The German trade union's discourse on AI: the last defenders of the workforce?

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Abstract

The influential position of German unions reaches far back to the beginnings of the democratization of labor. With the emerging AI revolution, a young discourse begins to unfold ever since the publication of the German national AI strategy. This paper researches the dynamics of the union discourse on AI by deconstructing the narratives and the most dominant frames of union communication. A content analysis approach detects both hopes and fears regarding AI implementation in the workplace, revealing an ambivalent discursive behavior. German unions identify corporate interests that drive the public discourse, pointing out the risk of the potential restriction of workers' rights and a further power shift from technologically pressured workers to profit-oriented businesses. In addition to the workforce's fate, German unions face yet another technological development that contests their influential position. By remaining diplomatic in their communication, German unions seek to leave room for cooperation with political decision makers. Thus, the implementation of AI as a technological challenge is overshadowed by a power struggle that continues the institutional challenges of German unions in the age of digitization.

List of Abbreviations:

IG Metall	Industriegewerkschaft Metall
Ver.di	Vereinte Dienstleistungsgewerkschaft
DGB	Deutscher Gewerkschaftsbund

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1. Introduction

The discourse about AI and its implementation in our everyday lives has become more important over the past few years. With AI inventions finding their way into cars, workplaces, and homes, leading Western industrial powerhouses have introduced national AI strategies, mapping out future lives with AI developments. These new technological developments result in different questions that arise in societies. Just like any major technological invention in the past, AI raises different opinions about chances and pitfalls, hopes and fears of citizens in all parts of society. In this context, the discourse about AI plays a major role when it comes to the dominant frames and the public image of AI and all its implications on our lives.

1.1 From Monopoly to Plurality - why unions can shape the public discourse on AI

National governments saw the potential of AI inventions and they were the first to set the tone in the discourse by releasing national AI strategies.
These strategy papers are the first indicators of political strategies in introducing AI developments in our societies. The message of these strategy papers is clear: the upcoming technological developments will have a major impact, some speaking of a revolution by pointing out that nothing would ever be the same again with AI applications in our lives (Bareis & Katzenbach, 2022). This drastic language is often linked with the announcement of quick actions that shall be taken by governments.

While the German AI strategy also emphasizes the inevitability of AI and the urge to act quickly to keep up with the leading industrial nations of the world, it points out the “human-centered” approach of its AI strategy (Köstler & Ossewaarde, 2022). By underlining its will of putting citizens first, the German federal government seeks to distinguish itself from AI powerhouses like China and the US, who are seen as competitors in the global development race. The German AI strategy is filled with references to core values of the democratic society such as inclusion, freedom of action and autonomy (Bareis & Katzenbach, 2022). By responsibly implementing AI, the German federal government wants to enable German citizens to be capable of self-determination by including AI developments in their lives (Bareis & Katzenbach, 2022). Research on AI discourses identified this kind of technological celebration to be present in all domestic discourses (Köstler & Ossewaaede, 2022). Governments tend

to point out the positive effects of AI in their papers, referring to different themes in their respective national context such as entrepreneurial possibilities (USA), social security and order (China) or a glorious past (UK) (Bareis & Katzenbach, 2022).

The public sphere is dominated by these glorious notions put out by governments. Further research indicates that media outlets as key actors in public debates mostly support the government framing, while still pointing out certain shortcomings in the strategy papers (Köstler & Ossewaarde, 2022). Up until this point, this broad consensus is possible due to the existing vacuum in the public discourse: the discursive standpoints of important public organizations representing those who are heavily affected are yet to become visible in the public realm. This paper seeks to detect whether the German Unions fill this vacuum as long-term representatives of the workforce and by researching the union discourse, their contribution to the discourse can be analyzed.
In both recent and older history, these unions have been responsible for representing workers' rights, decisively shaping the establishment of organized institutional representation for the workforce of the Western capitalist societies (Nissim & Simon, 2021). Trade unions and their position within the political landscape reach far back to the very beginnings of the democratization of the economy and society (Gumbrell-McCormick, 2018). It is argued whether unionism as such has experienced a fall-off in the post-industrialist era with the emerging gig economy and fragmentalization of work (Martinez Lucio et al., 2019). Despite the decrease in numbers, certain national contexts indicate a different development of unionism. When taking a look at German unionism since the beginning of the 2000s, the decreasing trend in numbers and political influence stopped since the great recession of 2008 (Dribbusch et al., 2017). Germany hosts the largest numerical unions in the world, steadily gaining more members after the fall-off from the 1990s until the Great Recession (Dribbusch et al., 2017).

Playing a pivotal role in defending workers' rights during the financial crisis and becoming more popular in the public perception of citizens, German unions must be taken into consideration as essential actors regarding labor politics (Dribbusch et al., 2017). The institutionalized nature of German unions makes the need for an analysis of their discursive behavior evident, as no decision-making process on the worker’s situation takes place without unionist participation. Thus, the future of work conditions regarding the implementation of AI applications in the workplace is - in addition to the government and the media - tied to the discursive behavior of unions. The following section maps out the research questions of this paper, indicating how the unionist discourse on AI is checked for and examined.

1.2 The research questions

Taking the importance of the unionist discursive behavior for the broader discourse into account, it is now necessary to systematically check for features that characterize a discourse. These features are categorized through different sub-questions, with each answer contributing to the formulation of the answer to the main research question:

1. In what way do German unions discuss the AI revolution in their discourse?

Discourses are dominated by narratives that authors or organizations use to convey a message, expressing their perception of 'what the world looks like' (Kaufman, Elliot & Shmueli, 2003, p.1). These narratives are constructed through a selection of frames that are used as 'cognitive shortcuts' that people use to help make sense of complex information (Kaufman, Elliot & Shmueli, 2003, p.1). Thus, the recurring frames are key in the construction of narratives that drive discourses and by dedicating one of the sub-questions specifically to the most dominant frames, a first introduction can lay the foundation for further analysis:

2. What are the most dominant frames regarding AI in the union discourse?

The analysis of the most dominant frames has important implications for further analysis: the potential detection of patterns can help to deconstruct the unionist narratives that recur throughout their communication. It is questionable whether there is one narrative that all unions convey collectively, or whether there are various narratives coming from different unions, resulting in a more diverse and heterogeneous discourse. This is important for the main research questions, as a unified unionist voice would affect the broader public discourse differently compared to differentiating or even contradicting discourse contributions. Therefore, the second subquestion checks for an existing shared unionist narrative:

3. Is there a shared narrative between different German unions in union discourse on the AI revolution?

After having analyzed the dynamics within the unionist discourse, it can be compared to the findings from government and media communication. This comparison can be regarded as the final step in filling the research gap, as the answer indicates whether the unionist discourse joins in on the discursive

hegemony, or a different communicative behavior contributes to a broader discourse. By using the scientific findings as a reference point for the theoretical conceptualization and the examination in the analysis, the paper seeks to be complementary to the existing research on AI discourses in Germany:

4. To what extent does the framing of the unions differ from government communication?

1.3 Research approach

The research questions are answered by executing a content analysis of a selection of 31 text documents all related to union communication regarding the implementation of AI in the world of work. Including a variety of documents such as official policy papers, public statements and media interviews, this paper seeks to cover the variety of ways public organizations choose to communicate. Before the choice of the content analysis approach is further elaborated on in a specific methodological section, a theoretical introduction to union discourses on technology is given. Based on this theoretical foundation, expectations about the union discourse on AI are formulated, as discursive behaviors from discourses on technology in the past are taken into account. Finally, a multi-step analysis is performed, examining different aspects of the union discourse by following the given methodological framework. By the end of the analysis section, the answers to the sub-questions are formulated, finally amounting to the conclusion section where the main research question is answered and findings are put into a more general context.

2. Theory

2.1. Introduction

This section serves as a theoretical introduction to unionist technology discourses on AI. Ever since the first implementation processes of technology in the workplace, a distinct research field has established itself, providing a theoretical foundation for the analysis. It is essential for the analysis of this paper to detect what affects the unionist discourse: Has it always been the same throughout time? Which conditions cause a negative or positive discursive dynamic? The identification of these conditions can not only help to theoretically categorize certain perceptions of technology, but it will also indicate what can be theoretically expected from the current unionist discourse on AI. The most dominant frames from earlier discourses are the main inspiration for the operationalization of this paper, considering the institutionalized position and long tradition of unions. In other words, the theory chapter can be seen as the bridge connecting the history of union discourse on technology with the current discourse on AI in the workplace. By presenting theoretical concepts that serve to characterize different perceptions of technology, the discursive behavior can be categorized.

2.2. Labour Unions and their perception of Technology

In the 1970s, unions in industrialized societies did not take on a fundamental opposition, as they did not fully reject the introduction of new technologies (Lucio et al., 2021). Within that period, the unions saw themselves as mediating actors to prevent an uncontrolled implementation by employees, consulting workers on defending their demands (Lucio et al., 2021).

During the post-1990s era of high-performance work systems and capital-intensive production, automotive unions in Canada, Sweden and Germany acted similarly (Haapalana, Marx & Parolin, 2022). By pursuing the overarching motto to ‘modernize and adapt’, the unions avoided confrontational positions, fearing long-term consequences for the represented workers in case of a loss of competitiveness (Haapalana, Marx & Parolin, 2022).

By adhering to the narrative put up by the employees, these examples reveal the unionist perception of technological innovation in the workplace. Scientific scholars from the field of science and technology studies identified this view of technology to be technologically deterministic.
This way of thinking regards technology as the driving force that steers societal development autonomously (Van de Poel, 2020). Technological determinism considers societal actors as reactive to technological development rather than actively shaping their implementation into everyday life. The unionist behavior in the late 20th century joined in on this deterministic narrative of an approaching fall-off without immediate reaction to technological development. By aligning with capitalist interests and remaining defensive in aiming to 'modernize and adapt' in light of the ongoing technological change in workplaces, the unions evaded any further actions to influence the actual implementation of technology in the workplace.
By the beginning of the 21st century and the rise of the Internet, an ongoing fragmentation of labor took place (Lucio et al., 2021). The upcoming gig work phenomenon marked a substantial change in institutionalized labor relations, as new forms of work came up through precarious and insecure jobs that were organized on gig platforms on the internet. This development challenged settled unionist traditions with the risk of diminishing and fragmenting workers' rights and led to the development of grassroots unions that enabled more direct and independent forms of representation without the institutionalized structures of unions (Lucio et al., 2021).

Considering the new situation in work relations due to the rising influence of technological advancement, the unionist discursive attitude required new ways to represent the changing world of labor. This change of behavior can be seen during the discourse about the concept of 'Industrie 4.0' that first came up in Germany in 2011, which was an initiating discourse in the beginning stages of digitization (Kaff, 2019). Within this discourse, corporate representatives also argued to accelerate the institutionalized process of co-determination as German companies were at risk to fall-off in the international competition (Kalff, 2019).

The co-determination right of employers can be regarded as the holy grail of German union politics (Dribbusch et al., 2017) and the capital-driven narrative caused a heated debate about the extent of influence of the 'Industrie 4.0' concept on the established legal co-determination process in Germany.
Co-determination is based on experiences made in labor politics before the upcoming of the Federal Republic of Germany (Michel, 2007). It is meant to rebalance unequal powers between labor and capital, with the aim to democratize the economy through an organized discourse between employers and employees instead of leaving the employers to the power dominance of capital (Michel, 2007).
The essence of the co-determination process is the prevention of massive cooperation between big capital and the executive power, which was the case during the reign of the Nazi regime in Germany (Michel, 2007).

Taking this into account, the corporatist narrative caused an uproar in the unionist discourse. The overarching DGB (Deutscher Gewerkschaftsbund) as a representative organization for all unions and the biggest union IG Metall (Industriegewerkschaft Metall) considered the Industrie 4.0 concept to introduce 'new problem arenas' that require 'strengthened and internationalized' co-determination (Kalff, 2019, p.47). With companies aiming to shift the co-determination to a local workplace level and therefore questioning the essence of unionism by arguing to weaken collective bargaining, unions were alerted. The unionist-oriented Hans Böckler Foundation feared an erosion of social relations in the workplace due to digitalization, claiming that democratic participation cannot survive without collective and institutionalized participation (Kalff, 2019).

When comparing the different discourses on technological advancement, a development of unionist behavior can be seen. While the unions in the 1990s adhered to the deterministic corporate narrative, aiming to 'modernize and adapt' to measures taken by the corporations, the situation in the 2010s is different. The discursive behavior changed from being passive to a more active role within the discourse, obtaining a different perception of the implementation of technology at the workplace. Science and technology studies with Landon Winner as a leading scholar identified a constructivist perspective on technology in the 1980s which emphasizes the human nature of technology as a product of values and interests that constantly shape technology (Van de Poel, 2020). According to Winner's view, technology is not only shaped by humans but also perceived differently depending on their social context (Van de Poel, 2020). This line of thinking aligns with the more self-confident and confronting opposition of unions to the corporate narrative in the Industrie 4.0 concept discourse. In a theoretical sense, the discourse on Industrie 4.0 symbolizes a different discursive behavior of unions towards technological development, representing a more active attitude in comparison to the deterministic view in earlier discourses.

2.3. The dominant frames in Union discourse

Based on the attitudes and statements in the given examples, an idea of an unionist narrative comes up with technological advancement. To promote their interests and create a convincing narrative, an organization portrays imaginaries that show how they perceive a certain technology or concept and how they think this will affect the future (Meyer, 2019). Taking this into account, it is necessary to check for recurring frames that dominate the unionist discourse on technologies before taking a closer look at the specific discourse on AI.

The unionist attitude to technological advancement is a complex phenomenon as it differs depending on national and regional contexts with different economic situations. While in some regions there is a higher focus on manufacturing, others are mostly dominated by service sector employment with little industrial activity (Marenco & Seidl, 2021).

Research from different industrialized countries such as Belgium, Denmark and Canada with varying institutional landscapes and union densities indicate different imaginaries put up by unions despite representing the same industrial branch (Garneau, Pérez-Lauzon & Lévesque, 2023). Regional situations with decreased industrial production and low employment levels in general such as Wallonia in Belgium lead to a more skeptical attitude towards advancing technology, while economically successful situations like in Denmark create a more welcoming attitude of unions towards new technologies (Garneau, Pérez-Lauzon & Lévesque, 2023). Quotes from the discourses on the concept of Industry 4.0 which brings advanced digitized processes show that while there are different attitudes, the most important frames remain the same for unions regardless of a negative or positive perception.

The Belgian unionist discourse fears losing influence regarding proceeding automation in the manufacturing sector: "(...)The influence we have, they would like to strip us of that." (Garneau, Pérez-Lauzon & Lévesque, 2023, p.147). This focus on safeguarding the unionist influence can also be seen in the Danish discourse: "From our point of view, the Danish Trade Union Confederation, new technology has always been a productivity driver in society and that is a good thing, but the important part is, do you have strong labor unions?" (Garneau, Pérez-Lauzon & Lévesque, 2023, p. 148). The examples show that the preservation of influence is key to both unionist discourses, even though there are different institutional and economic situations.

Another important aspect of all unions is the skill training of employers. Danish and Canadian unions aim to use the productivity gains achieved by proceeding digitalization to train workers and give them a fair share of salary increase and the Belgian unions expect the companies to invest in workers development (Garneau, Pérez-Lauzon & Lévesque, 2023).

Taking these findings from other national discourses into account, similarities to the dominant German frames can be seen. Especially regarding the Industry 4.0 discourse, the focus on guaranteeing the right of collective bargaining as the essential part of the co-determination process is key to German unions (Kalff, 2019).

When unions speak about the 'participation' of workers as a prominent frame regarding Industry 4.0., they implicitly also mean the preservation of their institutional influence. Unions emphasize 'training' and 'development', as they call out companies to share productivity gains with workers to educate them for new job opportunities. These 'opportunities' appear in many statements as well, symbolizing the unionist optimism towards technological development that can mostly be seen in economically prospering regions and sectors with well-established union organizations such as Germany and Denmark.

2.4. The AI revolution - a new discourse emerging?

Based on the findings that can be drawn from past discourses, the discourse on the AI revolution in Germany must be regarded as a new chapter of technological innovation which is challenging the institutionalized processes of labor politics. After having analyzed unionist attitudes towards technological development and its impact on the world of work, it is now possible to take a closer look at the now-emerging union discourse on AI.

The discursive hegemony that Bareis & Katzenbach and Köstler & Oseewaarde detected in their research did not emerge from an exclusion or the mere inactivity of unions as an important societal player ever since the publication of Germany's national AI strategy in 2018. Trade union experts were part of the German Bundestag's Commission "Artificial Intelligence - Social Responsibility and Economic, Social and Ecological Potentials" which was established in 2018 (Krywdzinski, Gerst & Butollo, 2023). Within this parliamentary commission, these trade union representatives joined members of parliament and employee representatives to formulate a report on the Regulation of AI (Krywdzinski, Gerst & Butollo, 2023). The inclusion of trade union expertise is yet another sign of the inclusive corporatist tradition in Germany, proving its institutional significance that could be seen after the Great Recession (Dribbusch et al., 2017).

In the commission's report, a consensus on the general economic and social potential that can be promoted and shaped can be seen within the commission (Krywdzinski, Gerst & Butollo, 2023). This aligns with the constructivist perception of AI that was developed by Winner, as unions are optimistic that they can handle the impact of AI on the world of labor by referring to the successful management of former challenges such as the introduction of 'Industrie 4.0' (Krywdzinski, Gerst & Butollo, 2023). While the commission aims to safeguard certain core features of co-determination such as the legally obligatory consultation of experts and work council consent when introducing AI applications, the paper mostly remains vague (Krywdzinski, Gerst & Butollo, 2023).

This vagueness is characterized by the term 'human-centered AI' which is also used prominently by the national AI strategy formulated by the government. It must be stated that despite minimum agreements in the co-determination matter, a general right of co-determination in the process of company digitalization as a demand of trade unions was not included in the report (Krywdzinski, Gerst & Butollo, 2023).

The participation of trade union representatives is mostly symbolic, as the tension between the government's objective of increased competitiveness and the claim of responsible and 'ethical' AI solutions could not be resolved (Krywdzinski, Gerst & Butollo, 2023).

Throughout time, unions in industrialized countries showed different attitudes toward technological innovation. Research has identified various attitudes in the discourses that occur up to this day in times of technological development: there are mostly corporate-driven capitalistic narratives that promote the urge of technological adoption, reacting to fierce competition to prevent a fall-off (Van de Poel, 2020). The constructivist perception on the other hand regards technology as a product of human craftsmanship, shaped by societal and ethical contexts (Van de Poel, 2020). Depending on the specific economic situation and degree of institutionalization of labor relations, unions position themselves differently towards technological innovation, either adhering to a corporate deterministic narrative or being rather self-confident and optimistic about handling the innovation.
In the German unionist discourse on AI, the beginning stages of the discourse were marked by the confident behavior of German unions, having made good experience with the recent technological challenge in the form of the concept 'Industrie 4.0' that is regarded as a well-handled process. As unions were able to safeguard the core issue of co-determination, they now aim to preserve their institutional position by cooperating with political actors, e.g. in the form of the AI commission in the German Bundestag.

Considering the theoretical conceptualization made in this section, the unionist discourse is orienting itself towards the dominating discursive narratives that are promoted by governmental and media actors. Due to its close political ties with the SPD and the positive experiences in the past with showing the willingness to cooperate, unions stay cooperative and optimistic as long as their core strongholds are safeguarded. More specifically, unions insist on the legal guarantee of collective bargaining and the co-determination process. As long as this influential position is granted to the unions, they are likely to cooperate and adhere to the governmental discourse. This positioning translates into a co-evolutionary perspective on technology, combining the general assumption that technological development is manageable while being aware of potential negative consequences that come along with it (Van de Poel, 2020).

2.5 conclusion

This theoretical introduction into the unionist discourse on technology and AI specifically can now provide the foundation for the analysis. It can be stated that despite changes in discursive behavior throughout time, there are recurring patterns of argumentation unions use across different societal and economic contexts. The advancing development of technologies is not only considered a challenge to the workers but also to the unionist organizations themselves as the preservation of institutional influence is a priority for unions in each discourse. In Germany, the unionist perception of technology has developed from a rather technologically deterministic position to a more co-evolutionary perspective, as communication became more self-confident with the declared goal to actively influence the implementation of technologies in the workplace.

3. Methods

3.1 Introduction

The following section on the methodological approach of this paper maps out the concrete realization of the research objective. It is an instruction on how the detection and analysis of the union discourse on AI takes place by presenting the research design of the paper, focusing on the advantages of a textual analysis approach in discourse research. Based on this first case description, the motives for the choice of data collection are explained, stating why the selected variety of text documents including official papers, public statements and media interviews are best to generate a valuable data foundation for the analysis. The method of data analysis ultimately elaborates on the frameworks used to categorize the data, providing insight into the individual approach to making sense of the collected data: communication must be understood as a process with multiple stages that shape a discourse.

3.2 case description

The substantive theme of this paper requires a fitting methodological approach that helps in answering the theoretically posed questions practically. Both the main research question and the sub-questions try to identify underlying narratives, even though they pursue different objectives in observing union discourses in their own right or by comparing them in relation to government and media discourses.

Practically speaking, the theoretical objective translates into extensive research on public union communication. The question about the very nature of the discourse arises: what is it that makes a discourse? As the research questions are all focused on the discourse, the definition is key to understanding the operationalization of the questions.

Being public organizations, unions convey their messages constantly in the form of policy papers, statements, or media interviews. The research of a public organization discourse extends the context that must be considered when analyzing an author's opinion: the discourse goes beyond the individual author, focusing on the more general context of a text (Taylor, 2013). For instance, union text documents must be put with each other as frames recur or some statements appear outstanding, being untypical for union communication. It is the sum of all the individual contributions, from a quick public statement to a well-thought-out policy paper, that creates the very discursive dynamic of unions that this paper seeks to detect.

Dealing with a high amount of textual data, the textual analysis approach provides the appropriate methodological foundation, as the contents and meanings of texts can be examined and put into the context of a broader discourse (Lockyer, 2008). Each text is structured differently to portray a certain narrative and while the textual analysis approach does not seek to find the right interpretation, it is rather used to understand the underlying narrative the author aims to convey (Lockyer, 2008).

The importance of narratives as the steering argumentative force in discourses cannot be understood without the introduction of frames as an essential part of a narrative. By simplifying complex topics, frames can only explain a phenomenon by leaving out certain details and not providing the full picture as it would be too difficult to grasp for a broader audience (Kaufman, Elliot & Shmueli, 2003). This ‘selective simplification’ through the construction of frames thus only represents one perception of a phenomenon, serving an overarching goal of setting up a narrative which is ought to convince a specific target group (Kaufman, Elliot & Shmueli, 2003, p.1).

Considering the importance of frames, the deconstruction of a narrative requires a close-up on the dominant frames within a discourse. Executing a content analysis as a subcategory of the textual analysis research tradition, the paper does not only aim to identify explicit statements but also to reveal implicit perspectives based on the theoretical foundation provided in the former sections (Julien, 2008). The content analysis approach facilitates the establishment of categories of frames that help to make sense of the data. Based on the categories, the transition from the raw collected dataset to suitable findings that permit the formulation of answers to the research questions is built (Julien, 2008).

3.3 data collection

The collected data mainly consists of official policy papers coming from the unions, stating positions on the use, impact and regulation of AI in the workplace.

The data collection includes texts from the unions IG Metall, ver.di, several smaller unions and the overarching DGB (Deutscher Gewerkschaftsbund) as a representative organization for all unions in Germany. In addition to that, the union-related foundations Hans-Böckler Stiftung and Otto-Brenner Stiftung provide valuable data sources, as they are funded by unions and perceive science in all union-related topics. In addition to these official documents, 6 extensive articles that either interview union representatives or directly cite unionist statements are also taken into account, as it creates the earlier explained broad foundation that extends the scope of the research. All of the included documents have been published between 2018 and 2023, meaning each document has been released after the publication of the national AI strategy of the German government. This is important to mention as the national AI strategy is a key reference point for the research objective, comparing the union discourse to the government discourse in the analysis.

With this data collection, it is the aim to cover the diverse unionist German landscape as much as possible, especially considering the limited amount of research resources as an individual researcher. Instead of using interviews to gather extensive and detailed data on the research topic, it is the priority to include discourse contributions from more union representatives coming from different organizations, as interviews would have shifted the focus to the organizations the interviewed belong to.

Still, it must be considered that the inclusion of different types of texts must always be taken into account during the process of analysis (Lockyer, 2008). For instance, media coverage differs from a policy paper or a scientifically conducted position paper from a foundation when it comes to language, build-up and audience. During the analysis of the data, the research only considers explicit unionist statements, cautiously excluding any journalistic classifications of statements.

3.4 methods of data analysis

Choosing the content analysis approach, the analysis extends a simple ‘word frequency’ count (Stemler, 2000, p.1). In fact, ‘(…)inferences about the matters of importance(…)’ cannot only be made by only pointing out the numerically most dominant frames (Stemler, 2000, p.1). To operationalize the theoretically mapped-out research on the union discourse, the check for word frequency can only be the very first step in the identification of important frames. The next step of the content analysis is the categorization of data, executed by setting up a coding scheme (Stemler, 2000). This organization of data enables the research to reach higher degrees of abstraction, seeking to generalize the theoretical assumptions of this paper based on the observed data (Benaquisto, 2008). A category unites all words

that have similar connotations, helping to make sense of the data in a way that it fits the research objective (Stemler, 2000).

In the theoretical section, recurring frames from the recent union discourse on ‘Industry 4.0’ as the latest stage of digitalization to be introduced in the world of labor have been identified. These frames differ in their substantive content, representing different negative and positive perceptions of the impact of technology. To create an organized overview, this paper seeks to set up different categories that facilitate a structure for the analysis. Using the qualitative data software Atlas.Ti, the data is centrally collected, coded and analyzed with the help of the memo function, carefully guiding the analysis process in an organized manner.

The orienting framework for the coding scheme is provided by Entman (Entman, 1993). Having introduced the concept of a ‘frame’ and its significance to understand and deconstruct narratives that shape a discourse, it is now necessary to explain the different stages of frame usage in a narrative. This helps to understand communication as a process, with the communicator deciding on the selective use of frames to convey a certain narrative while deliberately leaving out others (Entman, 1993).
Firstly, frames define the way a certain topic is problematized, meaning problems and challenges that can be identified, but also chances that it might bring along: it clarifies why the topic is important to the communicator (Entman, 1993). This coding category is used in the analysis to give a first overview of the union discourse and it is expected to reveal how the established unionist structures and standpoints affect the current discourse on AI.
Based on the theoretical findings, unions identify the following ‘risks’: ‘controllability’, ‘data protection’, ‘job loss’, ‘value of work’, ‘human rights’, and 'restricted workers rights’. Regarding ‘chances’, these frames are significant: ‘shortage of skilled workers’ and ‘improved working conditions’.

The cause diagnosis on the other hand is expected to reveal how the established unionist structures and standpoints affect the current discourse on AI, revealing the identified forces that create the arising ‘risks’ and ‘chances’ (Entman, 1993). This paper uses this concept to code for the following frames: ‘technology pressure’, ‘competitive pressure’, ‘digitization as a myth’, ‘globalization’ and ‘corporate domination’.
Then, there is the stage of ‘moral judgement’, meaning frames that ‘evaluate’ whether a situation is desirable or not (Entman, 1993). The frames of this category can be seen as a subliminal element in all other stages, as it cannot be solely regarded and therefore not exclusively elaborated on in the analysis. Nevertheless, it is still coded for as it has important implications for the research objective as a whole: ‘chance’, ‘risk’, ‘uncertainty’, and ‘boundaries’.

The last stage of the provided framework states the ‘suggested remedies’ that include a variety of propositions on how to manage the problem (Entman, 1993). This category is coded with frames that summarize all of these proposed measurements: ‘development of co-determination’, ‘creation of new legal foundations’, ‘training’ and ‘transparency’.

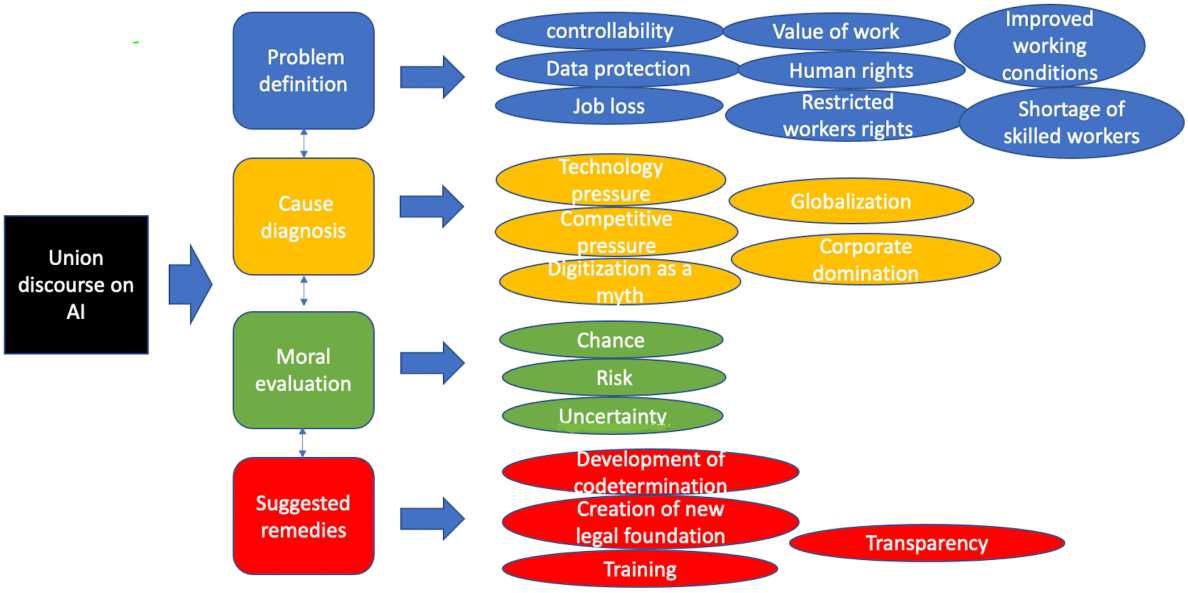

Figure 1: Coding scheme (Henning Deters, 2023)

3.5 conclusion

This extensive methodological outline provides key insights into how answers to the formulated research questions can be given. The different sections cannot be regarded separately, as the interrelations are key to the execution of the analysis: the content analysis is best to analyze a high amount of textual data and check for frames that create argumentative patterns. The textual data includes a variety of text documents, aiming to cover as many different union statements as possible and including different unions instead of focusing on a limited selection. Most importantly, the framework provided by Entman facilitates orientation in the categorization of frames that are coded for in the data, taking into account that the discourse on AI is a multi-stage process that includes the identification of causes, challenges, chances and potential solutions.

4. Analysis

4.1 Introduction

The analysis now provides the key findings regarding the posed research questions. In addition to an overview of the hopes and fears that dominate the discourse, underlying argumentations revealing remarkable implications for the general relationship between the worker that is affected by AI and the capital that initiates the implementation are analyzed. After the first introduction into the discourse and the implementation of AI being yet another development that has the potential to reshape the relationships between worker and employer, the union propositions on how to act are discussed. Leading up to the conclusion, these are analyzed as they are not solely meant to safeguard the worker's position, but also to preserve the influence of the very institutions themselves.

4.2 The ambivalent discourse- from 'win-win situation' to 'red lines'

The fitting way to start the analysis of the union discourse on AI is a citation that already gives an indication of the discursive dynamics:

> *The future has probably never been as uncertain and unpredictable as it is today.* (DGB, 2023, p.2)

Uncertainty is recurring throughout all unionist communication, in official papers, media articles and public statements. It indicates that, despite the dominant technological optimism in the broader public debate, unions are still arranging their exact position. By analyzing 30 documents that convey union communication, it is revealed how unions discuss the impact of AI on the workplace.
The discourse revolves around the general question that has been dominant throughout the recent centuries of technological advancement. It focuses on the value of work, meaning the relationship between Artificial Intelligence and the human worker that sees himself confronted with groundbreaking technology. Unions declare that in their point of view, the hierarchy is settled:

> *AI systems must always be designed and developed in such a way that they remain controllable. Ultimately, it is always the human being who must make the decision.* (ver.di, 2020, p.3)

According to ver.di representatives, the value of work should always be safeguarded during the introduction of AI applications. AI systems should never be higher positioned in the hierarchy within

the workspace, preventing workers from being commanded by fully autonomous inhuman systems. This statement might sound trivial, but union representatives are very aware of the capabilities of deep-learning systems, shifting the focus from objective skills to emotional intelligence and social capabilities:

> *Human contact makes the difference, a warm handshake, a sympathetic tear, an encouraging smile and even a kick in the butt. Such human reactions cannot be replaced by AI. The strength of humans, unmatched by AI, is social and emotional intelligence.* (ver.di, 2019c, p.7)

If the unionist motto focuses on 'assisting, but not commanding' (2019c), the question remains what this assisting is supposed to look like. In the following section, the ambivalent statements regarding AI in the workplace are analyzed, each affecting an aspect of the world of labor and ranging from positive to negative emotions.

When it comes to certain areas such as data privacy, anti-discrimination and the already introduced potential violation of personal rights with the possibility of AI systems commanding workers, unionist communicators underline that it is the human wellbeing that must be the center of the debate, not technology (Benner, 2019).
This indicates that unionists, in this case, the former vice-chairwoman and now chairwoman of IG Metall Christiane Benner, recognize that they must shift the focus back from solely discussing AI technologies and their impact on the worker who is affected by it. By referring to 'adjust' the focus of the debate to the worker, unions express their distance to simplified glorifications of AI that solely mention chances of AI systems while leaving out the worker's perspective:

> *Operational success is constantly in focus and is controlled via targets. Employees are largely autonomous in terms of how they work, when they work, where they work and under what conditions they work. The target pressure is constantly increasing, the set margins are difficult or impossible to achieve. Due to the ever-increasing enormous pressure to perform, the danger of permanent self-overstrain is growing(...).*
> (ver.di, 2019a, p.13)

By emphasizing these risks and dangers of constantly progressing digitalization coming along with the Introduction of Ai applications, unions contribute another standpoint to the discourse, revealing what uncontrolled technological advancement can also mean: delimitation, intensification and constant monitoring of work that results in a technology-driven overload for human workforces.

Yasmine Fahimi, the current chairwoman of the DGB, brings up a specific example that expresses her concern. According to Fahimi, the use of an AI application needs to be critically assessed and preferably forbidden in the case of delivery services, as they stand symbolic for 'a new form of digital piecework and thus exploitation' (DVZ, 2022, p.2).
The argumentative connection between the digitally emerged gig work economy and the introduction of AI applications is to be discussed in further detail in another section of this paper.

Unions have identified data protection as key to preserving workers' rights in light of AI systems, trying to maintain controllability and transparency by creating a 'purpose limitation of data' in the workspace that promotes a full 'sovereignty of data' (ver.di, 2020, p.3). While it would exceed the scope of this paper to assess the unionist capability to achieve the goal, it is most certainly necessary to take a second look at this ver.di proposition. As self-learning and deep-learning AI applications are reliant on data to fulfill their potential, it is questionable whether the goal of restricting data usage is a tension that can be resolved through unionist activities.

To meet these identified challenges, unions repeatedly emphasize two frames that must be considered when analyzing the discourse. 'Controllability' is a central feature, as unions aim to always keep control of developments. For instance, ver.di proposes a 'conceptual deceleration' of AI applications (ver.di, 2018, p.1).

> *Where there are ambiguities regarding responsibilities and liability, these must be defined. They must not be transferred to technology. The human being remains responsible* (ver.di, 2020, p.4)

In other words, unions want to be capable of reviewing every stage of AI system development in the workplace. By creating accountability, they seek to preserve the responsibility of a human being, fearing that at some point in development, implications on workers cannot be traced back to responsible legal persons. These argumentative patterns prove that within unions, there is a certain sentiment of technological pessimism that does not solely believe in narratives of prospering AI-supported work environments. This sentiment of pessimism can serve as an explanation for the dominant frame of 'controllability'. It can be regarded as a communicative approach that disguises the desire of making AI politically manageable, as there is a sentiment of fear that established unionist mechanisms are not equipped to meet the new challenges anymore.

The declared aim of 'conceptual deceleration' is certainly remarkable, as it is the opposite of dominating narratives in the public discourse that is rather pushing towards an ever-faster world of work to remain competitive. Similar argumentations were also brought up in the beginning stages of the 'Industrie 4.0'

concept, as corporate representatives argued that the established co-determination processes were not suitable for the new work environment in light of the advancing digitization.

According to union representatives, the desired controllability can be guaranteed by creating systematic transparency in the process. The DGB argues that often, the necessary preventive co-determination fails due to a lack of information about the planned function of AI applications in the workspace (Wirtschaftswoche, 2022). Referring to the introduced uncertainty in the beginning stages of this section that is dominating the unionist discourse on AI, it can be stated that the extensive use of the frame 'transparency' can be traced back to the desire for planning and legal certainty.

Before taking a closer look at the broader public discourse dynamics and the concrete unionist propositions on where to go from this problem description, the ambivalence of the discourse must be concluded with the second major stream of argumentation: the chances of AI.

4.2.1. Potentials of AI in the Workplace

This section covers the discursive attitude of unions that speaks of its potential and chances, completing the introduction to the ambivalent discourse of unions on AI.
In a DGB paper, the representative first elaborates on a persisting 'conflict of interest' regarding the introduction of AI in the workplace, indicating a complex process to manage the implementation. Shortly after, the representative brings up the 'win-win-situation' of AI, stating that if done correctly, both corporations and workers would be able to benefit (DGB, n.d, p.3). By using formulations such as 'simultaneously' or 'at the same time', the ambivalence is expressed, conveying a narrative of being in control and capable of managing this transformation process while also raising awareness of substantial dangers for workers. This links to the dominant desire for controllability and ever-present uncertainty that marks unionist communication.

One of the most prominent argumentative examples speaking of potentials and chances is the improvement of workers' conditions. According to unions, AI can not only substitute the workforce for unattractive or hard work, but it also enables the existing workforce to concentrate on other aspects of life and work that they did not have the time for before:

> *The fact is, AI can take dull, unhealthy and dangerous work away from us. We can focus more on our strengths, such as experience, creativity and compassion. We can work in a more self-determined way.* (ver.di, 2019c, p.3)

This statement conveys a different tone, much more coherent with government narratives that portray AI as a miracle cure to problems in labor politics today.
In another document, AI is called a tool that can be used as 'means to an end' to improve the quality of work and life in general (ver.di, 2020, p.1).
By portraying AI as a tool, the statement conveys the impression that AI as such can be used as wished, picking the cherries of benefit while simply avoiding all negative and undesired implications. The potentials can also be used for the reduction of work time hours, giving people space for a 'more fulfilled life' including training, care work, community, or simply for 'idleness' (ver.di, 2019c, p.7)
Compared to the communicative attitude presented in the first section, the dominant frames within these argumentations indicate no less than the unionist ambition to use this ongoing AI revolution to shape a new world of work. It appears that this AI revolution aligns with the gradual reduction of work times that unions have fought for since their existence, this time not only fighting for less work but also for a higher quality of life in general. When speaking about self-learning, intelligent systems that might exceed human capabilities, it must be critically questioned whether Artificial Intelligence is to be considered a 'tool' for selective unattractive tasks.

In addition to the improved working conditions, unions also bring up the potential of AI to fight the persisting worker shortage in Germany. While the argumentation of improved working conditions are certainly benefits that all workers would be happy about, this argumentation is different, portraying AI as a necessity that the future world of work is reliant on due to a lack of qualified working personnel. Based on the findings from the theoretical section, this can be seen as another similarity to the dominant government and media narratives where the necessity of fast processes to implement AI applications is emphasized due to economic pressure. Within the following statement, the leading unionist in Germany Yasmine Fahimi, chairwoman of the DGB that oversees almost all unionist activities, formulates the necessity of 'greater digitalization':

> *In order to solve our skilled labour problem, we need the productivity gains that come with greater digitalisation.* (DVZ, 2022, p.2)

Another statement regards AI to be essential in many sectors, stating that without the increased use of digital applications, it 'simply won't work' due to the lack of skilled workers (Wirtschaftswoche, 2022, p.3).
While the ambivalence of the discursive behavior appears to be contradictory, it must rather be the logical result of the situation unions find themselves in. In fact, it results from the ever-present sentiment of uncertainty that is apparent throughout unionist communication. By remaining relatively open to critical positions but also showing openness to techno-optimistic argumentation, unions seek to remain cautious in formulating too offensive positions. On the one hand, they raise awareness for the upcoming

change, problematizing certain negative implications on the future of work to prepare their members for the upcoming debates. On the other hand, potentials are highlighted to oppose pessimistic sentiments that might raise discontent or even fear within society. Thus, it aligns with the theoretical expectation of a consensus-oriented unionist behavior up until this point, while remaining self-confident as independent actors with differing positions compared to government or media discourses.

4.3 Acting and not speculating - the unionist contribution to the discourse

After a first detailed insight into the worries and hopes that are portrayed in the union discourse on AI, there is more clarity on the substantive focus of the discourse: it is not the fear of a large-scale job loss that lies at the center of the discursive attitude, but rather the question what the jobs of the future will look like. As already indicated in the beginning stages of the analysis, the unions have identified the digitally emerged gig economy and its ever-growing size as a new danger for workers in light of the AI revolution. New technological possibilities should not be misused to 'de-regulate work' (ver.di, 2019c, p.6). In this section, it is analyzed whether the AI revolution has implications for the discourse regarding the relationship between big capital and workers. In addition to the detected problems and chances, it is now necessary to check for the deeper argumentative motives that unions recognize as driving factors in the broader societal AI discourse.

In an annual general meeting of the IG Metall, the former vice-chairwoman and now chairwoman Christiane Benner implicitly admits that unions are 'late to the party' when it comes to the public discourse on AI, as media and politics 'discovered' the topic:

> *In 2018, the media and politicians have discovered "artificial intelligence" as a mega-topic. So have we. However, we are less interested in speculation, but have a very practical task.* (Benner, 2019, p.3)

Regarding the discursive behavior of government and media, the unionist standpoint is relatively clear: Instead of falling for drastic predictions by hyping up or dramatizing AI development, it is the unions who really work on substantive solutions.
The DGB's stance on the public discourse must be distinguished. By identifying a broader consent on a 'fundamental and abstract level', the overarching unionist DGB chooses a more diplomatic tone, while simultaneously stating that there is a lack of concrete implications for 'the future of industrial relations and its framework conditions' (DGB, 2020, p.3).

Despite differences in formulations, the substantial criticism of these 'concrete' implications is remarkable, aiming to demystify the glorified notions of AI that can be found in official government communication. According to the DGB, the political initiatives are largely based on 'acceptance and trust', while fundamental 'legal, economic and cultural frameworks' are being neglected:

> *This means that issues relating to changes in value creation, economic structures, labor markets and employment in particular are not addressed* (DGB, 2020, p.3)

4.3.1 Renegotiating the Power balances between capital and Workers?

This criticism extends the lack of concrete measurements regarding the individual worker and the working conditions at the workplace. It is rather a fundamental criticism aiming at the broader economic impact of the AI revolution, expecting a fully new economic situation that requires action from political actors. Through demystification, the unions aim to take the simplicity out of the discourse and in addition to the raised awareness in the represented workforce, it is also the aim to indicate bigger implications for the society and thereby actively shaping the societal discourse on AI.

It must be stated that the fear of increasingly precarious working conditions and the steadily rising power of big corporations is not a new phenomenon that arises with the growing importance of AI. In fact, the recent unionist debates about the gig economy have already paved the way for a new stage in the age of digitization which affects the discursive behavior of unions nowadays. Ver.di state that the 'new platform capitalism' must be considered 'problematic' as 'huge turnovers with very few permanent employees' are generated (ver.di, 2019c, p.6). As the known effects of digital platform economies mix with deep and self-learning AI applications, unions identify a new quality of a challenge that requires action.

It is the declared unionist will to not let the 'profit-making interest of businesses' shape the implementation of AI (ver.di, 2019c, p.7).

An accepted position paper of ver.di demands the 'enforcement of fair payment and equitable distribution': according to the unionists, the platform economy has strengthened tendencies leading to monopolies, increased accumulation of capital and 'cross border tax optimization' (ver.di, 2019b, p.5). In other words, unions fear that the AI implementation can be used as a fig leaf to increase the power of corporations by restricting workers' rights, exploiting the workforce and accumulating more and more capital which leads to an increased power imbalance between workers and businesses. While the

government portrays businesses as the ones in need because of ‘technical constraints’ that requires to pave the way for a quick and easy introduction, unions oppose:

> *There must be no room in the legal and collective bargaining framework for a short-sighted profit logic, for the free play of market forces that are supposedly subject to technical constraints.* (ver.di, 2019a, p.13)

4.3.2. The argument of competitive pressure

By referring to technological constraints and global competitive pressure that urges companies to a quick AI introduction, unions point out their biggest criticism of the technologically deterministic perception of technology. The governmental argumentation that this serves as a key justification of an AI inevitability is neglected by unionist representatives, demanding the deciding political actors to live up to their self-proclaimed expectations by referring to the prominent notion of a ‘human-centered design’. While big actors like the US and China as part of a ‘global competition for supremacy in the technical and economic performance of AI systems’ pave the way for fierce competition, Germany officially formulated their distinct approach (ver.di, 2019b, p.7). While this discourse is still relatively young and underdeveloped, unions identify a competition that prioritizes ‘making business with AI’ instead of focusing on the German approach (ver.di, 2018, p.2).
German unions fear a vicious cycle due to the competitive pressure that transfers from an international level to businesses in Germany: if one business starts to implement new processes that include the restriction of co-determination processes, that might be regarded as ‘best practice’ as this company obtains advantages regarding the introduction of AI supported systems. In this context, the Hans-Böckler Foundation formulated concerns that the ‘use of AI exacerbates the information asymmetry between the stakeholders’, shifting extra power in favor of the employers (Waas, 2023, p.90).

4.4 The future of unions - where to go from now?

Having analyzed the unionist contribution to the broader discourse and their identified problems and chances regarding AI, it is now possible to look ahead: what does the union discourse propose in moving forward? There are some key aspects that unions emphasize in their discourse and these are introduced, with some referring to findings from earlier stages of the analysis.
Reacting to the constantly changing requirements for the workforce, unions put emphasis on the necessity of worker training to guarantee fitting qualifications for the new work environment. Ver.di states that ‘in-service training’ will be more important than ever before (ver.di, 2019c, p.7). Referring back to the ‘value of work’ which states the ‘red line’ of unions that AI applications should only assist,

but never command, tasks are to be specifically upgraded through further qualifications instead of degrading them without enabling the workers through training (ver.di, 2020, p.3).
In addition to public services, union representatives seek to obligate businesses in contributing a fair share to further qualify the workforce. This links to the demands of systematic redistribution of capital that were analyzed in the last section, obligating corporations to let the workforce benefit from AI-generated surpluses:

> *It is precisely the decision-makers in the companies who should be obliged to prevent dismissals and to offer qualification to employees (voluntarily) whose jobs are threatened by AI - especially from the profits generated by AI* (ver.di, 2020, p.3)

The demand for workers' training can thus not only be regarded as a way to preserve the workers' qualifications but also to adjust the in-service training mechanisms, holding businesses more accountable to invest in their personnel.
Complementary to the financing of workers' training, these redistribution demands are also meant to serve a broader societal purpose. Unions expect a 'wealth growing in the digital revolution' that could serve the 'public good', making extensive financial contributions to Infrastructure and the social welfare system (ver.di, 2019b, p.5). Implicitly, this argument conveys the impression that unions join in on the glorification of the AI revolution, expecting a major increase in wealth accumulation. Despite the different communication compared to the businesses, they just want to get a bigger piece of the pie through a different distribution, ultimately claiming that the 'society' and their workforce are the biggest winners. This demand aligns with other claims such as the narrative of the alleged control over AI that conveys a message of the very simplicity and glorification that unions criticize regarding the government strategy.

Apart from the demand for better training mechanisms, unions insist on establishing new legal foundations in light of the implementation of AI applications in the workplace. The legal propositions are mostly derived from the identified problems introduced in the first section of the analysis. Aligning with the unionist narrative of self-confidence regarding the involvement in the implementation, unions encourage their members to become active at the workplace to guarantee a successful implementation:

> *Read, think, talk, get involved. Let's work together to ensure that artificial intelligence does not dominate us, but serves us. That it doesn't weigh our lives down, but makes them easier. Together, we will give the economy and politics a run for their money.*
> (ver.di, 2019c, p.3)

One proposed action is the establishment of one central agency specifically concerned with all AI-related topics. It would be helpful to ‘consult businesses and institutions’, as one regional chairman of the DGB states (ZEIT, 2022, p.1).
Furthermore, ver.di demands a specific data regulation designed for a worker, referring to the extensive use of data that should be specifically addressed with a new law (ver.di, 2019b). This call for legislative action extends the governmental line of argumentation, as the government states that the existing legislation suffices to protect workers from data misuse.
The DGB does not only seek to hold the employers accountable but also the AI developers by creating an obligation for transparency that provides clarity in the evaluation processes of AI applications (DGB, n.d.). All of these demands are somehow related to the central aspect of workers' representation and therefore union work: co-determination.
In the following section, the ‘holy grail’ of German unionism is analyzed in more detail, finally leading to a conclusion regarding the unionist plans for their future in light of the AI revolution.

4.4.1 Co-determination - the solution for all problems?

In the introducing stages of this analysis, the unionist will of evaluating every step of the AI implementation served as proof of the desire of counteracting the insecurity through increased controllability and transparency. These two key frames ‘controllability’ and ‘transparency’ can now be translated into a clear goal of the unionist discourse: bringing the co-determination process to the next level by adjusting it to meet the arising challenges of the AI revolution. The DGB chairwoman Fahimi points out the importance of an update: according to her, the ‘proactive co-determination rights and thus entirely new appointments’ are needed now as it would be too late to do it if AI applications have already been introduced (DVZ, 2023, p.2).
IG Metall chairwoman Christiane Benner even compares a ‘standstill’ in this context to a ‘factual step backward for the co-determination’ (IG Metall, 2022, p.3).
As with the other legislative proposals, the unionist position reaches further, even though there has been legislative action in 2021 to adjust the law:

> *The new Works Council Modernisation Act offers a first approach to co-determination. However, our aspiration goes much further in terms of the involvement and binding co-determination of workers and interest groups.* (DGB, n.d., p.4)

It remains questionable whether the unionist goal is to check for each step of AI implementation in the workplace. The union's focus on this preventive evaluation of AI, aiming to anticipate all possible negative implications, is another example of the optimistic unionist narrative of full control.

4.5 Conclusion

The extensive analysis of the text documents provides the foundation for the formulation of answers to the research questions. First, the answers to the sub-questions are formulated, before finally leading up to the main research question in the conclusion section of the whole paper.

2. What are the most dominant frames in the union discourse?

One of the most dominant frames in the union discourse is the ever-present desire for ‘controllability’. It symbolizes the unionist aim to oversee the whole implementation process of AI applications in the workplace and is a manifestation of a ‘red-line’ regarding the non-negotiable hierarchy of humans above machines that must not be crossed.
The declared cure to all the potential negative implications is the frame ‘transparency’ that states the goal to hold a person accountable for the potential consequences of AI in the workplace. It is linked with the desire for ‘controllability’ and can be seen as an expression of the prominent ‘uncertainty’ within unions regarding AI.
At the same time, the identification of ‘chances’ is a dominant frame, underlining potentials such as the fight against the ‘skilled workers shortage’ and a higher quality of work and life through improved ‘workers conditions’

3. Is there a shared narrative between different German unions in union discourse on the AI revolution?

The main unifying aspect of the unionist discourse is the ‘ambivalence’ of each discourse within the respective organizations. Regarding narratives, two main streams of communication can be identified: On the one hand, the two biggest unions IG Metall and ver.di similarly convey the image of self-confident unions that underline their capability in managing the AI implementation, positioning themselves as decisive in the discourse on the implementation. While the unions themselves communicate more openly including direct criticism of government plans such as the ‘human-centered design’, the representative overarching DGB remains diplomatic in tone. Acting as a connecting element between the unions and political parties, they embody the ambivalence by remaining reserved in communication, avoiding decisive or remarkable statements that can be seen at public events at the

union level. This symbolizes the union's will to remain hesitant in taking a definite position, remaining open for negotiations with the government and not moving too far from the status quo. Except for the tone and way of communication, unions portray a similar narrative regarding the AI revolution.

4. To what extent does the framing of the unions differ from government communication?

The union discourse is more concrete than the government discourse, critically questioning the superficial 'human-centered design' notion and drawing 'red lines' for the implementation of AI applications: data protection, preserving workers' rights and full control of the implementation. It can be stated that unions learned from past digitization discourse, opposing the government narrative of an 'AI inevitability' by revealing the 'fall-off' notion and unmasking the 'competitive pressure' as a fig leaf. At the same time, unions also expect large income increases from AI expectations, implicitly joining in on a glorified AI future that is a government feature characteristic. By portraying AI as a useful tool to fight the 'shortage of skilled workers' and improve 'workers conditions', the union discourse resembles the communication of the government's national AI strategy. Through energetic calls for 'redistribution', unions seek to get a bigger piece of the pie that also the government assumes to be bigger, as unions give in to a technologically deterministic perception of AI. According to that narrative, the future is 'wealthier', but it is just a question of who benefits the most.

5. Conclusion

After having answered the sub-questions that lead up to the main research question, it is now possible to formulate an answer to the main research question:

In what way do German unions discuss the AI revolution in their discourse?

The AI Revolution notion that was put forward by the government does not reflect the union's discourse on AI applications in the workplace. In fact, the discursive behavior is highly conservative in the sense that despite the exceptional nature of Artificial Intelligence and its impact on the world of work, unions seek to manage this supposed revolution with their usual mechanisms: extensive strengthening of co-determination processes, creation of a new workers-specific data protection law and the further qualification of the workforce. The main message of the union discourse is 'preservation': the implementation of AI can be dangerous, but if done to unionist terms, everyone is going to benefit, with less, easier and better-paid work. Coming from recent technological discourses, it appears that it is the declared aim to apply 'best practices' from experiences such as the beginning stages of advancing digitization with the governmental 'Industrie 4.0' concept.
This is expressed through the ever-present desire for controllability, transparency and the principal focus on co-determination. Aiming to oversee an invention with practices that have led to success in the past but might not be capable of dealing with such a groundbreaking invention.

The 'calm and collected' discursive behavior can be interpreted as a co-evolutionary perspective on technology as developed by STS scholars, stating the capability of managing technology while acknowledging potential negative implications for workers (Van de Poel, 2020). It can certainly serve

as an explanation for the analyzed ‘ambivalence’ of the discourse that is marked through the communication of ‘complex conflicts of interests’ between workers and employers and at the same time potential ‘win-win-situations’ if only managed correctly through the intervention of unions.
Having formulated the main research question before the extensive analysis of the gathered data, the ‘way unions discuss the AI revolution in their discourse’ must be regarded differently than a supplementary contribution to the broader discourse that has been so far dominated by the government and media:
Based on the analysis of union communication, it can be argued that the discourse on AI is less focused on the actual implementation of a new technology as uncertainty dominates the perception and statements remain defensive. The dominating narrative is rather a power struggle instead of a technology struggle that is expressed through the discourse on AI. The raised awareness of a growing power imbalance between a digitally pressured worker and capital-accumulating corporations is conveyed through demands of extensive redistribution policies of AI-generated surpluses. In this context, the rising challenge of AI implementation in the workplace is yet another development ever since the emergence of gig economy platforms.
Taking this into account, the theoretically expected unionist behavior fears the loss of its influential position in an age of advancing digitization. Thus, German unions discuss AI in light of an omnipresent uncertainty and by portraying themselves as self-confident and indispensable defenders of worker’s interests, they seek to retain their historically influential position in Germany.

Referring back to the formulated knowledge gap, the unionist contribution to the broader discourse can be detected. To a certain extent, unions contribute a different perception of AI, diversifying the societal discourse. Aiming to shift the focus to the worker instead of looking at broad economic implications and criticizing capital-driven narratives brought up by the governmental discourse, unions add a co-evolutionary perspective. Despite the contribution of different standpoints, it must be stated that the discursive hegemony of the government and media outlets that Köstler and Ossewaarde revealed persists, as unions are mere reactors to the initiated standpoints rather than actively shaping it. In fact, the discursive hegemony is partly adopted by joining in on glorified notations that portray ‘win-win-situations’ for everyone, despite substantial criticism and other perspectives that also take place in the communication.

The analyzed priority of remaining influential by fighting for the institutional position aligns with the theoretical findings from Garneau, Pérez-Lauzon & Lévesque, who identified similar unionist priorities regarding digitization in Belgium and Denmark despite different economic and legal contexts (Garneau, Pérez-Lauzon & Lévesque, 2023). This analysis proves that the current discourse on AI is marked by similar patterns as the discourse on the ‘Industrie 4.0’ concept that emerged in 2011, as Kalff revealed the strengthened co-determination as the core focus of the unionist discourse (Kalff, 2019).

Krywdzinski, Gerst & Butollo identified a broad consensus and first signs of cooperation in a Bundestag Commission on AI regulation established in 2018, which based on this research cannot be regarded as a remarkable initiating platform for substantial cooperation between political decision-makers and German unions (Krywdzinski, Gerst & Butollo, 2023).
The regained influence that Dribbusch et al. detected after successful union campaigns during the Great Recession cannot be recognized in the current discourse on AI, as unions are mere reactors to a discourse dominated by the government and media (Dribbusch et al., 2017).

This research can only be regarded as an introduction to the union discourse on AI, as it seeked to identify the first argumentative patterns to provide orientation. Further research can focus on more depth in the analysis, providing more detailed data acquired through interviews that can serve as a baseline for more extensive research. It would also be interesting to gain insights into the dynamics within the union membership, researching their hopes, fears and expectations regarding workers' representation. The developments around Artificial Intelligence in the workplace are highly dynamic and it remains to be seen how the next years affect unionist discourses.

How does this research translate into practical implications for unions? From my point of view, valuable approaches can be seen in the union discourse. The raised awareness for the quality of jobs in light of digitally emerged phenomena such as gig work can be pointed out as an example that could pave the way for future public communication, as this is the main challenge of advancing digitization. It should not be the union’s task to dramatize the impact of AI and bring up dystopian scenarios of mass unemployment, the focus should rather be on raising awareness for the real challenges that are masked through glorification or catastrophizing such as the delimitation of work and the extensive monitoring of labor. If the discourse continues to be dominated by myths, then in the long term nothing less than the future of regulated and full-time employment will be threatened by the gradual dismantling of workers' rights.

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8. Data appendix

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