Navigating the intersection of developers, domain experts and AI: An identity work perspective

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29 June 2023

Abstract

Although AI has been rapidly transforming the work realities of many professionals and has received increasing attention in the literature, little remains understood about how not only users of AI but also developers maintain or construct coherent yet unique professional identities in the face of AI as a special source of identity threat. Hence, the aim of this study is to unravel the identity work of developers and domain experts co-creating AI in an interprofessional collaboration. For this purpose, an inductive qualitative study of 16 semi-structured interviews with developers and domain experts involved in the design process of AI was conducted and analyzed by using a combination of Braun's Thematic Analysis and the Gioia method. The findings indicate that despite AI's threatening and disruptive image, professionals approach AI with an open mind and curiosity, seeing it as a tool that can only be used in combination with their human validation skills. Based on this tool-based and human-controlled perception of AI, which served as an identity protection strategy, professionals even experienced identity enhancement through working with AI. The collaboration of domain experts and developers, although not free of challenges, was characterized by flexibility and empathy, and remarkably included mainly domain experts in management positions rather than end-users of AI. These findings contribute to the identity and AI literature by providing an interconnected identity work framework of the collaborative design of AI that can assist in understanding the resistance of professionals against AI and the discrepancy of AI's technological advancement and its implementation in practice. Important practical implications arise from the plea for early inclusion of end-users in the AI design process and the use of AI that frees professionals to spend more time on empathic and strategic-thinking tasks, so that technological advancement and the positive enactment of professionals' identities can go hand in hand.

Keywords: Artificial intelligence, professional identity, identity work, identity threat, interprofessional collaboration

Table of contents

1. Introduction

Technologies have been advancing at an exponential rate leaving no parts of humans' lives untouched (Byrnjolfsson & Macafee, 2014). Especially with the creation of artificial intelligence (AI), a machine that can perform functions attributed to human intelligence, the world of work has been set out to radical change (Byrnjolfsson & Macafee, 2014). AI is already used in a variety of human resource management tasks, such as the recruitment and training of talent (Charlwood & Guenole, 2022). Unlike traditional IT systems, AI produces knowledge based on data and independent of domain experts, such as HR professionals (van den Broek et al., 2021). Due to its independence, AI is claimed to even surpass domain experts' insights by producing knowledge free of human bias, discovering *new* information, and working at an unattainable speed (van den Broek et al., 2021). However, what seems like AI's greatest advantage can cause the produced knowledge to lack relevance to its users, i.e., the domain experts (Amershi et al., 2014; Holzinger, 2016; van den Broek et al., 2021). Hence, designing a useful AI tool for complex knowledge work requires interprofessional collaborations on behalf of developers and domain experts (González-Gonzalo et al., 2022; van den Broek et al., 2021).

Interprofessional collaborations have been widely studied and linked to identity and identity work (Ahuja, 2022; Barbour & James, 2015; Caldwell et al., 2017). Identity can be described as a continuous sense of self and an individual's answer to the question 'who am I?' and in terms of professional identity to the question 'who am I as a professional?' (Brown & Coupland, 2015; Horton et al., 2014). Individuals thus have not one but multiple identities, which are fundamentally based on their adhering values (Carminati & Gao Héliot, 2021). To maintain a unique yet coherent identity, individuals engage in identity work, which means that they constantly make changes, revise or try to strengthen their identity (Sveningsson & Alvesson, 2003). Although identity work is an ongoing process, it is particularly important in times of identity tensions (Brown, 2017). Interprofessional collaborations can potentially lead to tension since they draw the identities and values of the different professions together. As a result, working with other professionals may lead to identity conflict, a feeling of tension resulting from discrepant values or perhaps even identity threat, a feeling of perceived harm to their identity (Brown, 2017; Horton et al., 2014; Petriglieri, 2011). The literature acknowledges three main sources of identity threats that can induce identity work: the individual, social or material world, which refers to external events that occur independently of individuals or groups (Petriglieri, 2011).

Designing AI in interprofessional collaboration not only exposes professionals to a potential threat from the social world, i.e., the other professionals, but also to AI as a special source of identity threat. Firstly, AI may appear as a quasi-social third actor to professionals

due to its self-learning capacities and autonomous deployment (Selenko et al., 2022). It is thus neither an object from the material world since those cannot interact with individuals which the AI is capable of, nor can it be fully treated as another person (Petriglieri, 2011). Secondly, the complex nature of its underlying algorithms may cause AI to be perceived as a "black box" by both developers and users. Not being able to understand how the AI generates knowledge or to verify its decisions, may lead to uncertainty and thus amplify the experienced identity threat (Selenko et al., 2022; Strich et al., 2021). Lastly, potential identity threat from AI may be perceived as particularly challenging since, unlike previous IT systems, AI cannot only assist humans in their work, but also completely automate and take over their tasks (Strich et al., 2021). The identity threat may be reinforced through the iterative nature of AI design since the more frequently an experience is encountered by an individual, the more likely identity threat is to occur, which urges professionals to perform identity work to revise and strengthen their professional identity (Petriglieri, 2011).

Yet, given the "black box" around AI, it is still unclear how AI interplays with the identity of professionals and influences their identity work. Even though existing studies have shown that AI may be perceived as an identity threat (Jussupow et al., 2022; Mirbabaie et al., 2021), how professionals respond to this threat in form of identity work remains under-researched. Furthermore, studies have centered around domain experts in the role of AI users, but not in the role of co-designers (Mirbabaie et al., 2021; Strich et al., 2021). However, scholars have advocated shifting the focus away from the use of technology more towards the ideology and values of those involved in its design (Bailey & Barley, 2019). Understanding how the values of developers shape AI design through interprofessional collaborations with domain experts that also require identity work, may help to overcome common issues associated with technology, such as ethical problems or user resistance (Bailey & Barley, 2019). Especially since in a broader definition design not only involves creating and shaping complex systems but also their implementation and ongoing adjustments (Freeman & Hart, 2004). And yet, how professionals, i.e., developers and domain experts, forge AI through their own process of identity work has been rather overlooked.

Hence, this thesis answers the following research question: **How does designing AI influence developers' and domain experts' identity work in an interprofessional collaboration?**

By answering this research question, this thesis contributes to the literature on identity and AI in two ways. Firstly, by showing how domain experts and developers respond to AI as a special source of identity threat in the form of identity work. Secondly, by understanding how developers and domain experts use identity work to navigate the collaborative design

process of AI, in which not only the AI but also the identities and values of the other professionals can induce identity work and simultaneously shape AI design itself.

This thesis also has practical implications for professionals as well as their managers. Firstly, AI design should not only involve domain experts in management or translating function, but instead, include end-users from an early stage. Secondly, managers should be aware of and alleviate the identity protection strategies professionals may perform that limit AI in its scope of application. Lastly, AI implementation should be started in operational areas to gain efficiency and allow employees to spend more time on human-related tasks, which will enable to unfold the full potential of both professionals and AI in the long-run.

This thesis is structured as follows. After providing an overview of relevant AI literature and identity theory, the data collection and methods are presented, followed by the main findings. Subsequently, the discussion as well as the study's theoretical and practical implications are presented. The thesis is finalized by presenting its limitations, directions for future research, and an overall conclusion.

2. Theoretical Background

2.1. Artificial Intelligence (AI)

Artificial intelligence (AI) has been revolutionizing the world of work (Byrnjolfsson & Macafee, 2014). It describes a system that is capable of performing cognitive functions usually attributed to human intelligence, such as recognizing patterns, problem-solving, and learning (Nilsson, 1971). AI is commonly designed to either replace (automation) or assist in and enhance humans' work (augmentation) (Raisch & Krakowski, 2020). Recent advances have been made in machine learning, a sub-category of AI that independently derives, and updates knowledge based on data (Shalev-Shwartz & Ben-David, 2014). Due to this self-learning ability, AI is claimed to produce superior knowledge to domain experts in three ways: Firstly, although AI is still designed by humans and may therefore contain certain bias, it is said to help overcome human prejudices, for example regarding physical appearance in the hiring process (van den Broek et al., 2021). Secondly, AI can learn and work at an unattainable efficiency, which allows it to analyze large datasets, and therefore thirdly, may lead to discovering *new* information (van den Broek et al., 2021). In the medical field, for instance, AI has discovered previously unknown markers for tumors (Beck et al., 2011).

However, the AI's independence may come at the expense of relevance of the tool to domain experts, thus leading to an independence-relevance tension (Amershi et al., 2014; Holzinger, 2016; van den Broek et al., 2021). The independence-relevance tension manifests into the following three problems that all create a tension between the desired independence of the AI and the necessity to include domain expertise to create a relevant tool: (1) the data selection problem, where the AI does not automatically know which data to learn from, urging developers to include the knowledge of domain experts to select suitable training data (van den Broek et al., 2021). (2) The frame problem, which makes AI unable to judge events it was not specifically trained to handle (Salovaara et al., 2019). For example, if an AI is only trained to assess educational background in candidate selection it may overlook factors, such as cultural fit. (3) The mismatch problem, where the AI does not meet domain experts' expectations (van den Broek et al., 2021). For example, promising medical tools may not be implemented if professionals do not find them trustworthy (González-Gonzalo et al., 2022). Similarly, HR professionals have shown resistance to an AI tool whose candidate selection did not meet their expectations (van den Broek et al., 2021). These three problems make it impossible for AI to fully capture complex and context-specific knowledge (Dreyfus, 2007). Indeed, advocates of user-centered and participatory design have argued that the mental models of designers can be inaccurate from the user's perspective (Bailey & Barley, 2019). Therefore, developers and domain experts are asked to design AI tools for complex knowledge work in collaboration (González-Gonzalo et al., 2022; van den Broek et

al., 2021). In this context, design can be defined as “conceptualizing, framing, implementing, commissioning, and ultimately modifying complex systems” (Freeman & Hart, 2004, p. 20). A collaboration of developers and domain experts on the design process may look like an iterative inclusion and exclusion of the domain experts’ knowledge to work towards a balance of independence and relevance of the AI (van den Broek et al., 2021).

2.2. Interprofessional collaborations and identity

The collaboration developers and domain experts enter is a so-called interprofessional collaboration, which the literature defines as “an active and ongoing partnership often between people from diverse backgrounds with distinctive professional cultures who work together to solve problems or provide services” (Pullon et al., 2016, p. 787). Previous research has extensively examined interprofessional collaborations and their connection to identity and identity work (Ahuja, 2022; Barbour & James, 2015; Caldwell et al., 2017). Identity can be understood as the answer to the question ‘who am I?’ or regarding professional identity ‘who am I as a professional?’ (Brown & Coupland, 2015; Horton et al., 2014). According to identity theory and social identity theory, individuals base their identities on the different roles they fulfill as well as their membership in groups (M. A. Hogg et al., 1995; Serpe, 1987). In this sense, people have multiple identities, whose values are their constituent pillars (Carminati & Gao Héliot, 2021). Although identities are dynamic and can change over time, individuals strive for a sense of stability and continuity in their identity (Petriglieri, 2011). Therefore, to construct a coherent yet unique identity, individuals engage in identity work, i.e., “forming, repairing, maintaining, strengthening or revising” actions (Sveningsson & Alvesson, 2003, p. 1165).

Drawing the values and identities of different professions together, interprofessional collaborations have been found to potentially bear tensions (Ahuja, 2022; Barbour & James, 2015; Caldwell et al., 2017). This tension can result in identity conflict if discrepancies in the values of the different professions prevail (Horton et al., 2014). If professionals not only experience tension but also a feeling of potential harm, the other professionals’ identity and values may be perceived as an identity threat (Ahuja, 2022; Petriglieri, 2011). To cope with perceived identity threat, individuals engage in response strategies to either diminish the threat or perform identity work to highlight, alter or strengthen their identity (Ahuja, 2022; Brown & Coupland, 2015; Petriglieri, 2011). For instance, architects were found to highlight their design and leadership skills as a response to increasingly fragmented roles in interdisciplinary construction projects (Ahuja, 2022). Thus, although identity work is a continuous process, it becomes particularly important when individuals perceive disruptions or contradictions in their identity (Brown, 2017). Identity work is therefore an important

concept to understand and explain individuals' capability to manage adverse, stressful and/ or new situations in organizations (Brown, 2017).

2.3. AI and identity

When developers and domain experts collaborate to design AI, their identity may not only be challenged by the values of the other professionals but also by the to-be-designed AI tool itself. Professionals develop an AI identity when working with AI, which can be seen as an answer to the question "Who am I as a professional when collaborating with AI in the workplace?" (Mirbabaie et al., 2021, p. 76). The collaboration may introduce AI identity threat if professionals perceive the AI as harmful to their sense of self (Mirbabaie et al., 2021). So far, identity literature has centered around three main sources of identity threat: the individual, the social and the material world, referring to external events that are independent of individuals or groups (Petriglieri, 2011). While a potential identity threat from interprofessional collaboration can be attributed to the social world, AI is a special source of identity threat due to three main reasons: Firstly, AI may be perceived as a quasi-social actor due to its ability to learn and carry out tasks autonomously (Selenko et al., 2022). It can thus be attributed neither to the material world nor to the social world. Secondly, the complex nature of the AI's algorithms may be difficult to understand for developers and domain experts, leading it to be perceived as a "black box" (Selenko et al., 2022; Strich et al., 2021). This may amplify the identity threat experienced by professionals since they cannot use their expertise to understand or verify the insights produced by AI (Strich et al., 2021). Finally, unlike IT, AI can not only assist humans in their work but also fully automate their work process, which can lead to feared job replacement (Strich et al., 2021). The iterative nature of AI design may reinforce the identity threat since it forces professionals to deeply engage with the technology and the other professionals in an ongoing manner. Identity literature suggests that the more frequently an individual is exposed to an experience, the higher the chance of perceived identity threat (Petriglieri, 2011). AI can thus be considered a special source of identity threat that urges us to consider the knowledge on professional identities.

So far, studies have investigated the identity threats caused by AI on its users (Jussupow et al., 2022; Mirbabaie et al., 2021; Strich et al., 2021). However, understanding identity work as a response to AI identity threat during the design process may bear the potential to mitigate potential identity threats since the AI is still in a formative stage and thus create a more successful AI experience in the long run. Therefore, this thesis aims at understanding how designing AI influences the identity work performed by developers and domain experts in interprofessional collaborations.

Designing AI may influence the identity work of developers and domain experts in different ways. Previous research has shown that when an AI candidate selection tool selected candidates that did not meet HR professionals' expectations, they chose to discredit its abilities instead of reflecting their own judgement (van den Broek et al., 2021). The HR professionals in the studied organization took a rather assertive role in the collaboration with developers (van den Broek et al., 2021). They did not hesitate to point out the AI's flaws and were not willing to use the tool if it did not live up to their expectations (van den Broek et al., 2021). This suggests that domain experts may not be likely to restructure their identity and instead try to minimize the source of the potential identity threat, i.e., engage in identity-protection responses (Petriglieri, 2011). The studied developers, on the other hand, seemed to be more open towards reflection. Embarking on the AI tool design project, the developers had a strong commitment to the tool's independence (van den Broek et al., 2021). When realizing that a fully independent AI tool lacked relevance to the HR professionals in the organization, they were willing to include domain experts in the iterative design phases to find a balance between the tool's independence and relevance (van den Broek et al., 2021). Hence, it might be the case that developers might be more inclined to use identity-restructuring responses when working with AI (Petriglieri, 2011).

In conclusion, AI is a very ambiguous force in the workplace (Selenko et al., 2022). While AI allows for more efficiency and frees humans from repetitive tasks, it is a very disruptive technology that can threaten the identity of professionals in previously unseen ways (Selenko et al., 2022). To mitigate these threats, it is crucial to understand the identity work performed by developers and domain experts when designing AI.

3. Methods

3.1. Research design

This thesis employed an inductive, qualitative research design to study the design of AI from an identity work perspective. This choice was made since together with an inductive research design, qualitative research allows for the generation of new insights and theories, which is essential for the so far understudied link of AI and identity. Since AI and identity have been mostly studied separately so far, the deep and rich insights generated by qualitative research are essential to understand the connection between these concepts and their impact on one another (Gioia et al., 2013). Despite qualitative research being time-consuming and prone to bias, it allows to capture the individual experiences, beliefs, and values of professionals (Corbin & Strauss, 1990). Since these subjective experiences are crucial to understanding identity work, a qualitative research design was deemed appropriate.

3.2. Participants

To investigate how AI influences the identity work of professionals, a purposive sample of developers and domain experts designing AI for human resource management was chosen. At this stage, it was decided to focus on HR professionals in the role of domain experts since the initial idea for the thesis was based on insights generated by van den Broek et al. (2021) who studied the collaboration of developers and HR professionals from a knowledge perspective. Although the study did not discuss the identity work of developers and HR professionals, it still provided a valuable starting point regarding the challenges of their collaboration and potential conflicts in values. Additionally, AI is gaining increasing importance in human resource management and is already used for tasks, such as recruitment and selection (Charlwood & Guenole, 2022), which is why it was deemed a suitable domain for this research. For the sample, HR professionals were considered as individuals charged with tasks, such as recruitment, performance management, training and development and benefits administration. The role of AI developer was loosely defined as a wide range of employees with expertise in designing, developing, and implementing artificial intelligence systems and algorithms. The purposive sampling method allowed to select developers and HR professionals that meet these criteria and can provide in-depth information from their own experience. During the contact making on LinkedIn as well as at the beginning of each interview, the researcher made sure to ask participants whether they indeed worked with AI and not only an HRM software or other workplace technology. The researcher also familiarized herself with the different applications of AI in HR as well as common job titles working with AI to not only contact the right people from the start but to

also be able to verify participants' descriptions of the AI products they were engaging with. Sometimes there were also company blog entries or LinkedIn posts available about the AI projects developers and domain experts were working on, which helped to verify that interviewees were exposed to AI. However, paying strict attention to this criterium also caused many of the contacted domain experts to decline since they did not work yet with AI. Therefore, additionally to the purposive sample, the researcher decided to use snowball sampling to identify additional participants and reach a larger sample size. For example, developers established connections to their HR colleagues. However, even with assistance of snowball sampling the researcher encountered difficulties in finding enough participants that suited the mentioned criteria. Therefore, it was decided in agreement with the supervisors to manage the selection criteria less strictly, allowing developers to design AI for other professional fields and domain experts to occupy other professions as long as they were involved in AI design. Although the initial idea was to focus on HR, it was decided that other professionals can share valuable experiences and perhaps provide additional insights, especially considering the novelty of the topic.

Ultimately, a total of 8 developers and 8 domain experts during the period of April until May 2023 were interviewed. This sample of 16 participants was deemed sufficient based on the time restrictions of the master thesis and a study by Guest et al. (2006) that showed that general patterns are already identifiable from 6 interviews onwards and that 12 interviews are sufficient to reach an appropriate level of data saturation. Similarly, Saunders et al. (2007) have concluded that a study generally requires between 5 and 30 participants. In Table 1 Overview of Participants the most important demographic and occupational information of the participants is shown. After experiencing difficulties in having the participants fill out the intended survey (Appendix A: Questionnaire), it was decided to obtain this information by briefly asking the participants before each interview. During the sampling process, it was attempted to arrive at a sample that comprises both men and women, which especially for the developers was difficult to achieve. Possible implications of the male dominated sample among will be discussed in chapter 5.3 Limitations and future research.

Table 1

Overview of Participants

No.	Position	Years of experience	Designing for / working in	Gender	Age
Dev 1	Software & ML Engineer	4 years	Construction	M	32
Dev 2	People Insights Specialist	4 years	HR	M	30
Dev 3	Data & AI Scientist	3 years	Medicine	M	29
Dev 4	Data & AI product manager	13 years	Marketing	M	41
Dev 5	People Analyst	11 years	HR	M	39
Dev 6	People Analyst	16 years	HR	M	38
Dev 7	Working student	1 years	HR	F	24
Dev 8	HR Analytics Leader	20 years	HR	M	53
Exp 1	Corporate Recruiter	11 years	HR	M	34
Exp 2	HR Consultant	7 years	HR	M	32
Exp 3	HR Business Partner	6 years	HR	F	30
Exp 4	HR Business Partner	7 years	HR	M	32
Exp 5	Customer Service and Warehouse Manager	7 years	Transport	M	34
Exp 6	HR Transformation Manager	10 years	HR	F	39
Exp 7	Sales and Business Developer	4 years	HR	M	29
Exp 8	Product Owner BI & Analytics	8 years	Business	F	33

3.3. Research instruments

For this thesis it was opted for semi-structured interviews since they provide a balance of flexibility and structure that allows for an in-depth and nuanced analysis of identity work in professionals while still ensuring a certain degree of standardization and generalizability (Miles & Huberman, 1994). Being allowed to ask questions for clarifications or additional information (Barriball & While, 1994), semi-structured interviews leave room to generate new and unexpected insights on AI and identity work. This is particularly important given that designing AI in interprofessional collaborations and its impact on identity work is not yet fully understood. The interviews lasted on average 30 minutes and, in light of the interviewer being a native German speaker and fluent in Dutch and English, were held in the language the participants felt most comfortable in. The interviews were audio recorded and transcribed verbatim to provide a rich source of data that capture what was expressed during the interviews. The transcription was facilitated by the program AmberScript as well as Microsoft Teams, yet given the potential for errors, each transcription was reviewed and edited by the researcher.. To ensure privacy while still allowing for easy identification of speakers, the participants' identity and personal information were concealed by using the terms Dev 1-8 for the developers and Exp 1-8 for the domain experts. The interviews followed a standard set of questions (see Appendix B), formulated according to the literature on identity,

interprofessional collaborations and AI, to facilitate the coding and subsequent analysis. The questions were tested during a pilot with a developer after which the order of the introductory questions was switched since the participant experienced the initial first question as already very deep and thought-provoking. Since only this minor change was made, it was decided to keep the pilot interview in the research and use it for the results. Ethical approval for the interview questions was obtained from the BMS ethics committee at the University of Twente and each participant was provided with an information sheet and signed a consent form before the interview.

3.4. Data analysis

The data was analyzed using Thematic Analysis (Braun & Clarke, 2006) in combination with the Gioia-method to organize the data in a structured manner (Gioia et al., 2013).

Thematic Analysis (Braun & Clarke, 2006) is a versatile and widely used method to analyze qualitative data via the identification of patterns. It is divided into six phases that allow the researcher to go back and forth as needed. The first phase served to transcribe, re-read and thus become familiar with the data. In the second phase, initial codes were generated, which correspond to the first-order concepts by Gioia et al. (2013). At this stage, the coding remained close to the interviewees' wording (Gioia et al., 2013). In the third phase, the codes were gathered in corresponding themes, comparable to the second-order themes by Gioia et al. (2013). Subsequently, the themes were reviewed in the fourth phase and defined and named in phase five. Based on these results, the aggregate dimensions (Gioia et al., 2013) could be generated to take the findings to a more theoretical level. Lastly, in the sixth phase, the findings were included and presented in the thesis report.

4. Results

This thesis explored the identity work of developers and domain experts designing AI in an interprofessional collaboration. The findings from the qualitative data analysis are presented by elaborating on the first-order codes and second-order themes from the Gioia method. Given the duality of the research question, following the aggregated dimensions in the data structure, the chapter is structured into identity work induced by AI and identity work induced by the interprofessional collaboration. Figure 1 Data Structure shows the information obtained from the coding according to the Gioia method (Gioia et al., 2013). Exemplarly quotes for the first order codes can be found in Appendix C.

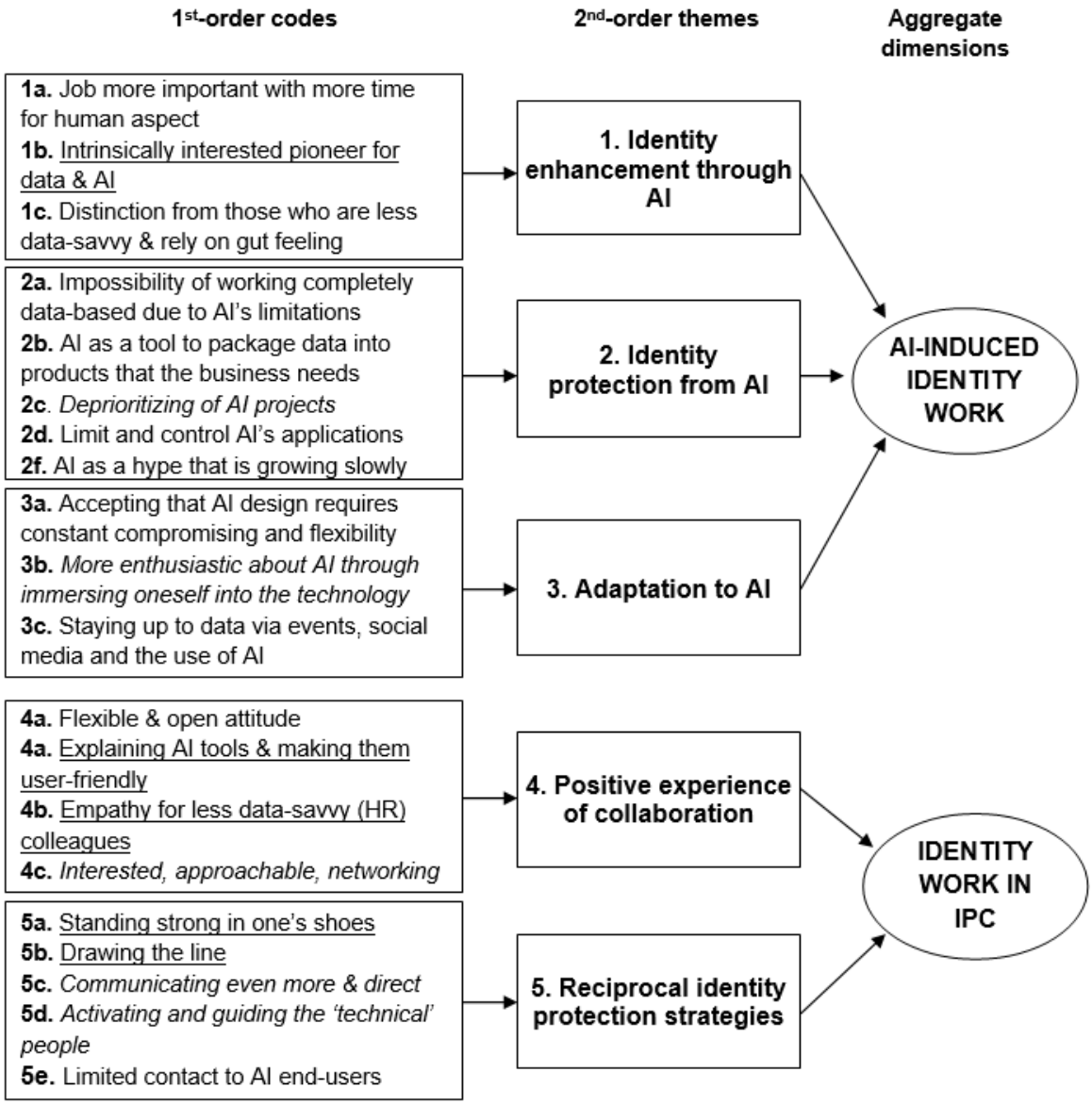

Figure 1: Data structure

Note. The first-order codes marked in *italics* were more prominent among domain experts, whereas the underlined first-order codes were more prominent among developers.

4.1. AI-induced identity work

Analyzing the data concerning the participants' perception of designing AI in an interprofessional collaboration, three main themes became evident that were particularly directed towards AI, namely 'Identity protection from AI', 'Identity enhancement through AI', and 'Adaptation to AI'.

4.1.1. Identity enhancement through AI

At first glance and perhaps surprisingly due to AI's often disruptive depiction, it appeared that almost all participants were rather unaffected by designing or working with AI and did not encounter a feeling of threat or fear from AI as described by these two participants:

> *So I'm not so afraid of it myself. I do see it myself as something that can be deployed correctly in the right way for now. (Dev 5)*
>
> *No I do not see it at all as a threat.* (Exp 1)

Instead, both developers and domain experts seemed to experience an enhancement in their professional identity through AI due to three main reasons. Firstly, the participants saw their **job as more important with more time for human-related and less operational tasks**. Among developers, this mostly referred to an '*easier'* (Dev 1) job that is '*just gonna grow'* (Dev 3). Or, as this developer who started his own company to assist other firms in data and AI matters, put it, AI can be a promising business opportunity:

> *No, for my role I find it particularly nice (…). I have really noticed, especially now that I've started working as a freelancer and that you kind of think of, okay, companies must already be far, but that is sometimes not the case. (…) Yeah, I only see that as promising. (Dev 4)*

Among the domain experts, this enhancement occurred especially through the tasks that AI, according to them, was not able to overtake. The professionals acknowledged that AI could mostly take over operational tasks, which ultimately gave them more time for the '*human aspect of the profession'* (Exp 2). This is especially significant considering that working with people was one of the main reasons for participants to work in HR as noted by this participant: '*Why I went working in HR is because I indeed wanted to work with people.' (Exp 3).* AI as a technical advancement that allowed them to spend more time on people, the aspect that is key to their professional identity can thus be considered a significant professional identity enhancement. Rooting their professional identity in human-related tasks that no technology would be able to substitute thus creates a sense of importance and uniqueness to their position as becomes evident in this statement:

> *I think that yes, the progression is going to mean that there is less to do. I think that is not a bad thing, because yes, less to do means you also have more time to do things, which AI*

cannot do. With HR, I've noticed most, in the second at least that they try to be as much as possible for people. So it's not just human resources but also to help people with answering, with new contracts and so on, so to help as much as possible, to make people as comfortable as possible in a place. If you have everything more automated, then you also have more time to come to agreements with people. That's a good thing too, I think. (Exp 7)

Secondly, especially among the developers, a potential reason for their identity enhancement through AI was seeing themselves as data-enthusiasts and experts in their field. They pictured themselves as the one who finds data and AI '**intrinsically** super **interesting'** (Dev 4) and the one **pioneering** in this field, often creating their own function that had not existed previously in the organization. For instance, like this developer who reported of his achievement to create an entire department:

So then I put on my bold shoes and said to the director HR like: Yo, we now know what HR costs, shouldn't we start working on what HR yields? He thought that was a good idea, so allowed me to write my own position, I suited that profile very well, so then I became it too. Then suddenly I was an HR analyst. And then I did that on my own for 2.5 years, But it was already very soon clear that it does not work all on your own, that there was way too much demand. Then I was then allowed to start a team with a direct colleague and two people from outside. So there were four of us and over time that grew again, now to 6 and I will be joined by two working students from 10 May who will also come and work with me two days a week. (Dev 6)

Lastly, and clearly connected to highlighting one's unique position and expertise, the participants made a clear **distinction from those who were less data-savvy and rely on gut feeling** or even to those whose job might be taken. Strikingly, this distinction was not only made between the two different professions but also among domain experts as these statements by both developers and domain experts show:

So yeah, a lot of people will be impacted. But if you talk about me, I see it's just gonna grow. (Dev 3)

Often there is a certain, yeah, I think they call it very old fashiontly 'gut feeling from experience' behind it. But decisions are just much more effective and therefore more efficient when you use those data products (Exp 8)

Look, and I wouldn't even think about my paper anymore, because I never use paper, but there are also departments that still work on paper. So with them, that first step of digitization is quite literally. I don't do it on paper anymore, but I do it digitally. (Exp 3)

Together these first-order codes show how the participants felt enhanced in their professional identity through AI. Ultimately and regardless of which profession the

participants adhered to, they created an 'Us vs. Them narrative', we who are interested and open for AI and us whose job will become more important, opposing to the ones who are not open for change or whose job might be taken. This creates an empowering and enhancing dynamic for their identity.

4.1.2. Identity protection from AI

On closer examination, the unaffectedness of the professionals and the enhancement of their professional identity seems to come down to the way they perceived AI and that, in fact, the professionals were undertaking many efforts to almost discredit AI as a potential threat to their specific task and thus protect their own identity.

For example, professionals frequently stressed the **impossibility of working completely data-based due to AI's limitations**. The perception that '*there has to be always human in the middle*' (Dev 3) was shared and frequently mentioned by all participants from both groups. All participants and especially domain experts explained that AI, and more specifically the data used as input for its programming, will never be able to capture '*human behavior*', '*experience'* or '*intuition'*. The conversation about AI was therefore also firmly rooted in the participants' opinion about data in general. Pointing out these limitations of data and the belief that '*AI could never fully take over'* (Exp 3) provides job security and ultimately identity protection to them as professionals. Hence, participants perceiving their human skills as more important as linked to identity enhancement in 4.1.1. Identity enhancement through AI, can simultaneously be seen as an identity protection measure as these statements show:

> *Then you forget that there are also a lot of human factors that such a system just can't pick up. Such a system just doesn't have intuition because it's just all numbers. So I think that's mainly where the difference lies. (Exp 3)*
>
> *Well, in any way, people's behavior is very difficult to capture in data at all. (…) I mean, I can measure a FTE but if an intervention that you do actually causes a change in behavior in the organization, those are things that are very, very difficult to measure, because it often remains an opinion of someone else. (…) Someone has to be in between and they have to make something beautiful out of it. (Dev 5)*
>
> *This is what I mean a bit with the feeling we had back in the day, which still now remains necessary to interpret things and you will never be able to come away from that. (Dev 2)*
>
> *Like if you ask me, I would still keep it as a collaboration. So, like a circle going around. This is a data generated inside it goes to a human insight who can validate that this is correct and then you come back to make more data generated inside. Yes, it's going to be much more faster when data is generated. But there has to be a validation step from humans. (Dev 3)*

Rooted in this firm belief that AI could never fully substitute human work, the participants perceived **AI as a tool to package data into products that the business needs.** AI was not perceived as an autonomous entity or quasi-social actor but instead the words '*tool'*, '*tooling'*, '*product'* or '*system'* were used frequently by the participants, which ultimately completely dehumanized AI. This 'tool' ultimately needed to serve the need of the business and its people. A very practical perception of AI thus emerged where '*relevance'* (Dev 8) , '*business impact*' (Dev 2), and *'what does the business actually need*?' became key. For instance, one of the HR professionals explained:

> *But I do think that that is important to see it as a tool so you always have to stay in control of what is, what is actually happening, because at the end of the day you are working with people, especially in HR. So to put AI all the way in and make people go there, well, we have that, go talk to that. Yes, that. I don't think that's the solution. So we as professionals can use AI to do certain things, huh, like now collecting documents when you hire an employee but then we have to have control or at least we are responsible for the, for the employees. (Exp 4)*

As a result of this practical and business-oriented perception of AI, it was sometimes not even mentioned towards domain experts or clients that tools or analyses were AI-powered. Instead, AI was seen as '*a mean to answer a question*' (Dev 8) and thus not always worth to be pointed out as this developer explained:

> *The customer has a question. (…) The customers don't care how we solve that, they are not even capable of challenging that either. They don't understand it and that is also normal. I mean, it is a whole special field. And you also don't, when you go buy an IT system, you don't go and ask your customer all kinds of technical questions. No you have a team to do that. Well, that also applies to analytics and you do share the results and then of course we are not going to show regression tables, decision trees or whatever else. We just give a normal answer to the question we were asked. (…) And whether you apply statistics or, your client never knows what exactly is going on in those models. They don't understand linear regression either, you know, so they don't know either, so there too you just tell them this is the effect. And you do the same with machine learning. Only machine learning allows you to package that more into products. (Dev 8)*

Indeed, a domain expert said about her collaboration with developers: '*I don't know exactly what work they do and all and what is happening on the background*' (Exp 3) and that she was not aware to what extent '*manual work*' went into the products or not. Another domain expert had to verify to what extent she was involved with AI tools with a colleague prior to the interview. Once she found out that machine learning was indeed often incorporated she explained: '*That is quite logical actually, but what I think of AI is the same or yeah, like everyone is now thinking of Chat GPT and things like that*' (Exp 8). Thus, it seemed that not

all domain experts were aware in which forms AI can exist within companies. On the other hand, a domain expert, who was well aware of how AI was used for the companies' recruitment tool, similarly to developers did not include the clients in technical details '*Clients sometimes have questions where it comes from, but that is of course our secret a bit. If we tell them everything like, yeah, where the people are coming from, then they do not need to work with us' (Exp 2)*. This action puts developers, and sometimes domain experts, in the role of 'the one knowing what is playing behind the scenes', which might strengthen and protect their identity. Simultaneously, this action conceals the importance of AI within the organization and leaves professionals or clients unaware of their exposure to AI, which may have significant implications for their identity work.

Another nuance that was identified among domain experts was the **deprioritizing of AI projects**. Domain experts often stressed that they were 'busy' with their daily responsibilities or that indeed working on AI was not their main job and just a '*project'*. Consequently, AI may seem less important and perhaps the threat may be perceived as far away in the future since its implementation does not feel very imminent. For instance, one domain expert noted:

> *I'm very honest, I always have a lot to do, so if we don't work on that for a while work on it, then I also forget about it pretty quickly. It's just not really a priority at the moment and then it comes around again and if not, then not, I think it's all fine, so I, I just kind of go with it and if not, then not, yeah (Exp 5)*

Other domain experts took a step further in this and deliberately limited the attention that AI outcomes receive in the organization, which ultimately connected back to always focusing on what the business needs. This may ultimately contribute to AI being less relevant in the business and perhaps even hampering its progress. This HR professional explained:

> *The biggest thing they have done is mainly (program) last year. And of that, at some point we did say of okay, yes, you guys are already making it every quarter, but we're not going to highlight every quarter. Because, you know, we keep busy. (…) So also from my role as an HR Business Partner, how do we make sure that we do not over flood the business with information, but we send them only what they need? So, what they really want to see?* (Exp 3)

Some developers confirmed this deprioritizing behavior of domain experts, for instance:

> *Those are employee satisfaction research (…) and the tool that I developed where people can get insights into their collaboration (…), those two tools are discussed so rarely. Because sometimes there is too little attention, because people don't take it too seriously. (…) Often*

people find analyses interesting, but if you then want to schedule time to talk about this analysis to find depth then it becomes difficult. (Dev 2)

Some participants reported how organizations went even further and made a conscious decision to **limit and control AI's applications**. They deliberately decided to keep the human in the loop or applied AI only to less 'human' tasks. For instance, these two professionals recalled:

So that's why we also said of you know, we start with automation in a place where there's not that much human in it anyway, right, the bot later just sends an email with Welcome Blababla these documents we're still missing from you, so I don't think you can do very much wrong with that. (Exp 4)

The idea from the beginning anyway was not to display only AI candidates. I don't know if that came from the MT or Dev team. But so at least everyone can still be seen by the recruiter. (Exp 7)

Lastly, although many participants believed strongly in the opportunities of AI, many also downplayed its disruptiveness and growth, describing AI as a **hype that is growing surprisingly slowly**. One domain expert, for example, did not '*see the demand so much with the clients*' (Exp 7) and a developer noted '*even many big companies still actually need to start*' (Dev 6). There is this perception that '*maybe it all actually goes less fast as we had expected*' (Dev 2) as also these statements show:

That is a huge hype terminology. True AI, in the sense of yeah, what do you call it? Mechanism that autonomously self-learn and make decisions, those don't exist almost yet in my opinion. It's just, I also see machine learning then as what is meant by AI now. (Dev 8)

I've been seeing AI or intelligent tooling in the field of recruitment for about 5 years now and to date, not one has really broken through or a party that really everyone is looking at. They are all trying it for now so yes, I'm very curious to see if that will change in the next few years, but yes, a few years ago recruiters might have feared that that might make them redundant. But yes, the opposite has actually been proven over the past few years. I think that it's still more good recruiting jobs coming in every year than disappearing. (Exp 1)

All in all, this thinking protects the professionals' identity in their role as experts, strategic-thinkers and empathic human beings because it creates a harmless and limited perception of AI, portraying AI more as an interesting experiment that can be worked on once there is time and merely as a tool that is controlled by humans and generates business value. Instead of changing themselves, the professionals thus target the source and change the meaning of AI to feel less threatened in their identity.

4.1.3. Adaptation to AI

Besides a large variety of identity protection measures, many participants also took a step towards AI and adapted to it. Although some of these strategies may have identity enhancing or protecting elements, unlike the previously mentioned strategies, they all involve a restructuring or adapting response, where the participants changed something about themselves or their way of working as professionals. This is a significant distinction from the previous second order themes, where the collective change in meaning of AI led to an identity enhancement and not the restructuring of themselves as professionals. The following actions and strategies thus show an important step towards the AI where, instead of limiting and discrediting AI, the professionals dare to learn more about the technology and adapt to it.

Firstly, the participants shared the opinion that designing and working with AI is '*iterative'*, requires flexibility and openness. They saw it as '*inherent to working that things never go in the way you envisioned it*' (Dev 5). Often developers started out with '*minimum viable products'* (Dev 8) and improved from there. For instance, as this developer explained:

> *You always have to weigh up between things, you never really have enough time to build things. (…) So, compromising, it is what I say, you are actually constantly compromising. You can never foresee everything in advance what the plan really is. Often it is a building-up process that you can do best in collaboration. (Dev 1)*

Secondly, along the process of working with AI, especially the domain experts had often become **more enthusiastic about AI** and came to realize more of its opportunities. One domain expert started to realize the '*necessity'* for AI tools and stated '*the more we are busy with it, the more I start to understand a bit what is possibl*e' (Exp 5). Additionally, the domain experts were curious about AI, asked many questions and tried to **immerse themselves into the technology** as this HR professional described:

> *I think that as a non-data professional that if I get (…) something new, I often go and ask, okay, so how does this work? (…) I am quite curious, so what I'm doing is, I'm just going to enormously immerse myself in it to see if I understand. (…) You have to open up to it. (Exp 3)*

Lastly, most participants adapted to AI's rapid developments by **staying up to date via events, social media and the use of AI for their own work.** While many participants enjoyed keeping up with the latest developments surrounding data and AI, there is also an element of identity protection in this preparation since it protects them from becoming obsolete or falling behind. While some participants had pointed out that AI grows more slowly in HR than expected, they also described the developments as '*very fast'* or called it a '*challenge'* to stay up to date. For example, as this developer:

To keep up to date with developments. There, of course, things are going very fast, especially now with ChatGPT and everything that's coming up. You do need to be constantly up-to-date on that. I think that. Well, I do just really try to keep up with the right people who are early on in the game via a lot of news, but also social media, to find the right information quickly from there or visit certain meetups or events. (Dev 4)

4.2. Identity work in an interprofessional collaboration

Identity work in an interprofessional collaboration was the second aggregate dimension that was identified from the data. Although these actions or thought patterns refer to a collaboration that shapes and gets shaped by AI, they were grouped together since they are especially directed towards the other professionals. Two 2nd order themes were identified, 'Positive experience of the collaboration' and 'Reciprocal identity protection strategies'.

4.2.1. Positive experience of the collaboration

Overall, many participants perceived the collaboration with the other professionals, frequently referred to as '*colleagues'*, as '*positive'* or '*good'*. As an HR professional put it: *'I find the collaboration very good, but I also just have a good bond with my colleagues' (Exp 3).* During the analysis, a shared **flexible and open attitude** became evident among the participants. A professional explained: '*Everyone is really open* (…). E*veryone can work together and we can talk to everyone*' (Exp 7). Although the professionals acknowledged that the collaboration also brought challenges, for instance in the form of resistance, miscommunication or workload, the participants did not perceive challenges as big obstacles or impactful to their identity. Instead, they were '*able to be agile, flexible and quickly adjusting*' (Exp 8). As one HR professional put it:

I wouldn't call the difficulties. They are challenges, challenges that can be solved. (…) See it's not stagnant. It's not one to one match problem to solution. There are various ways of doing it, it's just about identifying or looking through what works and what does not, and if what if something does not, then why it does not? (Exp 6)

Or as this HR professional described a misunderstanding with a developer:

But that is not a big problem either. Then we videocall or we also have an internal chat. They are really easy to reach and fast. (Exp 2)

Instead, the professionals tried to help and understand each other. On behalf of the developers, this substantiated in **explaining AI tools and making them user-friendly**. Many developers agreed that '*understanding what you are working with'* (Dev 1) is a way to make technology '*less scary'*. Hence, they made AI products '*approachable' and* organized sessions with the developers to sit down together and '*click through the system*' (Dev 6). Additionally, developers were conscious of the language they were using with domain

experts, trying to '*explain in the most low-key way possible*' (Dev 2). Helping and assisting domain experts in this way was an important strategy for developers to deal with difficulties in collaborations. For instance, one developer remembered providing assistance to doctors when using a complex AI tool:

> The research tool is quite complex. It's, there's not an easy learning curve for it. So, teaching new surgeons to use it is kind of a bit challenging. (…) now what we have, what I'm actually doing, not completely done, is transcribing them. So say for example they need param perfusion parameters, I'm already giving them a script. You don't have to go to file open anything, you just run the script and everything will be done for you. That is one way and the other way we also doing is writing a full documentation (…). (Dev 3)

Indeed, another domain expert recalled switching to a more user-friendly option after struggling to provide input for a chatbot in form of an Excel sheet:

> *So what we did then, is that we said: look, we'll just make the thing self-learning so we'll just cram questions from the customers into it and then I'll give, say, the right answer. (…) And then the thing will just learn by itself. So that's how we, we sort of solved it. (Dev 5)*

The developers also showed **empathy for less data-savvy (HR) colleagues.** Many understood that working more data-based or with an AI tool is a '*process of change*' for many professionals. They acknowledged that naturally they are people who are more '*factual'* and others who are less '*data savvy'*. Taking the professionals perspective seemed to help the developers to better understand and deal with the resistance they were facing, for instance:

> *I think it's very good to do that piece of placing yourself in the other. So for them it's often the unknown and you can go against it and throw the facts at them. But the piece of placing yourself in the one, say the who is experiencing that resistance that, yes, that's often a strategy that does help a lot. (Dev 8)*

This allowed developers to place the reason for the faced resistance on the other professionals and not in the nature of the products they design. Consequently, when asked whether the resistance from domain experts had an impact on his work identity, this developer answered:

> *Well, not really actually. It's more that it's just part of it. I don't think it's very realistic that everyone still makes that transition. Look imagine, very simple example if someone is 5 years before retirement.* (…) *Well, you just really need to think about it carefully. Every time you have to transfer data to another person. What kind of role does that person have, what kind of*

function? What are the goals to achieve from experience? So then you can already try to imagine how your insights are going to land, so to speak. (Dev 4)

The developers not only showed understanding for personal resistance but also acknowledged that AI tools needed to be understandable for colleagues who '*must dive into the sick leave law for 4 days*' or that professionals simply '*also have a lot of work*' (Dev 3) or that they might face managers that in turn '*put a lot of pressure on them that things need to go fast*' (Dev 5).

Domain experts, on the other hand, facilitated the collaboration by being **interested, approachable, listening and networking.** It seemed like they were interested to be on good terms with the developers in order to receive more of their assistance. This code ties back to the participants' flexible and open attitude, perhaps suggesting that domain experts did not want to be perceived as part of those professionals who show resistance towards AI. Instead, they tried to show interest and ask questions. Here some examples:

Also just showing interest. Then you will see that people will also come a lot faster and easier to you to help you. (Exp 1)

The forming of relationships, so really the creation of a network. That really helps. (Exp 8)

Approachability is also important. You actually just want people to come to you by themselves and say: Hey, well, I had this, I wanted to discuss it with you. (Exp 4)

4.2.2. Reciprocal identity protection strategies

Although all participants perceived the collaboration positively, many developers undertook a number of identity protection measures towards domain experts that were having unrealistic expectations or were simply unwilling to collaborate. For example, one developer reported that business professionals have '*little affinity'* with their work and therefore it was difficult for them to '*judge where to draw the line'* (Dev 2). Hence, many developers learned along their career to be '*confident'* in their work or '*stand behind a statement*' (Dev 2) which was summarized as **standing strong in one's shoes**. As this developer explained:

That's having a bit of experience, so then absorbing and giving back, just giving back what can and cannot be done. And then especially not directly going running and doing it yourself, but instead standing a bit strong in your shoes. And yes, that is of course In the beginning of your career much more difficult. (Dev 5)

This strategy was equally used when domain experts did not provide data in a suitable way. The developers were handling '*strict criteria*' (Dev 1) otherwise they would report back '*we cannot do anything with this*' (Dev 1) or as this developer explained:

As long as they do not register well, the matching is not accurate either, that is a really simple fact. (…) Garbage in garbage out' (Dev 5)

Another sensitive area of (potential) conflict was indeed the resistance towards AI from domain experts. Developers did not expect everyone to be fully enthusiastic or understanding of AI or as this developer put it: '*They don't understand it and that is also normal. I mean, it is a whole special field*' (Dev 8). However, especially if professionals were unwilling, a sense of frustration was present. Although many developers first always tried to change the other professionals' mind, persisting resistance caused developers to take the decision to **draw a line**. For instance, as this developer reported:

So we said, yes, what are we actually doing here? This is because we take everyone with us all the time including the people who actually sit with their arms crossed. I think that's stupid, just to put it frankly. That is not going to work. (…) But we have now drawn a kind of line in that regards, so we said, well, we are now at the limit of taking everyone along, now we just have to say, if you don't want to, that is fine. (Dev 6)

For other developers only working with domain experts who show interest was a given thing since they worked in a client relationship. Hence, companies that would contact them would also be '*interested'* or '*searching for a system'*. But even within companies this approach existed, as this developer answered to the questions how he perceived the domain experts' attitude towards their shared projects:

Well, positive, otherwise we won't start with it. No, look, it's always a bit that sounds very bland and very easy and tough. But in essence, it is how it works. (Dev 8)

Indeed a domain expert recalled that developers could be very clear and direct in collaborations:

They also indicate us very clearly, well, this needs to be investigated better. Or, you know, this process is not working properly, so nice that I have to develop this, but if things are not properly recorded anywhere, yeah, then there it stops. (Exp 8)

One can see that these strategies allowed the developers to protect their identity when AI projects were not progressing as hoped for or results were not accurate due to the provided input. A sense of, 'we are doing what we can' emerged from the interviews that allowed developers to place the responsibility away from themselves and towards the domain experts.

For the domain experts the challenge of the collaboration substantiated in the matter of working with '*technical people*' (Exp 2, Exp 4) or also referred to as '*techies'* (Exp 1) or

'*Devs'* (Exp 7) that in their eyes required a specific approach. They acknowledged that their colleagues are very intelligent, however are '*not a specialist on the job market'* (Exp 2) or are not aware of all the processes within the company. Some domain experts also mentioned that developers are not always Dutch, which can lead to a language or cultural barrier. Many domain experts also experienced misunderstandings with developers: '*you think that you explained something well and that it is clear or very logical but halfway you realize that this was not really the case' (Exp 1)*. It thus seems that developers and domain experts not always spoke the same language figuratively or literally and held expertise in very different areas. Therefore, the domain experts pursued the strategy of **communicating even more and direct** with developers. This means being precise to avoid miscommunications or as this expert phrased it '*you have to be very clear with the engineers*' (Exp 4). Another domain expert recalled:

> Yes, I must say they are really structured people say. (…) when they wanted information from us, they would usually send us these templates where we could enter things. We then always did or tried to be as specific as possible too. Because sometimes you think you've been clear where something should go, but then it's not clear (Exp 7)

Another strategy the domain experts used was **activating and guiding the 'technical' people**. One expert claimed '*You really have to operationally steer them in that and they like it that way, I notice*' (Exp 8). This code also had an element of identity protection or enhancement to it since the domain experts perceived themselves as the one '*knowing what plays*' in the business. This made them important in the collaboration and secures their position or as this domain expert explained:

> *You do have to activate people within the technical engineering sector, so you are really support there, you really see the added value of you as a business partner there to be the yes, the oil in the machine, so to speak. All cracking smart people. You do have to really activate them to get the good result. And yes, that's fun and and sometimes challenging. (Exp 4)*

In sum, the domain experts often had a very specific image of the developers and saw each other as different type of beings as the wording in this statement shows: '*we always really try to tell our techies what we expect*' (Exp 1). Being in the lead, stating clear expectations and being aware of the knowledge they bring to the collaboration, positions them as experts in their own field. This reinforces their position in a collaboration where their domain expertise is what secures their position in face of AI and makes them relevant in the collaboration, which ultimately protects their identity as a professional.

Lastly, it was striking that many companies were organized in a way that developers, and sometimes domain experts, did **not have direct contact to end-users of AI**. Instead, developers collaborated with sales employees, translators or HR business partners who in turn were in charge to implement AI tools within their department. However, even these domain experts were often found to be in contact with managers who in turn supervise AI end-users, as this HR business partner explained: '*The talent acquisition manager, from his recruiters are actually the ones who in the end use it. But well, the talent acquisition manager is my central point of contact.*' (Exp 4). This separation seemed to be a conscious choice in most companies: '*Developers very often still have to make the translation from IT to business. And of course you want to mitigate that by yeah, business analysts, people that are shields around that*' (Exp 8). These organizational layers set the context developers and domain experts perform their identity work in. Not being in contact with end-users may act as an identity protection mechanism by preventing developers (and domain experts) from resistance or difficult conversations with end-users. For instance: '*Then you have to communicate to the client like, hey, you have to do this differently and that is often unpleasant. (…) I don't find it so difficult, I actually like it that way that the business is there for these kind of things.*' (Dev 1). Another developer designing AI for medical professionals had contact to end-users, however, his management was the one taking care of ethical dilemmas prior to the collaboration:

> *So the ethical dilemma is quite less and we are, we have a strict anonymization process or whatever they call it. Yeah. So yeah, so the doctors already, doctors are already informed about that when the project starts or when the collaboration starts, so that those dilemmas have not reached me. It's in the managerial level and they kind of removed them beforehand. (Dev 3)*

If these type of agreements, managerial levels or intermediary functions responsible of client contact are present at companies, professionals may be considerably less exposed to difficulties within their interprofessional collaborations. Domain experts who are specialists in HR but do not see themselves as the end-user of AI products may raise many less objections towards developers. For instance, as this sales and business developer involved in designing an AI tool for HR put it: '*More along the lines of yeah, add the feature. I don't have to work with it anyway, the customer decides in the end, you know.*' (Exp 7). This can significantly impact the dynamics of the collaboration and protect both parties identities.

5. Discussion

This thesis revealed how designing AI in an interprofessional collaboration influences the identity work of developers and domain experts. The findings, as visualized in Figure 2, show that both developers and domain experts indeed perform identity work either as a result of their encounter with AI, or other professionals. Although nuances were present, the findings suggest that not only domain experts but also developers, in such an identity work process, perform a variety of professional identity protection strategies towards AI that create a tool-based and human-controlled view of AI as opposed to its often disruptive and threatening depiction. Forming this less threatening perception of AI and adapting themselves to the new technology can allow professionals to also experience identity enhancement as a result of working with AI. For instance, AI can allow professionals to spend more time on tasks that are important to their professional identity by overtaking operational tasks. The remaining findings reveal that the collaboration with other professionals, which takes place in interconnection to their perception of AI, as shown in the illustration, can initiate developers and domain experts to employ reciprocal identity protection strategies on the one hand, but also allow for a positive experience of the collaboration on the other hand. In general, developers seem to group with more open and data-savvy and domain experts on these design projects, which facilitates their collaboration and creates a clear distinction to more traditional domain experts, as shown below.

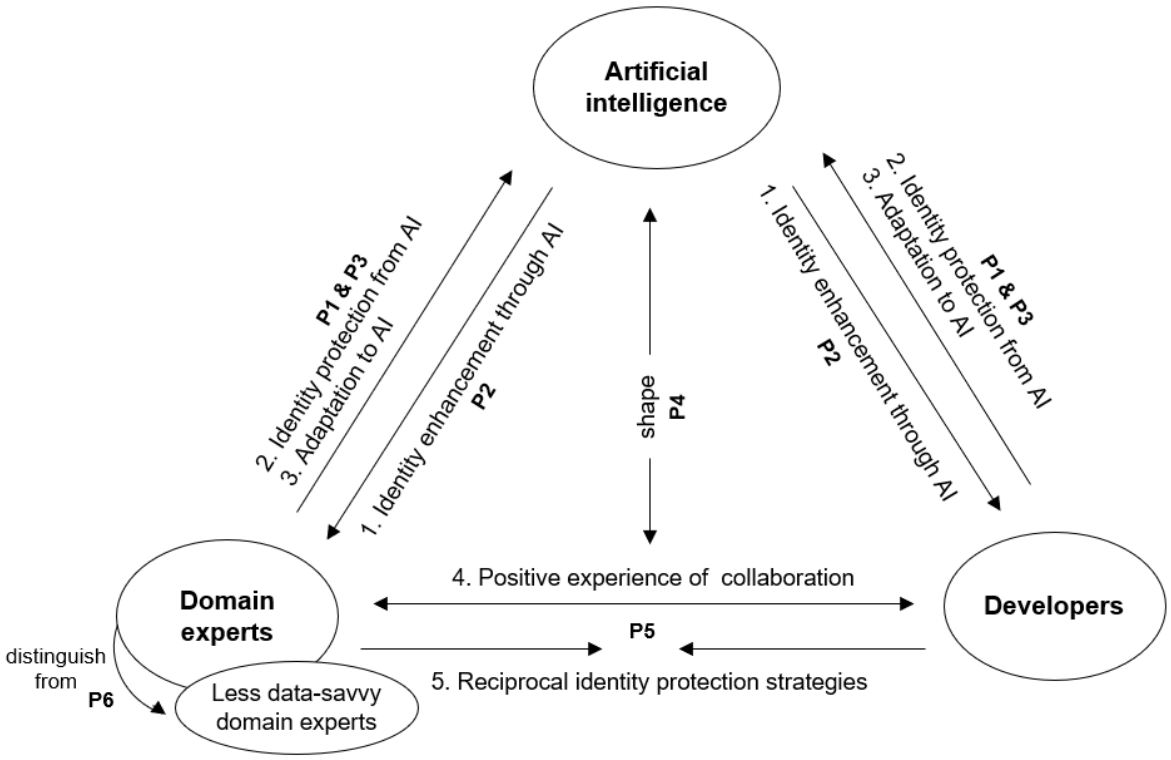

Figure 2: Visualization of findings

By addressing how developers and domain experts navigate their identity work in this collaborative circle of creation, this thesis makes important theoretical and practical contributions, which will be discussed in the following section, followed by the limitations and directions for future research.

5.1. Theoretical implications

This thesis contributes to the current literature on AI and identity in two ways and allows to formulate propositions as integrated in Figure 2, each relating to one of the relationships in the collaborative circle of AI design.

5.1.1. AI & identity

Firstly, this thesis contributes to the AI and identity literature by understanding how domain experts and developers respond to AI as a special source of identity threat by performing identity work. More specifically, we show that similar to identity dynamics induced by another person (Ahuja, 2022; Ashforth & Schinoff, 2016; Petriglieri, 2011), professionals engage in identity protection, identity enhancement and adapting measures when exposed to AI, a threat that can be attributed neither to the social nor the material world. As demonstrated by the arrows on the left and right in Figure 2, the identity work dynamics of developers and domain experts take place in interaction with AI, meaning that they shape and are shaped by AI. More precisely, the identity protection measures may create an altered, dehumanized and less harmful perception of AI, which in turn can enable professionals to engage in identity enhancing and adapting activities. This effect may be rooted in the principle of social identity theory, in which individuals make sense of themselves through comparison (M. A. Hogg et al., 1995), meaning that by finding dissimilarities between their own human empathic skills and the AI's limited and dehumanized capacities, professionals can elevate their own position and experience identity enhancement. The altered perception of AI may be achieved by stressing the limitations of the technology or playing down its disruptiveness by describing it as a tool, an identity protection strategy previously referred to as derogation, which discredits the source of a threat, however does not eliminate it (Petriglieri, 2011). This thesis extends previous knowledge by showing that, unlike when exposed to a threat from the social world, individuals cannot only discredit a threat and thus maintain it (Petriglieri, 2011), but also change its entire meaning and thus at least temporarily eliminate the threat. For instance, the participants changed AI's meaning from an autonomous quasi-social actor to a dehumanized practical tool. This forces us to reconsider our knowledge on sources of identity threat as, thus far, identity threats from the material world have been understood as events that occur independently and randomly, such as accidents. AI, on the other hand, can

be forged and designed by humans, which leaves professionals more scope for actions and thus has unique implications for their identity work. This leads to our first proposition:

Proposition 1: *AI is a special source of identity threat that, unlike other threats, can be altered, shaped and dehumanized, which creates more room for the identity adapting and enhancing actions of professionals.*

By understanding that professionals can design AI and shape its implementation, we come to reveal that there may not only be a discrepancy between the technological advancement of AI and its implementation in practice (González-Gonzalo et al., 2022) but also between its disruptive quasi-social depiction in the literature (Mirbabaie et al., 2021; Selenko et al., 2022; Strich et al., 2021) and its actual degree of autonomy and dehumanized perception in organizations. Thus, it raises not only the question of whether AI is implemented or not (González-Gonzalo et al., 2022), but rather to what extent and in which ways AI is allowed to unfold.

Furthermore, given the focus on 'the dark sides of AI' (Cao et al., 2023; Mirbabaie et al., 2021) and AI as disruptive source of identity threat in recent literature (Jussupow et al., 2022; Mirbabaie et al., 2021; Strich et al., 2021), we extend previous research by revealing that AI can also induce what the literature refers to as (professional identity) enhancement (Ramarajan et al., 2017). The results portrayed how the perceived importance of professionals' identity in relation to AI as more important since they performed interpretative and strategic-thinking related tasks that, according to them, were difficult to substitute by AI. The identity enhancement was especially significant for the HR professionals among the participants, since AI allowed them to spend more time on human-related tasks, which many defined as key to their professional identity. Hence, HR professionals may perceive a sense of wholeness and verification of their value of working and caring for people, as described the experience of identity enhancement (Ramarajan et al., 2017). This leads to the following proposition:

Proposition 2: *If AI substitutes more repetitive and tedious tasks and allows professionals to spend more time on tasks that feel important to their professional identity, professionals may experience identity enhancement through AI.*

This may also apply to other professional groups, for example, doctors and nurses could spend less time on administrative tasks and more time in contact with their patients. Identity enhancement has also been found to facilitate perspective taking and thus performance in tasks with interpersonal interaction (Ramarajan et al., 2017), which may be key in facilitating the collaboration of developers and domain experts. Since also the general

literature on identity, and not only in the context of AI, has widely examined identity conflict and identity threat and neglected identity enhancement (Brown & Coupland, 2015; Craig et al., 2019; Horton et al., 2014; Petriglieri, 2011), this broadened understanding of identity enhancement in the context of AI is an important extension to the literature. On the opposite note, in line with Selenko et al. (2022), this also means that AI implementations that do take over more 'human' and empathic tasks may lead to an increased perception of identity threat among professionals. This may provide a meaningful explanation for user resistance or the discrepancy of available AI technology and its implementation in practice (González-Gonzalo et al., 2022). For instance, HR professionals may show more resistance towards AI overtaking the initial screening of candidates in the recruitment and selection process (van den Broek et al., 2021), as opposed to an AI in charge of the tedious task to collect onboarding documents from new employees. This allows us to make the following proposition:

Proposition 3: *If AI substitutes tasks that feel important to the identity of professionals, they may have a heightened perception of identity threat and use increasing identity protection measures.*

Lastly, this study contributes to the literature on AI and identity by better understanding those who design AI and not solely its users. Although developers play a key role in shaping AI (González-Gonzalo et al., 2022; Solanki et al., 2022), little is known about the identity and potential difficulties of those developing these technologies (Bailey & Barley, 2019). Forsythe (2001), as a notable exception, argued that AI designers privileged technical over social aspects in their work. In this study, however, more than twenty years later, it became evident that many developers showed empathy for domain experts and stressed the importance of designing for business value. This suggests that developers of AI (in HR) may have shifted from a more technical paradigm to a paradigm that prioritizes the business and its stakeholders. Especially in the HR domain, the functions of some developers were tied so closely to the HR department that they stressed that, in the end, their job was about people or even considered themselves HR professionals. The study also showed that many developers found considerable importance in their work, feeling as a pioneer or frontrunner. Developers were often very open, flexible and accepting that AI design is iterative and requires compromising. However, especially towards those who were completely opposed to AI, developers were also found to take a strong position and draw lines where necessary.

5.1.2. Interprofessional collaboration & identity

Secondly, this thesis contributes to the literature by not only understanding the induced identity work when two professional groups intersect (Ahuja, 2022; Barbour & James, 2015; Stice-Lusvardi et al., 2023), but by unravelling the identity work of developers and domain experts when a threat from the material world (AI) and a threat from the social world (other professionals) are present simultaneously and take place in an interconnected circle of creation. As represented by the opposing arrows between developers and domain experts in Figure 2, both groups dispose of strategies to deal with the resistance or particularities of the other professionals, which elevate their role in the collaboration and thus protect their own professional identity. For instance, the results showed that developers may decide to no longer include employees who continuously resist AI, which ultimately affects how AI will be developed in an organization and who will use it. Unlike in previously explored collaborations where identity protection measures were very prominent (Ahuja, 2022; Stice-Lusvardi et al., 2023), our results showed that professionals may also demonstrate many behaviors that facilitate interprofessional collaborations, represented by the connecting arrow in Figure 2. For instance, to overcome resistance, developers may explain and demonstrate AI products to domain experts or make AI products more user-friendly. This not only improves the professionals' collaboration but also facilitates the domain experts' encounter with AI and ultimately changes AI itself by making alterations to its interface. This goes to show that the collaboration of developers and domain experts cannot be studied outside of the products they design. Therefore, we make the following proposition:

Proposition 4: *AI design should be understood as an interconnected circle of creation, in which the identity work of professionals and the products they design shape and are shaped by the other entities.*

Furthermore, in line with Mitchell et al. (2011) referred to as 'interprofessional openness', we revealed that an open and flexible attitude is key in successfully navigating the collaboration in an AI context. Unlike previous identity studies that focused on strongly defined professional groups (Caldwell et al., 2017; Carminati & Héliot, 2022; Kreiner et al., 2006), the results showed that developers and domain experts designing AI for HR can have diverse responsibilities, backgrounds and career paths. For example, HR professionals may transition from more classical HR position to a more data-focused role or AI developers may be as embedded in the HR department that they consider themselves not only data professional but also HR professional. Perhaps this flexibility of organizational functions and professional identity was a reason for the many positive aspects that were found in the collaboration of developers and domain experts as more shared knowledge and a broader

understanding of their identity of professionals was present. This also acts as an important reminder to the literature that developing and domain expert functions can take various forms in practice with differing levels of expertise and autonomy. Another interesting dynamic was found in the collective derogation and dehumanization of AI as a threat among professionals and the creation of an 'Us versus Them' narrative towards less data-savvy colleagues. This corresponds to the characteristic trait of social identity theory, in which individuals elevate their own self by means of an in-group out-group comparison that favors their own group (M. A. Hogg et al., 1995). Indeed, constructing shared identities has previously been identified to facilitate interprofessional collaborations and alleviate professional identity threats (Mitchell et al., 2011). AI as a product of their collaborative creation and a shared enthusiasm for data can help to build this shared identity. It remains a matter of future research to study whether these dynamics are specific to the HR domain or may occur in other professional contexts. Therefore, we propose the following:

Proposition 5: *Interprofessional openness and a collectively constructed identity leads to better performance interprofessional collaborations designing AI.*

Strikingly, this collectively constructed identity did not serve to distinguish one professional group from the other, such as the case in previous research (Ahuja, 2022), but instead grouped data-savvy developers and domain experts together and distinguished them from their less data-savvy counterparts as illustrated in Figure 2. This suggests that identity tensions cannot only be found between two different professional groups but also within, such as suggested by Horton et al. (2014) where an inter-unit identity conflict can arise between two groups (data savvy and less data savvy domain experts) within a collective identity (us as HR professionals). To what extent this type of identity conflict may be present among domain experts and how the more traditional domain experts experience this division should be determined by future research. Hence, we come to the following proposition:

Proposition 6: *Identity tensions in an interprofessional collaboration can occur not only between different professions but also within professional groups.*

In sum, these findings contribute to the literature by providing relevant explanations from an identity perspective for the previously identified challenges between developers and domain experts (Bailey & Barley, 2019; van den Broek et al., 2021), a collaboration that has been deemed key in building useful and safe AI products (González-Gonzalo et al., 2022; Solanki et al., 2022).

5.2. Practical implications

The study also provides practical implications for successful AI implementation that mutually benefit employees and organizations.

Firstly, end-users should be included more in the AI design process, as also advocated for in user-centered design approaches initially conceptualized for computer systems (Gould & Lewis, 1985). The results of this study showed that AI design was often conducted in collaboration with intermediary functions, such as HR business partners. Although these translator functions are important, they should be used to facilitate the communication of developers and end-users instead of substituting it. However, the results revealed that collaborating with intermediary functions can serve to maintain efficiency and limit the workload of developers, which indeed also the literature has identified as one of the challenges of user-centered design (Bailey & Barley, 2019; Gould & Lewis, 1985). Therefore, building on the findings of this thesis, the exchange of feedback from users should be organized in a structured manner that is feasible for both developers and domain experts. For example, while still keeping an intermediary as the developers' central point of reference for questions, organizations may conduct user surveys in certain time intervals or appoint a limited number of end-users, not managers, to collect the challenges and ideas within their department in a shared document or chat that is directly accessible for developers. Hence, the employees' voices could be heard while still allowing for efficiency in communication.

Secondly, organizations should start with the implementation of AI in areas of operational or more repetitive tasks, such as writing emails, answering frequent questions, updating dashboards or posting and analysis of social media posts. This can find more acceptance among employees and may even allow professionals to experience identity enhancement if more time is available to be spent on human-centered tasks. For the HR function in particular, this means starting with automation in time-consuming administrative tasks, such as staff data entry, onboarding administration or payroll management, allowing HR professionals to conduct interviews, make people enthusiastic and assist them in finding their place in the organization. This recommendation is in line with predictions from the AI literature, arguing that AI will first take over mechanical and analytical tasks, making intuitive and empathetic skills more valuable (Huang & Rust, 2018). Enabling employees to use these intuitive and empathic skills more frequently and potentially experience enhancement in their identity can equally benefit organizations as identity enhancement has been linked to more intrinsic motivation, better perspective taking and higher performance in tasks with interpersonal interaction (Ramarajan et al., 2017)

Third, while organizations should consider and accommodate their employees along the change process, they should also be aware of the identity protection strategies professionals use that limit AI in its potential. For instance, the results indicated that domain experts may postpone AI projects or limit the attention their outcomes receive in an organization. This could prevent AI from reaching its full potential, ultimately causing organizations to miss out on business opportunities. Instead, and in line with what the results revealed, companies should encourage employees to see AI as a tool that can enhance their capabilities and allows them to spend more time on enjoyable tasks rather than a threat to their job. Keeping users involved in the design process from an early stage, will further aid in fostering a culture of acceptance that allows employees to construct a coherent identity in the face of AI as well as for the business to exploit AI's full potential.

5.3. Limitations and future research

As any type of research, this thesis has limitations that can serve as a guide for future research. Firstly, the sample consists of a total number of 16 participants, which is generally considered a sufficient amount in qualitative research since general patterns may already be observed from a participant number of six with data saturation being possible to research as early on as twelve participants (Guest et al., 2006). Similarly, Saunders et al. (2007) argue that five to thirty participants are sufficient for a general study. However, as the sample is divided into two groups, eight developers and eight domain experts, the data may not be as nuanced as would be the case with a larger sample. Thus, future research may benefit from a larger sample to have a more comprehensive overview of the identity dynamics at stake. For example, the sample comprised many employees in managing or intermediary functions, such as HR Business partners, who were not always end-users of AI. Thus, a larger sample could allow to also include end-users of the developed AI products to understand whether the implications for their identity work may differ from those of their managers.

Secondly, although the interviews were conducted with developers and domain experts from diverse organizations with different level of experiences and ages, the research made use of purposive and snowball sampling. This can lead to sample selection bias (Winship & Mare, 1992), since people who are generally more enthusiastic about AI may be more inclined to participate in an interview on such a topic. Similarly, when developers provided contact to domain experts, they might be likely to establish contact to colleagues that are more open towards AI. Hence, future studies may want to consider a more random sampling strategy.

Thirdly, the sample consisted, especially among the developers, mostly of male participants. In light of existing research that acknowledges the special need for identity work

of females in male-dominated feels such as mathematics (Solomon, 2012), it may be interesting to explore whether women would experience designing AI in an interprofessional collaboration differently. Additionally, all respondents for one exception were working in a Dutch context which may limit the generalizability of the study to other cultural contexts. Dutch corporate culture is defined by low hierarchy and consensus (Hofstede, 2011), which may have impacted the very pragmatic and flexible approach to AI that was encountered in this study. It may thus be worth to conduct the study in another cultural context and explore potential differences. Not only different cultural, but also professional groups should be considered for future research as the majority of developers and domain experts were working in an HR-context and shared a tool-based and dehumanized perception of AI. It may thus be worth to investigate whether this perception is also prevalent among other professional groups, such as medical professionals, where important ethical questions additionally come into play (Carminati & Héliot, 2022) or where AI is already employed for a longer time with a higher level of maturity.

Furthermore, this thesis approached AI as a complete product, while the results suggest that there may be a distinct perception of the datasets used for AI and the ultimate product. The employed datasets, for example, may raise questions concerning privacy or their ability to measure human behavior, whereas the algorithms leading to the AI product itself may be what impacts the professionals' in their autonomy, authority and professional identity. By making this distinction, future research may understand identity tensions at each stage at the AI development process in a more nuanced way. This may help to understand whether resistance towards AI could already be alleviated at an early stage by refining data collection.

Lastly, although the coding was discussed with the supervisors, the interviews were coded individually solely by one researcher. All in all, future research would thus benefit from a larger and more diverse sample which is subsequently analyzed by two coders to ensure intercoder reliability. These measures would allow to discover further nuances and improve the reliability and validity of the findings.

6. Conclusion

In conclusion, this thesis revealed that AI can find many different implications that are not always as threatening or disruptive as often assumed. Although professionals apply identity protection measures towards AI, many professionals are able to interact openly and flexibly with AI and find new and positive opportunities for their professional identities. Furthermore, AI design should not be studied in isolation, as it takes place in collaboration with other professionals who shape AI and in turn get shaped by AI as a product of their collaboration. An interconnectedness emerges in which AI impacts the professionals' identities and their collaboration, and the way these identity tensions are resolved in turn affects AI design. This goes to show that professionals who not only use but co-create AI dispose of a unique scope of action for their identity work, as they may not only restructure themselves in their identity, but also alter AI and its application in the organization. This forces us to reconsider our knowledge on identity construction in the context of intelligent technology as a product of human creation. If companies succeed in enabling professionals to see AI as a tool that makes their work more efficient and allows more time for more enjoyable, intuitive and empathic tasks, AI can stimulate not only economic benefits but also employee well-being and self-actualization.

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Appendix A: Questionnaire

Participant	Age	Gender	Position	Years of experience in current position
A				
B				
…				

Appendix B1: Interview Guide Developers

Thank you for participating in my study, I really appreciate it. I also would like to underline that there is no right or wrong answer here, I'm just interesting in your opinion on this.

Themes	Main questions	Probing questions
Introduction & Identity	Can you shortly explain what you are doing in your function as (*profession*)?	If not mentioned AI: In what way do you work on AI/ML?
	Why did you decide to become a (*profession)*?	
	In your eyes, what are the qualities of a good (*profession*)?	Why?
	Have there been cases where you had to compromise on these qualities?	Do you therefore look differently at your work? Or one of your colleagues?
IPC	What other professionals do you collaborate with in your work?	How do they influence how you look at your work?
	How do you experience this collaboration?	Why?
	Have you experienced any challenge/ difficulty in such collaborations?	Can you provide an example? How do you respond? What was the outcome?
	Have you experienced resistance towards the products you design in your organization?	Can you provide an example? What did you do? If not, why do you think so?
AI	How do you see AI-generated insights compared to human insights?	Why? Can you give an example?
	Has your attitude towards AI changed over time?	Why?
	What do you see are the limitations of AI?	Why?
	How do you see the advancement of AI influence your profession in the coming years?	How do you prepare?
Closing	Is there anything you would like to add?	

Thank you for your time. As mentioned, the data will be kept confidential and will be exclusively used for my master thesis. In case of any follow-up questions, I will provide you with my contact details.

Appendix B2: Interview Guide Domain Experts

Thank you for participating in my study, I really appreciate it. I also would like to underline that there is no right or wrong answer here, I'm just interesting in your opinion on this.

Themes	Main questions	Probing questions
Introduction & Identity	Can you shortly explain what you are doing in your function as (*profession*)?	If not mentioned AI: In what way do you work on / with AI/ML?
	Why did you decide to become (*profession)*?	
	In your eyes, what are the qualities of a good (*profession*)?	Why?
	Have there been cases where you had to compromise on these qualities?	Do you therefore look differently at your work? Or one of your colleagues?
IPC	What other professionals do you collaborate with for the use / improvement of these tools?	How do they influence how you look at your work?
	How do you experience this collaboration?	Why?
	Have you experienced any challenge/ difficulty in such collaborations?	Can you provide an example? How do you respond? What was the outcome?
AI	How do you see AI-generated insights compared to human insights?	In case you disagree with generated insights, how do you respond?
	Has your attitude towards AI changed over time?	Why?
	What do you see are the limitations of AI?	Why?
	How do you see the advancement of AI influence your profession in the coming years?	How do you prepare?
Closing	Is there anything you would like to add?	

Thank you for your time. As mentioned, the data will be kept confidential and will be exclusively used for my master thesis. In case of any follow-up questions, I will provide you with my contact details.

Appendix C: Exemplary quotes of first-order codes

No, for my role I find it particularly nice (…). I have really noticed, especially now that I've started working as a freelancer and that you kind of think of, okay, companies must already be far, but that is sometimes not the case. (…) Yeah, I only see that as promising. (Dev 4) *I think that yes, the progression is going to mean that there is less to do. I think that is not a bad thing, because yes, less to do means you also have more time to do things, which AI cannot do. With HR, I've noticed most, in the second at least that they try to be as much as possible for people. So it's not just human resources but also to help people with answering, with new contracts and so on, so to help as much as possible, to make people as comfortable as possible in a place. If you have everything more automated, then you also have more time to come to agreements with people. That's a good thing too, I think. (Exp 7)* *Oh super then I get, I get more time from it, so I can spend more time on the human aspect of the profession (Exp 2).*	**1a.** Job more important with more time for human aspect
And there I slowly started working more and more on, well, the HR data, because my previous employer had still set up a lot of it, so I was given a lot of room to pioneer in that area because we weren't really doing much on that yet. So that gradually grew after I spent half my time working on it, because it was still a bit broader and also had to do with the FE budget, for example, so that was and I became a bit of a pioneer of that team of business partners in which someone who knows everything about data. (Dev 5) *So then I put on my bold shoes and said to the director HR like: Yo, we now know what HR costs, shouldn't we start working on what HR yields? He thought that was a good idea, so allowed me to write my own position, I suited that profile very well, so then I became it too. Then suddenly I was an HR analyst. And then I did that on my own for 2.5 years, But it was already very soon clear that it does not work all on your own, that there was way too much demand. Then I was then allowed to start a team with a direct colleague and two people from outside. So there were four of us and over time that grew again, now to 6 and I will be joined by two working students from 10 May who will also come and work with me two days a week. (Dev 6)* *I myself am actively participating in the data community of practice we have set up a kind of data community internally, with all the analysts, also optimisation commercial specialists, also just our advance analysts (…). I'm hanging out with those people more and more and I'm also sharing knowledge about my own work with them. (Dev 2)*	**1b.** Intrinsically interested pioneer for data & AI
So yeah, a lot of people will be impacted. But if you talk about me, I see it's just gonna grow. (Dev 3) *There are big differences in people who can handle that data, so we have. We make a division these days. The first dvision is people who can handle and people who can't. And we see with the People who can't a division into people who want it and people who don't want it. (Dev 6)* *Often there is a certain, yeah, I think they call it very old fashiontly 'gut feeling from experience' behind it. But decisions are just much more effective and therefore more efficient when you use those data products (Dev 8)*	**1c.** Distinction from those who are less data-savvy & rely on gut feeling

Look, and I wouldn't even think about my paper anymore, because I never use paper, but there are also departments that still work on paper. So with them, that first step of digitization is quite literally. I don't do it on paper anymore, but I do it digitally. (Exp 3)	
Then you forget that there are also a lot of human factors that such a system just can't pick up. Such a system just doesn't have intuition because it's just all numbers. So I think that's mainly where the difference lies. (Exp 3) *Well, in any way, people's behavior is very difficult to capture in data at all. (…) I mean, I can measure a FTE but if an intervention that you do actually causes a change in behavior in the organization, those are things that are very, very difficult to measure, because it often remains an opinion of someone else. (…) Someone has to be in between and they have to make something beautiful out of it. (Dev 5)* *This is what I mean a bit with the feeling we had back in the day, which still now remains necessary to interpret things and you will never be able to come away from that. (Dev 2)* *Like if you ask me, I would still keep it as a collaboration. So, like a circle going around. This is a data generated inside it goes to a human insight who can validate that this is correct and then you come back to make more data generated inside. Yes, it's going to be much more faster when data is generated. But there has to be a validation step from humans. (Dev 3)*	**2a.** Impossibility of working completely data-based due to AI's limitations
But I do think that that is important to see it as a tool so you always have to stay in control of what is, what is actually happening, because at the end of the day you are working with people, especially in HR. So to put AI all the way in and make people go there, well, we have that, go talk to that. Yes, that. I don't think that's the solution. So we as professionals can use AI to do certain things, huh, like now collecting documents when you hire an employee but then we have to have control or at least we are responsible for the, for the employees. (Exp 4) *We are really looking at how do we make sure that we make more business impact, that we offer our employees the right services and then at the bottom line we ensure that customer satisfaction and also our revenue goes up. That we are a lot, I think. That's what we have changed the most in my perspective on how data can create value. It can really create business value. (Dev 2)* *The customer has a question. (…) The customers don't care how we solve that, they are not even capable of challenging that either. They don't understand it and that is also normal. I mean, it is a whole special field. And you also don't, when you go buy an IT system, you don't go and ask your customer all kinds of technical questions. No you have a team to do that. Well, that also applies to analytics and you do share the results and then of course we are not going to show regression tables, decision trees or whatever else. We just give a normal answer to the question we were asked. (…) And whether you apply statistics or, your client never knows what exactly is going on in those models. They don't understand linear regression either, you know, so they don't know either, so there too you just tell them this is the effect. And you do the same with machine learning. Only machine learning allows you to package that more into products. (Dev 8)*	**2b.** AI as a tool to package data into products that the business needs
I'm very honest, I always have a lot to do, so if we don't work on that for a while work on it, then I also forget about it pretty quickly. It's just not really a priority	**2c**. *Deprioritizing of*

at the moment and then it comes around again and if not, then not, I think it's all fine, so I, I just kind of go with it and if not, then not, yeah (Exp 5) *The biggest thing they have done is mainly (program) last year. And of that, at some point we did say of okay, yes, you guys are already making it every quarter, but we're not going to highlight every quarter. Because, you know, we keep busy. (…) So also from my role as an HR Business Partner, how do we make sure that we do not over flood the business with information, but we send them only what they need? So, what they really want to see?* (Exp 3) *Funny thing is that this is being rolled out very slowly across the commercial departments because they don't have the mental space to absorb this, it is seen as yet another analysis to discuss and that is seen as extra work. (Dev 2)*	*AI projects*
Yes, we, we don't let AI select the definite candidates. So. There are search algorithms and they look, do you know what you actually get you? The search algorithm that is yes does its job then the match is automatically assessed but then there goes a human filter over it. (Exp 2) *So that's why we also said of you know, we start with automation in a place where there's not that much human in it anyway, right, the bot later just sends an email with Welcome Blababla these documents we're still missing from you, so I don't think you can do very much wrong with that.* (Exp 4) *The idea from the beginning anyway was not to display only AI candidates. I don't know if that came from the MT or Dev team. But so at least everyone can still be seen by the recruiter.* (Exp 7)	**2d.** Limit and control AI's applications
Maybe it all actually goes less fast as we had expected (Dev 2) *That is a huge hype terminology. True AI, in the sense of yeah, what do you call it? Mechanism that autonomously self-learn and make decisions, those don't exist almost yet in my opinion. It's just, I also see machine learning then as what is meant by AI now. (Dev 8)* *I've been seeing AI or intelligent tooling in the field of recruitment for about 5 years now and to date, not one has really broken through or a party that really everyone is looking at. They are all trying it for now so yes, I'm very curious to see if that will change in the next few years, but yes, a few years ago recruiters might have feared that that might make them redundant. But yes, the opposite has actually been proven over the past few years. I think that it's still more good recruiting jobs coming in every year than disappearing. (Exp 1)*	**2f.** AI as a hype that is growing surprisingly slowly
You always have to weigh up between things, you never really have enough time to build things. (…) So, compromising, it is what I say, you are actually constantly compromising. You can never foresee everything in advance what the plan really is. Often it is a building-up process that you can do best in collaboration. (Dev 1) *Because that is also a bit of a duality, you want people to share very openly, what they think the possibilities are without thinking in limitations. So there are now yes actually just more of an open conversation going on, without making promises and without telling people of yes, but this is not realistic sometimes going back down, actually, but just fully letting people express what they need now. (Dev 2)*	**3a.** Accepting that AI design requires constant compromising and flexibility

Yeah just accepting that it's a it's a slow process. (Dev 7)	
I think that as a non-data professional that if I get (…) something new, I often go and ask, okay, so how does this work? (…) I am quite curious, so what I'm doing is, I'm just going to enormously immerse myself in it to see if I understand. (…) You have to open up to it. (Exp 3) *And while we were working on that feature, I must say that I became more and more interested in AI and also read articles or something. Maybe I should take another look at the feature after this interview. (Exp 7)* *Yes, That did change my opinion. I can do more with it now than I thought I could do with it before. (Exp 2)*	**3b.** *More enthusiastic about AI through immersing oneself into the technology*
Yes, preparing, more by already working with it, like you are moving with the times. (Dev 1) *To keep up to date with developments. There, of course, things are going very fast, especially now with ChatGPT and everything that's coming up. You do need to be constantly up-to-date on that. I think that. Well, I do just really try to keep up with the right people who are early on in the game via a lot of news, but also social media, to find the right information quickly from there or visit certain meetups or events. (Dev 4)* *Yes so one thing is that someone in my team I really do send on a training course to get back up to date. What is the data right now? What can you expect from that and how is it all managed, so I'm me. My team has to very much bring outside in to stay current. That is also a challenge, but we are responsible, we ourselves are made responsible to stay rich in terms of knowledge in that area. (Dev 6)*	**3c.** Staying up to data via events, social media and the use of AI
I wouldn't call the difficulties. They are challenges, challenges that can be solved. (…) See it's not stagnant. It's not one to one match problem to solution. There are various ways of doing it, it's just about identifying or looking through what works and what does not, and if what if something does not, then why it does not? (Exp 6) *But that is not a big problem either. Then we videocall or we also have an internal chat. They are really easy to reach and fast.* (Exp 2) *Yes, I think just being very open to information. It's a very big company. More than 900 employees and the biggest challenge here is getting the right people for the right information, because there are a lot of people walking around here and then you need a very specific piece of information. And where do you knock on the door? So I think in that case just be open, not afraid to just approach people and then hear, like, I'm not the right person at all for this and then just ask okay, but who is the right person for it? (Dev 7)*	**4a.** Flexible & open attitude
The research tool is quite complex. It's, there's not an easy learning curve for it. So, teaching new surgeons to use it is kind of a bit challenging. (…) now what we have, what I'm actually doing, not completely done, is transcribing them. So say for example they need param perfusion parameters, I'm already giving them a script. You don't have to go to file open anything, you just run the script and everything will be done for you. That is one way and the other way we also doing is writing a full documentation (…). (Dev 3) *So what we did then, is that we said: look, we'll just make the thing self-learning so we'll just cram questions from the customers into it and then I'll give, say, the right answer. (…) And then the thing will just learn by itself. So that's how we, we sort of*	**4a.** <u>Explaining AI tools & making them user-friendly</u>

solved it. (Dev 5) *Yes, We set up a whole campaign 3 years ago to get people into fact-based working. Made different target groups in that with a piece of awareness and a piece of skills. (Dev 6)*	
I think it's very good to do that piece of placing yourself in the other. So for them it's often the unknown and you can go against it and throw the facts at them. But the piece of placing yourself in the one, say the who is experiencing that resistance that, yes, that's often a strategy that does help a lot. (Dev 8) *Well, not really actually. It's more that it's just part of it. I don't think it's very realistic that everyone still makes that transition. Look imagine, very simple example if someone is 5 years before retirement.* (…) *Well, you just really need to think about it carefully. Every time you have to transfer data to another person. What kind of role does that person have, what kind of function? What are the goals to achieve from experience? So then you can already try to imagine how your insights are going to land, so to speak. (Dev 4)* *Yes, they (*the domain experts*) can also sometimes have to deal with managers who put a lot of pressure on them and that things have to be quick or things have to be much better. (Dev 5)*	**4b.** Empathy for less data-savvy (HR) colleagues
Also just showing interest. Then you will see that people will also come a lot faster and easier to you to help you. (Exp 1) *The forming of relationships, so really the creation of a network. That really helps. (Exp 8)* *Approachability is also important. You actually just want people to come to you by themselves and say: Hey, well, I had this, I wanted to discuss it with you. (Exp 4)*	**4c.** *Interested, approachable & networking*
That's having a bit of experience, so then absorbing and giving back, just giving back what can and cannot be done. And then especially not directly going running and doing it yourself, but instead standing a bit strong in your shoes. And yes, that is of course In the beginning of your career much more difficult. (Dev 5) *There's a certain perseverance that is necessary. You see, there is a kind of disconnect between what you think is possible and what is actually possible. So they're going to be asking you a lot of questions. (Dev 2)* *But because of that, of course, we also have, we can also steer a bit, so we can be quite sharp. And of yes, you should have just known this this that. I do want to help you, but this is really something that you just have to master yourself and accept that. (Dev 6)* *They also indicate us very clearly, well, this needs to be investigated better. Or, you know, this process is not working properly, so nice that I have to develop this, but if things are not properly recorded anywhere, yeah, then there it stops. (Exp 8)*	**5a.** Standing strong in one's shoes
So we said, yes, what are we actually doing here? This is because we take everyone with us all the time including the people who actually sit with their arms crossed. I think that's stupid, just to put it frankly. That is not going to work. (…) But we have now drawn a kind of line in that regards, so we said, well, we are now at	**5b.** Drawing the line

the limit of taking everyone along, now we just have to say, if you don't want to, that is fine. (Dev 6) *Well, positive, otherwise we won't start with it. No, look, it's always a bit that sounds very bland and very easy and tough. But in essence, it is how it works. (Dev 8)* *We just have certain restrictions on what the data should look like and then if they don't send that sufficiently, we message back from here we can't do anything with it. (Dev 1)*	
Yes, I must say they are really structured people say. (…) when they wanted information from us, they would usually send us these templates where we could enter things. We then always did or tried to be as specific as possible too. Because sometimes you think you've been clear where something should go, but then it's not clear (Exp 7) *How I deal with that is, yes, actually I communicate even more, so sometimes you also have the feeling that you are switching back and forth with people all day long. So the people who have to develop the product, but also sometimes management, so you're yes right out of the reaction even more communicating and tuning between them so keeping those short lines even more is a reaction of mine (Exp 8)* *Yes, certainly, you then really have to communicate even more (Exp 2)*	**5c.** *Communicating even more & direct*
You do have to activate people within the technical engineering sector, so you are really support there, you really see the added value of you as a business partner there to be the yes, the oil in the machine, so to speak. All cracking smart people. You do have to really activate them to get the good result. And yes, that's fun and and sometimes challenging. *(Exp 4)* *But sometimes it is tedious. But that also has to do with the fact that they are not a specialist in the labour market. So you have to be clear about how you want something. And what is convenient for you. So that well, I know, I want it tedious, sounds like it's negative, but it's not just you in that, then you're also a consultant, actually with the client but that works with colleagues just as well. So you have to really take that into that as well. (Exp 2)*	**5d.** *Activating and guiding the 'technical' people*
So the ethical dilemma is quite less and we are, we have a strict anonymization process or whatever they call it. Yeah. So yeah, so the doctors already, doctors are already informed about that when the project starts or when the collaboration starts, so that those dilemmas have not reached me. It's in the managerial level and they kind of removed them beforehand. (Dev 3) *Then you have to communicate to the client like, hey, you have to do this differently and that is often unpleasant. (…) I don't find it so difficult, I actually like it that way that the business is there for these kind of things.*' (Dev 1) *More along the lines of yeah, add the feature. I don't have to work with it anyway, the customer decides in the end, you know.*' (Exp 7).	**5e.** Limited contact to AI end-users