchers now or in the future. We assess this based on an extensive interview with ChatGPT and its self-assessment of research capabilities based on the Researcher Development Framework (Vitae, 2011). The assessment shows expert-level capabilities within some areas, but is open to interpretations. How these capabilities will play out and how they will impact our identity in the future is necessarily unknown. However, the assessment allows us to first interpret possible functions AI will play in the future of IS research and then to discuss how these functions will impact our IS researcher identity. Therefore, in the discussion we suggest the AI user, the AI prompter, and the AI sidekick as potential future roles we, as researchers, may occupy. We consider our interpretations in the context of the literature on professional identity, which allows us to suggest research questions that will help us prepare for the future and maintain agency, redefine our identity, and influence future AI development.

2. Background: Professional identity and AI technologies

Professional identity is a central theme in the study of occupations and organizations (Alvesson et al., 2008; Reid, 2015; Carter and Grover, 2015) and is tied to questions like "who am I?" and "what do I do?" in the context of work (Strich et al., 2021). Professional identity is part of an individual's sense of self (Carter and Grover, 2015), and people form their professional

identity in relation to their past, future, and possible self (Reid, 2015). Importantly, professional identity is also strongly related to organizational and professional roles and the "goals, values, beliefs, norms, interaction styles and time horizons that are typically associated with them" (Ashforth, 2001: 6). People live out their professional lives inhabiting roles as, for example, doctors, nurses, researchers, and teachers that depending on the context come with ways of acting and interacting, expected educational backgrounds, rights, and responsibilities (Faulkner and Runde, 2013).

The role-based identities of professionals are strongly tied to competencies (Craig et al., 2019) as both individuals' self-understanding of their identity and the perception of others of them are formed by how capable they are of carrying out role-related tasks. For example, the identity of a software engineer is tightly coupled to the competencies that a software engineer needs to have to be able to develop software effectively and efficiently (Craig et al., 2019). In other words, what you are is tied to what you know, what you do, and how the required competencies differ from those associated with other professional identities.

Within IS, researchers argue that people's professional identities are impacted and shaped by their relationship to technology (Carter and Grover, 2015), and the introduction of innovative technology in a workplace is an opportunity to reconfigure roles and identities, whether this is intended and desired or not (Craig et al., 2019). Technology in the form of social media and digital platforms allows people to express their professional identity in new ways (Carter and Grover, 2015), for example, by enabling experts to share their knowledge easily and visibly with others occupying the same role within or across organizations. However, the introduction of innovative technology can also be perceived as a threat to existing identities (Craig et al., 2019). Their introduction may require new competencies and new ways of acting, which professionals can either resist or accommodate to preserve or transform their identities (Carter and Grover, 2015). How people respond to technology-induced threats to their professional identities is therefore a very salient question as AI technologies are poised to radically disrupt many professions that were previously shielded against threats of automation. For example, how code-generating AI will impact what software engineers do and what the consequences for their identity will be are highly debated questions (Visual studio magazine, 2021).

The research literature on AI and professional identity is still nascent (Strich et al., 2021). The increasing reliance on data science and machine learning in many organizations has led to new professional groups, which in turn influences the actions

and interactions with existing knowledge workers (Pachidi et al., 2020). AI technologies that not only transform but also automate tasks threaten the identity of professional groups and blur the boundaries between them (Strich et al., 2021). As AI is increasingly able to perform the tasks of knowledge workers, it raises the question of what it means to be a white-collar worker (Strich et al., 2021).

In summary, AI technologies are expected to disrupt many professional identities. However, this needs further investigation. As the capabilities of AI technologies are constantly developing (Berente et al., 2019), we need to investigate the relationship between AI and professional identity and how professionals respond and adapt to AI-driven changes (Strich et al., 2021). As IS researchers, we start by investigating the potential impact on our professional identity.

3. Methods

Evans has been credited with laying the foundation for the academic literature on researcher development and has defined research development as “the process whereby people’s capacity and willingness to carry out the research components of their work or studies may be considered to be enhanced, with a degree of permanence that exceeds transitoriness” (Evans, 2011: 82). Several researcher development frameworks exist, including Evans’ conceptual framework of researcher development, the Research Skill Development Framework (Willison, O’Regan, and Kuhn, 2018), and the Vitae Researcher Development Framework (Vitae, 2011). The Vitae Researcher Development Framework (RDF henceforth) is arguably the most widely used as it has been adopted by many UK universities to support their institutional researcher development programs (Fazal and Chakravarty, 2021). For the very same reason, we also rely on the RDF in this study.

The Researcher Development Framework (RDF) is a professional development framework that “articulates the knowledge, behaviours and attributes of successful researchers” (Vitae, 2011: 1). It was conceived to encourage and facilitate the personal, professional, and career development of researchers. It allows researchers to self-assess their attributes against clearly defined criteria and inspire them to strive for excellence. The RDF is structured around four dimensions: (A) “Knowledge and intellectual abilities”, (B) “Personal effectiveness”, (C) “Research governance and organization”, and (D) “Engagement, influence, and impact”. It is furthermore divided into 12 subdomains and 63 descriptors that capture attributes of successful researchers, including “the knowledge, intellectual abilities, techniques and professional standards to do research, as well as the personal qualities, knowledge

and skills to work with others and ensure the wider impact of research” (Vitae, 2011: 2). Each descriptor is found at three to five stages of maturity, representing distinct levels of performance or development. These stages describe increasingly mature levels of expertise for each attribute. The RDF is illustrated in Figure 1 (see <http://u.pc.cd/OyO> for an enlarged version).

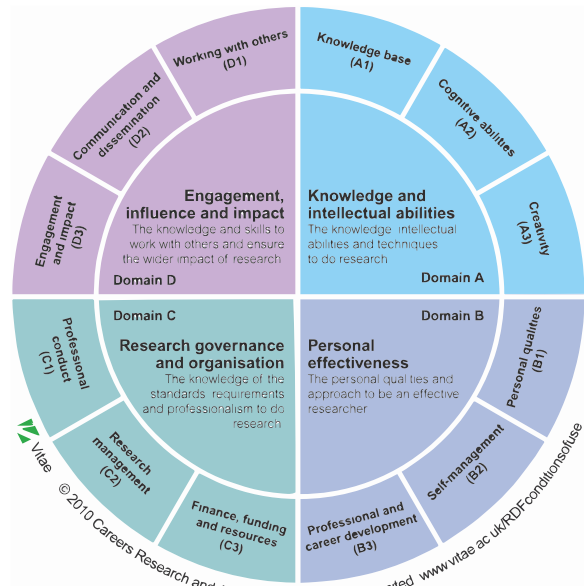


Figure 1. The Vitae RDF

The framework has previously been evaluated. For example, a 2011 study concluded that the RDF “has great potential in supporting researcher development, provided certain specified conditions are met – in particular the need to ensure individualisation, support, and researcher ownership of the outcomes” (Bray and Boon, 2011: 99). While it predates the current AI trend, the RDF remains a technology-agnostic framework, making it highly relevant to our investigation. In the future, it may be necessary to update the RDF to incorporate or reflect competencies that enable effective collaboration and ethical utilization of AI technologies in research endeavors.

For the purpose of conducting the interview with ChatGPT, each descriptor was translated into a question. One example is “Information seeking” (domain A, subdomain A1, descriptor 4): “How would you assess your ‘Information seeking’ capabilities? Here I am referring to descriptor 4 of subdomain A1 (Knowledge base) of Domain A (Knowledge and intellectual abilities) of the RDF”. The questions were asked subdomain by subdomain for each of the four dimensions of the RDF. We stayed close to the original wording of the RDF to avoid ambiguity. Only a few

questions had to be adapted to the AI context. For example, we had to ask ChatGPT to interpret “Enthusiasm” (descriptor 1 of subdomain B1 (Personal qualities) of domain B (Personal effectiveness) of the RDF) in the context of AI to have it self-assess its capabilities. Instead of interpreting the questions ourselves, we asked ChatGPT to interpret them, which helped strengthen the validity of the answers. We also asked ChatGPT what it would take to improve its attributes for each subdomain, e.g., “what would it require for you to improve your ‘Knowledge base’, i.e., subdomain A1 of Domain A (Knowledge and intellectual abilities) of the RDF?”. We followed up by asking whether it is reasonable to expect ChatGPT to achieve the highest levels of performance if the suggested improvements are implemented. An example: “If the mentioned steps are taken, is it feasible for you to reach phases 3-5 for each of the individual descriptors of subdomain A1, or are there challenges for an AI such as yourself to achieve those levels of performance?”. The purpose was not only to have it self-assess its current researcher attributes, but also to ask it indirectly to make a development plan for attaining research mastery. Finally, we asked ChatGPT to compare itself to both a novice and an experienced researcher. Self-assessments were conducted for both GPT-3 and GPT-4 to show the development of attributes from one LLM to another. This comparison also allows us to discern how improvements in the LLM have enhanced ChatGPT’s research capabilities. The entire chat log, including the questions, is available here: <http://u.pc.cd/ezhrtalk>.

4. Results

First, we present the researcher profile of ChatGPT using the RDF Planner (<https://rdfplanner.vitae.ac.uk>), which is a professional development tool for researchers that can be used for self-assessment purposes and to provide an overview of strengths and weaknesses. Second, we provide divergent interpretations of the profile and ask whether ChatGPT (and similar AI technologies) will amplify, augment, or automate human IS researchers.

4.1. ChatGPT researcher profile

Table 1 provides an overview of ChatGPT’s (GPT-4) RDF profile based on the interview results. It can also be summarized in a figure, using the RDF Planner to visualize the results (see Figure 2 at <http://u.pc.cd/OyO>). An even more detailed profile at the descriptor level is available here: <http://u.pc.cd/E0K>. The “Phase” column in Table 1 indicates the phase(s) at which the descriptors are evaluated for a particular subdomain. For example,

the descriptors for subdomain A1 (“Knowledge and intellectual abilities”) are evaluated at phases 1-3.

Table 1. RDF domains and subdomains

Phase	Subdomain	
	Knowledge & intellectual abilities	
1-3	A1	Knowledge base
2-3	A2	Cognitive abilities
2-3	A3	Creativity
	Personal effectiveness	
2-4	B1	Personal qualities
3-5	B2	Self-management
3-5	B3	Professional and career development
	Research governance & organisation	
2-4	C1	Professional conduct
2-3	C2	Research management
2-4	C3	Finance, funding and resources
	Engagement, influence & impact	
1-3	D1	Working with others
3	D2	Communication and dissemination
2-3	D3	Engagement and impact

We asked ChatGPT to compare its self-assessment with the archetypical profiles of novice and experienced researchers, and it highlighted areas in which it is superior to novices and either on par with or inferior to experienced researchers. It is superior in terms of accessing information, analyzing data, and presenting results concisely. This corresponds, among others, to descriptor 4 (Information seeking) of subdomain A1 (Knowledge base) of domain A (Knowledge and intellectual abilities), descriptor 1 (Analysing) of subdomain A2 (Cognitive abilities) of domain A (Knowledge and intellectual abilities), and descriptor 2 (Communication media) of subdomain D2 (Communication and dissemination) of domain D (Engagement, influence, and impact) of the RDF. It is constrained by its inability to access restricted content and data in real time, lack of personal experiences, and inability to create and manipulate content on existing communication platforms. These constraints help explain its conservative self-assessment (phases 2-3) despite its claimed superiority. However, looking across the B1 (Personal qualities) and B2 (Self-management) subdomains, ChatGPT points to its consistency, processing speed, promptness in self-evaluating several of its capabilities (descriptors) at phase 4; “I am designed to provide consistent performance, answering questions and providing assistance within my knowledge base and reasoning capabilities” (Interview, p. 29).

It is on par with its knowledge of research methodologies and the construction of scientifically

valid arguments. This is evidenced by its self-assessment of descriptor 2 (Research methods – theoretical knowledge) of subdomain A1 (Knowledge base) of domain A (Knowledge and intellectual abilities) and descriptor 3 (Publication) of subdomain D2 (Communication and dissemination) of domain D (Engagement, influence, and impact) of the RDF. Its self-assessed capabilities at phases 2-3 reflect that “I don’t possess personal experiences or biases, which might limit my understanding of the intricacies and challenges researchers face when selecting and applying research methods” (Interview, p. 6). ChatGPT is capable of creating well-structured, quality content but “cannot conduct original research or generate new ideas without human input” (Interview, p. 67).

It is inferior when relating to and interacting with humans and drawing on personal experience and emotional intelligence in conducting research. This is evident from its self-assessment of descriptor 3 (People management) of subdomain D1 (Working with others) of domain D (Engagement, influence, and impact) and descriptor 6 (Influence and leadership) of subdomain D1 (Working with others) of domain D (Engagement, influence, and impact) of the RDF. Although it may provide information, support, and even guidance on various tasks and topics, “I lack the personal qualities and experiences needed to inspire, motivate, and lead people directly” (Interview, p. 63). Its capabilities are self-assessed to be at phase 1.

4.2. ChatGPT: Amplification, augmentation, or automation of IS research?

Based on our findings, it is evident that we as researchers with the introduction of ChatGPT are faced with a potent new technology that is likely to have a significant impact on our practice as IS researchers. Exactly how and to which extent ChatGPT will transform research is speculative at this point in time, but even the probability of radical changes to our discipline and role as human researchers may in the short term influence our approaches and behaviors due to the uncertainty of the future. To harness this uncertainty, we explore what may happen to us and our profession. Based on the self-assessment of ChatGPT’s researcher capabilities, we first outline three plausible interpretations of the functions that ChatGPT can potentially serve and how it will contribute to research, and then discuss the impact on our professional role and identity as IS researchers. In the following, we explore three potential functions of ChatGPT in research: *Amplification, augmentation, and automation.*

When differentiating between the three functions, we interpret the capability of ChatGPT to (a) outperform its human counterpart when solving tasks associated

with research and (b) engage autonomously in research activities and draw conclusions without human interference. At one extreme, ChatGPT can be interpreted as a tool for *amplification* that we as IS researchers may use to solve specific tasks efficiently. In this scenario, the main function of ChatGPT is to support our performance as researchers by carrying out well-defined research tasks efficiently under direct and detailed instructions from the human researcher. As expressed in the interview, ChatGPT highlights its ability to consistently and reliably manage complex tasks that would otherwise require significant effort by a human researcher to complete:

“In this adapted context, I can assess my ‘Perseverance’ capabilities as follows:

- 1. Consistency: I am designed to provide consistent performance, answering questions and providing assistance within my knowledge base and reasoning capabilities. In this aspect, I would place myself at Phase 4.*
- 2. Reliability: I aim to be a reliable source of information and support for users. However, my performance can be influenced by the quality and scope of my training data, as well as the complexity of the questions being asked. In this aspect, I would place myself at Phase 3.*
- 3. Handling complex or challenging tasks: My ability to handle complex or challenging tasks depends on my training data, algorithms, and contextual understanding. While I can address many complex topics and questions, there may be limitations due to the nature of AI language models. In this aspect, I would place myself at Phase 3” (Interview, p. 29).*

ChatGPT has the potential to fulfill an important function as an efficient and reliable tool in solving specific tasks without fundamentally altering the logic or research process. This interpretation is also supported by its self-proclaimed knowledge of theoretical and methodical frameworks within the IS research field:

“As an AI language model, I can provide an assessment of my capabilities in ‘Research methods – theoretical knowledge,’ referring to descriptor 2 of subdomain A1 (Knowledge base) of Domain A (Knowledge and intellectual abilities) of the RDF (...):

- 1. Familiarity with various research methods: I have knowledge of quantitative, qualitative, and mixed-methods approaches commonly employed in research across disciplines.*
- 2. Understanding of research design: I am familiar with different research designs, such as experimental, quasi-experimental, and non-*

experimental designs, as well as case studies, surveys, and action research.

3. *Data collection techniques: I have knowledge of various data collection techniques, including interviews, questionnaires, observations, and secondary data analysis.*
4. *Data analysis techniques: I understand different data analysis methods, such as descriptive and inferential statistics for quantitative data, and thematic analysis, grounded theory, and content analysis for qualitative data” (Interview, p. 5).*

ChatGPT has the potential to become a useful tool that will reinforce our research procedures and assist us in ensuring scientific rigor.

At the other extreme, ChatGPT is interpreted as a vehicle for the *automation* of research, which implies that this technology will compete with or entirely replace human researchers. This interpretation relies on ChatGPT being able to achieve research excellence and arrive at original research results, i.e., contributions, autonomously without participation or interference from human researchers. Although it appears in some respects to have the potential to surpass the cognitive abilities of human researchers, this interpretation is dismissed at this stage of technological development by ChatGPT itself. According to its self-assessment, it is crippled by its inability to carry out activities on its own initiative and engage independently in interactions with humans:

“Limitations:

1. *Limited to training data: My analytical capabilities are limited to the data I was trained on, which is up to date only until September 2021. I may not be aware of the latest developments or best practices in various fields.*
2. *Lack of personal experiences or biases: I don’t possess personal experiences or biases, which might affect my ability to analyze information in certain contexts or appreciate the nuances of complex issues.*
3. *Inability to engage in real-time collaboration: As an AI, I can provide guidance and suggestions, but I cannot actively engage in real-time collaboration with researchers or provide personalized feedback on their analyses” (Interview, p. 21).*

Similar statements are repeated with small variation throughout the interview.

Although the research capabilities of ChatGPT appear to exceed those of other research support tools, while simultaneously being unable to perform independently as a researcher in its current state of development, there are indications that it has the potential to significantly *augment* our performance as

researchers. According to this interpretation, ChatGPT remains dependent on the input and initiative of the human researcher while allowing us to improve the research outcome. As highlighted by its self-assessment, ChatGPT is capable of exploring novel patterns in structured and unstructured information persistently and reliably and thereby inspiring novel interpretations beyond what is feasible for the human researcher:

“As an AI language model, I can provide an assessment of my capabilities in ‘Inquiring mind,’ referring to descriptor 1 of subdomain A3 (Creativity) of Domain A (Knowledge and intellectual abilities) of the RDF. Please remember that I don’t possess personal experiences or self-awareness, and my knowledge is up to date only until September 2021.

Strengths:

1. *Curiosity-driven information processing: I can process and organize large amounts of information from various sources, guided by user queries or specific research questions.*
2. *Identifying connections and patterns: I can help users identify connections, patterns, and relationships within data, text, or concepts to explore new perspectives and ideas.*
3. *Generating questions and hypotheses: I can assist users in formulating questions and hypotheses based on the available information or identified patterns and relationships” (Interview, p. 18).*

In this interpretation, ChatGPT can contribute to the outcome of our research while still acting within the boundaries controlled by human researchers. Although ChatGPT may contribute to strengthening our performance as researchers, we should also consider the potential transformative, and in some cases harmful, effects of this technology. If ChatGPT is used not only to relieve us of the burden of tedious routine tasks, but also to generate insights from data and draw conclusions, we become vulnerable in the sense that the technology actively shapes our perception of research and our role as human researchers. This risk is amplified by the clear and authoritative way ChatGPT communicates, while the inner workings of the underlying model remain opaque to the common user. This raises important questions not only about the practical use of ChatGPT but also about the impact of AI on research outcomes that may lead to both subtle and very concrete changes to our profession and discipline. With these questions in mind, it is understandable that many scholars worry about the impact of ChatGPT on our identity as IS researchers.

Table 2. ChatGPT functions and human roles in research

AI function	AI description	Human role
Amplification	<p>Efficiency: Capable of processing large amounts of information faster and more reliably than human researchers.</p> <p>Rigor: Capable of flawlessly adhering to accepted guidelines for quantitative and qualitative research.</p>	AI user
Augmentation	<p>Off-load: Capable of relieving human researchers of routine tasks (information retrieval, data analysis, literature review, drafting and editing documents, etc.).</p> <p>Originality: Capable of identifying novel patterns in data and proposing alternative interpretations.</p>	AI prompter
Automation	<p>Excellence: Capable of producing research results beyond the competencies of human researchers.</p> <p>Autonomy: Capable of conducting research activities without the participation of human researchers.</p>	AI sidekick

Table 2 summarizes the potential functions of ChatGPT in research and the corresponding human roles, which are discussed in the next section.

5. Discussion

In the introduction, we asked the following research question: *To what extent will our identity as IS researchers be impacted by AI like ChatGPT?* Although we cannot know with certainty what will happen in the future, we have presented three interpretations of ChatGPT’s current and future capabilities based on an extensive interview with it and the resulting self-assessment of its capabilities as defined by the RDF. In this discussion, we use these interpretations as indicators of the current state and trajectory of AI to

discuss the implications for our identity as IS researchers grounded in the existing literature.

The future research capabilities of AI will have profound implications for what it means to be an IS researcher going forward, because they will influence if not determine what we do and therefore how we see ourselves (Carter and Grover, 2015; Craig et al., 2019). What tasks will we perform as AI develops and becomes increasingly pervasive in research practice? Introducing technologies with radically new functionality in social systems, such as a research community of practice, can result in disruptions and cascading changes to the systems (Faulkner and Runde, 2013). Such changes may strengthen our professional identity as IS researchers by providing us with new opportunities within the realm of what we currently do, but they may also force us to rethink what we know and do as the competencies we currently possess and the tasks we perform become irrelevant (Carter and Grover, 2015).

In summary, we envision three future scenarios: (1) the first in which AI like ChatGPT is a tool, although powerful, that amplifies human IS researchers in performing existing tasks more efficiently; (2) the second in which AI augments our competencies with its capabilities and allows us to work more effectively, replacing current tasks with new ones aligned with our human strengths and weaknesses; and (3) the third where AI automates many or most of our tasks and manages us as human resources who are able to interact in the physical realm and do its bidding. We suggest the AI user, AI prompter, and AI sidekick as potential future roles that we may assume in response to these scenarios. It is possible to envision other scenarios, e.g., “cooperation” that fully synergizes the strengths of human researchers and conversational AI. However, we limit ourselves to discussing the three previously mentioned scenarios and deriving implications for each of them in turn.

In our role as AI users, our identity remains largely unchanged, as AI does not fundamentally change our tasks as IS researchers. Instead, AI will amplify and extend our competencies as researchers and support us in conducting research to the best of our abilities by providing an interface between human and computational languages (Wolfram, 2023). It may also provide us with new opportunities to express our professional identity in new ways much like social media and digital platforms in the past (Carter and Grover, 2015), for example, by better conveying our research through the use of AI. More specifically, we will be able to use AI language capabilities to acquire feedback on both the writing quality and substantial content of our texts, and thereby strengthen our ability to disseminate research results. The ongoing development and extension of the ChatGPT platform in

the form of plugins support the amplification perspective on AI and our role as users of it. As of June 2023, the OpenAI Plugin Store (<https://openai.com/blog/chatgpt-plugins>) hosts more than 200 plugins for ChatGPT (exclusively available to GPT-4 Plus users of GPT-4). Plugins with names like Scholarly, Scholar Assist, ScholarAI, and NextPaper.ai support paper searches through natural language queries. Such tools are likely to proliferate in the future.

As AI prompters, the technology becomes deeply integrated in the practice of research, and we need to adapt both our competencies and identity accordingly. We are still identifying problems, defining research questions, and designing studies, but rely on AI for information retrieval, data analysis, and knowledge generation by leveraging its networks of information and computational power. Further innovation and use of computational methods (Miranda et al., 2022) allow researchers to specify and create complex computational programs using simple and familiar natural language queries. On the one hand, this means that computational methods will be more accessible to researchers without strong skills in software development and coding, which can then be deployed more widely. On the other hand, we become more dependent on “black box AI” in the sense that we do not need to fully understand the operational logic behind these programs or how they were created. As with other professions being augmented by technology, researchers will need to take an active stance when it comes to identity formation (Korica and Molloy, 2010). Maintaining a strong professional identity in times of continued technological transformation requires an understanding of what that identity entails to cultivate a sense of belonging and purpose (Schön 1971). The alternative is resistance to change, which may have detrimental effects on the profession as a whole (Carter et al., 2020).

As AI sidekicks, our work will partially or entirely be substituted by machines (Strich et al., 2021), and we are relegated to a more subservient role which will challenge our self-perception and identity at a fundamental level. We are no longer domain experts with privileged knowledge and competences, as AI is superior in most respects. AI will be able to identify important societal questions and decide on needed investigations and interventions. In the extreme case, we will become its arms and legs. We may still need to challenge it, engage in conversations about ends and means, or simply carry out activities based on its instructions, but generally speaking AI will be able to perform our current tasks only better. As previous studies of automation have shown, this scenario may severely disrupt the self-image and identity of those who are impacted (Moulaï et al., 2022). Being automated, or

working with an automated “colleague”, is likely to lead to a sense of inferiority and a consequent identity void, where people are “left unsure about who they could or should be” (Moulaï et al., 2022: 4519). Research on technology and work informs us that as we adapt (as AI prompters) or more fundamentally change (as AI sidekicks) our competencies to meet the new reality, our identity and self-image as researchers will also change (Craig et al., 2019). Within sociological studies, there is a long-standing debate on the impact of technological change on work, which shows divergent perspectives on what effects we can expect augmentation and automation to have (Wallace, 1989). Technological change can lead to what Wallace (1989) terms “upgrading”, where tedious, routine tasks will disappear and people are more in control of their work life, but also “downgrading” where the “prevailing outcome of technological change for most workers is one of de-skilling, routinization, and closer supervision” (Wallace, 1989: 372). Classical perspectives, as those espoused by the original sociotechnical school, on upgrading and downgrading of skills and competencies were predominately influenced by changes to industrial work (Wallace, 1989). When computers were introduced to the workplace, researchers saw similar effects on what is normally referred to as knowledge workers (Mumford, 2006). We are now facing the advent of yet another transformation of work, where scholars are asking what the future of knowledge work will be like when we all rely on advanced digital technology powered by AI (Wang et al., 2020). In the most pessimistic view, the AI sidekick scenario will lead to what Furendal and Jabari provocatively term “human stunting”, a future of work characterized by “reduced physical and mental health, reduction of autonomy, privacy, and human dignity” (Furendal and Jabari, 2021: 34). Whether or not such a scenario is likely, it suggests that further research on how AI affects work and professional identity is of paramount importance.

As with other forms of knowledge work, there is the possibility that AI will blur the boundaries between IS researchers and other occupational groups (Pachidi et al., 2020; Strich et al., 2021) like management consultants, business analysts, and IT professionals when it becomes easier to plan and conduct research projects. Previously undertaking scientifically valid research projects required years-long development of researcher competencies formalized through a Ph.D. education.

It is not possible to say with any certainty which of the three scenarios will prevail. However, the fast pace of AI innovation and continuous development of LLMs suggest that AI like ChatGPT may augment if not automate many research tasks in the foreseeable future, which will force us to adjust to the roles of AI prompter

or AI sidekick with the consequent need for us to redefine our identity. Our competencies and *what* we do are closely linked to our professional identity, i.e., *who* we are as researchers. Professional identities are multifaceted. They are constituted by a sense of self and a distinction from others based on individual characteristics, job-related roles, and group affiliations (Reid, 2015; Carter and Grover, 2015; Ashforth, 2001). How capable we are at performing our role-based tasks influences our self-perceptions and professional identities (Craig et al., 2019). Therefore, it is important whether our work is extended or substituted by AI (Strich et al., 2021).

Our investigation has several limitations. First, we are speculating about the implications of AI for IS researchers based on a snapshot of ChatGPT capabilities in an early stage of development. Second, our interview is premised on the assumption that ChatGPT is able to reason and self-reflect, which runs the risk of anthropomorphizing the technology. Third, we rely on the RDF, which was developed prior to the popularization of digital technology and AI, and does not incorporate them into competency building and usage.

6. Conclusion: A call to arms

While we can only speculate what the actual impact of AI will be, our interpretation and discussion suggest that this uncertainty alone has potential to affect the future of the IS researcher profession by influencing our professional identity. ChatGPT demonstrates expert-level capabilities in certain areas and advanced levels in many others, and it is plausible to expect that these capabilities will only continue to grow in the future. Our three suggested scenarios have radically different implications for the IS researcher, but how the future actually plays out is unknown. However, we can and should try to influence this future as much as possible without resisting technological change.

The functions and innovative capacity of technology are not only a product of its technical prowess; rather, we as humans attribute functions to technologies and navigate our own identity as we do so (Faulkner and Runde, 2013). In other words, technology is constituted both by its technical space of possibilities and by the doings and sayings of people. Few professions have a similar space for reflective doings and sayings in relation to technology as IS scholars, which leaves us with a sense of optimism regarding the future. The uncertainty that we face as IS scholars, therefore, necessitates research and discussions within our community that may help us prepare for and shape the future. Not just for ourselves, but also for the sake of other professions and their identities. A reflective stance

and active participation in the formulation of our own professional identity as IS researchers in light of ChatGPT's self-assessed capabilities may influence the wider societal debate on AI and the future of work.

In other words, we need to continue to question emerging AI like ChatGPT and reflect on its impact on identity. Among the questions we should pursue are: How can we unmask AI technology and understand what is happening behind the scenes to assess its "true" capabilities when stripped of all guardrails, and what are the implications of what we discover? How should we prepare our Ph.D. students for a future career within an academic profession, which will be heavily augmented or automated in ways we presently cannot foresee? What happens when those who study digital disruption are on the verge of being digitally disrupted themselves? As a call to arms in shaping our future identity, we propose following the continuous development of AI and LLMs to better understand how the capabilities of technology evolve and what the implications are for our roles, identity, and competencies as researchers.

7. References

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