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Discourse Strategies of Implementing Algorithmic Decision Support Systems: The Case of the Austrian Employment Service

*Katharina Braunsmann, Korbinian Gall & Falk Justus Rahn **

Abstract: »Diskursstrategien der Einführung algorithmischer Entscheidungsassistenzsysteme am Beispiel des österreichischen Arbeitsmarktservices«. In the process of digitalisation, social administrations are increasingly turning to algorithmic decision support systems. In this particularly controversial field of application of algorithms, we observe efforts to gain public legitimacy for using such systems. In particular, we examine the implementation of the “AMS algorithm” in the Austrian Public Employment Service (AMS). Using the Sociology of Knowledge Approach to Discourse (SKAD), we identify three strategies that shape the development of the AMS discourse: (1) the strategy of placing the algorithm in the discursive field of help and efficiency, (2) the strategy of referential agility of the algorithm, and (3) the strategy of the algorithm’s incorporation into the organisation. Our discourse analytic approach shows that the social situatedness of digital technologies contradicts the notion of technology as a neutral tool. Second, we find that the AMS occupies an important and supporting position during the discourse. The article argues that organisations undergoing digital transformation are involved in discourses on the use of digital technologies and are central to them as such; they shape discourses and constitute phenomena.

Keywords: Sociology of Knowledge Approach to Discourse, discourse strategies, algorithmic decision support systems, AMS algorithm, organisation.

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1. Algorithmic Decision Support in Social Administrations^{1,2}

As digitalisation continues, algorithmic support systems are being piloted and deployed in organised contexts. Increasingly, public organisations are also turning to them. Prompted by work pointing to the negative effects of using algorithms in public organisations (such as mishandling cases or perpetuating discrimination through biases in data) (O’Neil 2016; Eubanks 2018), doubts about these systems are growing despite promises of objectivity and efficiency.

At the same time, algorithmic support systems inspire hope for more efficient and optimised administration. As early as 2014, Poland deployed a rule-based scoring system for job placements (Orwat 2020, 57-8), which algorithmically divides job seekers into three segments. The goal of this project, as well as numerous projects that followed, was to optimise resource allocation and increase the efficiency of the distribution of the services offered by the public administration (Niklas, Sztandar-Sztanderska, and Szymielewicz 2015, 7; Niklas 2019). The usage of predictive policing algorithms is also related to the hope of “doing more with less” (Egbert and Leese 2020, 25), thereby utilizing scarce and limited resources more efficiently.

These examples indicate the importance of socio-political and, thus, legal contexts for shaping digital innovations (Davis and Sinha 2021). We refer to these contexts as well as the discursive dimension of legitimizing algorithmic systems in order to explain the social significance of these systems (i.e., Sturken and Thomas 2004; Hirsch-Kreinsen 2022). Public discourse, understood as a space of negotiation in which social actors constitute “the socio-cultural facticity of physical and social realities” (Keller 2011b, 51) through language and materialities such as images and objects, shapes the socio-political and legal contexts of digital innovations. This contributes to establishing the acceptance of such systems or to making them fail – as is also evident in our case.

An analysis of the *discursive negotiation* of the use of algorithmic decision support systems is therefore significant. Only through discourse does the notion of the nature of digital technologies inscribe itself into the societal interpretive framework (Keller 2011a, 108). However, this does not happen arbitrarily; discourse carriers who argue about (de)legitimation of this technology shape this discursive context. Thus, by reconstructing and

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² The authors of this paper have translated all direct quotations cited in German. For causes of a more convenient reading, we decided against highlighting every single quotation.

analysing discourses, we can increase the visibility of the negotiation process and its particularities. This article explores this negotiation process by drawing on a case of algorithmic decision support that is both typical and particularly controversial in the media: The implementation of the assistance system for labour market opportunities called “AMAS” in the Austrian Public Employment Service (AMS).³

We examine the case using the Sociology of Knowledge Approach to Discourse (SKAD) (Keller 2001, 2011a, 2011c), which combines Foucault’s discourse theory (2001) with the social constructivist sociology of knowledge of Berger and Luckmann (1980). For our case, we conceive the implementation of the AMAS assistance system as a phenomenon that is only publicly constituted in discursive execution and is thus by no means manifested as a neutral technology. In redrawing the implementation discourse, we used media coverage taken from online portals of daily newspapers from August 2016 to November 2020. Therefore, our more general, guiding research questions are: *How is the implementation of the algorithm negotiated by public discourse carriers? How do discourse speakers impact the development of the discourse? And what relevance does the AMS organisation have for structuring the discourse? Furthermore, why is the system being implemented even though there is growing scepticism about decision support systems?*

We examine the discourse surrounding the algorithm’s implementation by empirically assessing the interplay of (de-)legitimising discourse events. Through various discourse strategies, as part of the “knowledge politics” (Keller 2011c, 16) employed by its carriers (Keller 2011c, 235), the algorithm is dynamically related to other (problem) references. The present analysis focuses on the legitimating discourse strategies (Keller 2011c, 235) that shape the discourse. Sociologically, this case is particularly interesting for two reasons: the AMS organisation itself has publicly initiated the implementation *despite* the sensitive nature of the issue of the algorithm, and this decision is being negotiated as a “moving target” *despite* massive public criticism.

Three discourse strategies of legitimation emerge: First, the *strategy of placing the algorithm in the discursive field of AMS, as welfare state support and an efficiency booster, becomes apparent*. Our analysis shows that the historical discourse on increased efficiency and welfare state support functions as a common focal point of negotiation between critical and supportive discourse positions. The interpretation and functionalisation of the algorithm tend to intertwine with existing discourses about efficiency and the overall fairness of welfare state support.

Second, we identify the *strategy of referential agility of the algorithm*. Although the discourse of the algorithm is permeated by attributions of the

³ In the following, we refer to the decision support system as “the algorithm,” a more general term with a functional character. Naming the system plays a crucial empirical role, and we do not want to adopt the interpretation of the discourse carriers without reflection.

algorithm's innovative power and objectivity, it is by no means consistently framed. In fact, the discursive contouring of the algorithm changes during discourse: The algorithm remains discursively indeterminate or opaque. The basic character of the algorithm (conventional regression function, artificial intelligence, or support tool) remains vague throughout the discourse.

Third, the *strategy of incorporation of the algorithm* becomes visible. The algorithm is continuously related to the deploying organisation, the AMS. The organisation *itself* constantly works on keeping the contour of the algorithm in motion by re-defining it. It is discursively shifted into the AMS's space of decision-making and thus the organisation's area of responsibility, where it finally becomes an organisational technology.

Organisations using algorithms, here the AMS, establish themselves throughout discourse as plausible instances of regulation, even for critics. Thus, from a discourse-analytic perspective, the article contributes to clarifying the question of how the algorithm is diffused, despite increased scepticism, and shows that digital transformations as a macro-phenomenon are actively (discursively) shaped and formed by organisations. Furthermore, we will show that ideas like the transparency of digital tools or the discussion – whether something is artificial intelligence or not – shaped by the discourse about the macro-phenomenon of digital transformations affect the understanding of our specific case. The reconstructed dynamics of the public discourse surrounding the algorithm contribute to the current state of research around algorithmic decision support in several respects. Although algorithms have been framed as stable myths of rationality by several scholars (Faust 1992; Büchner 2018; Keiner 2020), we analyse the underlying strategies that enable and stabilise its legitimation. Adopting a process-oriented perspective of the sociology of knowledge illuminates the contingency and dynamics of the relationship between algorithms and organisations as an element of discursive associations. The analysis presented here sensitises organisations' discursive significance as elements of the relationalisation and association of algorithms.

The paper first introduces the discussion about algorithmic decision support systems in general, their discursive sphere, and the importance of considering organisational and social embeddings of digital technologies (2). We then outline the Sociology of Knowledge Approach to Discourse (3) and describe our case of the public discourse on the decision support system in Austria (4). Then, we present the discursive strategies identified (5) by referring to empirical data. The paper concludes with a conclusion and outlook (6).

2. Discourses on Algorithmic Assistance Systems

Numerous analyses of innovation discourses demonstrate the relevance of the discursive negotiation of novel technologies (amongst others, Bosančić, Bösch, and Schubert 2018; Pfeiffer 2019; Hösl, Irgmaier, and Kniep 2020). Technologies advance to “solving multiple problems at once” (Vogelpohl 2018) and are brought into position to address a vast number of problems (Godin 2015; Windeler 2016; Beer 2017, 8). In his analysis of predictive policing, Egbert (2021) points out that digital technology

is a discursive phenomenon, i.e., an occurrence embedded in (different) discourses, which is perceived differently by different actors (groups), associated with different bodies of knowledge, and consequently evaluated and argumentatively treated differently.

Societal solutions to problems, e.g., preventing air pollution using technology, must first be discursively prepared in order to generate plausibility for technological solutions (Rosner 2004). Again, predictive policing software can serve as an example: Egbert (2018) argues that the success of German predictive policing applications can be explained not least by the fact that residential burglaries have been publicly unfolded as a large-scale security problem.

At this point, we come full circle to discourse analysis research on technology, which describes how discourse logics discursively negotiate new technologies and are provided with meaning, or how meaning changes. In their discourse analysis, Fischer et al. focus on the judiciary’s use of the polygraph. Here, the discursive notion of the body changing from the “shell of the soul,” which is not to be harmed, gives way to a vision of the body as the brain’s antagonist (Fischer, Paul, and Voigt 2020, 431). In order for the polygraph to generate data that the judiciary can use to build its case, the interrogator must outwit the body.

Another example of the discursive shift in conceptions of technology from Starkbaum and Felt (2019) shows that it is discursive shifts, “epistemic transition[s]” (Starkbaum and Felt 2019, 2), that enable major exemptions for biobanks in the General Data Protection Regulation. In this context, it is possible to shift the focus from the problems of data protection law to the risks posed in medical research impaired by data protection.

The importance of discursive strategies is also central to the analysis of Big Data as “emergent technologies of knowledge production and discovery of truth” that claim “epistemic authority” (Priestl 2019, 22, following; Weber 2017). In the same vein, Beer (2017, 9) points out the discursive significance of the “concept of Big Data”:

the term Big Data is doing a lot of work [...]. The work that is being done by the concept of Big Data needs attention, particularly as it is frequently doing

far more than the actual data itself. Indeed, the term Big Data can be used to reveal the type of thinking and the mode of reasoning that ushers data and metric-led processes into everyday organisational and social life.

The invocation of Big Data therefore posits claims to an epistemic authority that exerts a powerful influence on the discursive strategies at hand.

Big Data and algorithms, in addition to these discourse-oriented considerations, are theorised primarily in the context of their sociotechnical environment and can be explored in this research context (Gillespie 2014; Kitchin 2014, 2017; Kappler et al. 2018). Often, the resulting research practice challenges (such as access difficulties, manifold social embeddings, and contingency) are also considered. Algorithms only seem to be objective and mathematical (Gillespie 2014); they are often created by heterogeneous teams that sometimes have diverging interests and that are working under certain regulatory constraints (Kitchin 2017). Burrell (2016) describes algorithms as black boxes and analyses the sources and consequences of their opacity for understanding how conventional and self-learning algorithms work. However, the implications of this opacity of algorithms in public discourses remain unexplained. We address this gap by showing in our analysis that the opacity of algorithms as a discourse strategy also plays a role in the discursive negotiation of algorithms.

These sources likewise remind us not to lose sight of the organisation as a genuine site of the emergence and dissemination of algorithms. While organisations themselves are rarely placed at the centre of research interest in these studies, there is some awareness of the relevance of these subject areas of organisational sociology (Saifer and Dacin 2021, 10). Alaimo and Kallinikos (2020) show that by analysing a categorisation algorithm for music genres in a streaming platform, the manifold relationships between users, algorithm, and organisation almost make it impossible to draw boundaries between the individual entities (see also Stampfl 2020). Often, technologies, along with the practices or processes associated with them, operate in, around, with, or through organisations, and without organisations, these technologies could never achieve their social impact. This is shown by Büchner and Dosdall (2021), who propose understanding algorithms as digital observational formats. Organisations can act by embedding such technologies at sensitive, socio-politically charged decision points in public administrations (Büchner and Dosdall 2021, 345-7).

Concerning the questions raised in the introduction to this special issue (Büchner, Hergesell, and Kallinikos 2022, in this issue), we understand technology as a discursive phenomenon that requires special attention due to its situatedness in social administration organisations. Following the state of the research, we ask, in addition to the more general research guiding questions posed at the beginning: *What role does the AMS organisation play in shaping the discourse of implementation of its own algorithmic decision support system?*

3. Research Program Sociology of Knowledge Approach to Discourse

To answer the question of how the algorithm is discursively negotiated, we analyse the public discourse surrounding the implementation of the algorithm through the lens of the Sociology of Knowledge Approach to Discourse (SKAD). In the following, we describe SKAD as a method of analysis and data acquisition process. According to Reiner Keller (2011c)⁴, a discourse can be subjected to a “reflective reconstruction” (Diaz-Bone 2006, 12). SKAD asserts that reality is a discursive construct (Keller 2011c, 190) and links constructivist sociology of knowledge according to Berger and Luckmann to Foucault’s structural discourse theory (Keller 2003, 197-8). This approach facilitates an analysis of the production and formation of knowledge in institutional fields such as science and the public sphere (Keller 2011a, 61). This knowledge is shaped by discourses, structured relations between (statement-) events, in which collectively shared structures of interpretation and action emerge (Keller 2011c, 205). Single statement events update, reproduce, and transform the discourse (Keller 2011c, 186). Thus, either the validity of the interpretation arrangements is confirmed and perpetuated, or it is undermined and changed (Keller 2011c, 189). SKAD thus fulfils two essential characteristics that depart from our understanding of classical notions of digitalisation: First, it focuses on the social situatedness of digital technologies. These are by no means neutral tools, and while this idea of social situatedness has been adequately addressed in terms of development and programming (see, among others, Gillespie 2014; Kitchin 2014, 2017), we would like to add it to digitalisation research in terms of knowledge production in the public sphere about digital phenomena. The nature of the algorithm is negotiated by the discourse carriers – and it is by no means clear what we are dealing with. Keller speaks of a power of definition “that excludes other reality, that is, ultimately: around the social structuring of what we think is possible” (2001, 125). The second characteristic is rooted in a processual view; here, SKAD, with its sensitivity to trajectories, allows the discursive instability of the algorithm to come into view. This instability arises as discourse carriers vie for the power of definition.

Of particular relevance in the present case are *interpretive schemes* as part of the interpretive repertoire (Keller 2011a, 65-8) of discourses. Interpretive schemes, which build connections between single *statement events* and are part of the societal interpretive framework (Keller 2011a, 108), are used by discourse carriers to denote the essence of the phenomena negotiated in the

⁴ To explain the characteristics of SKAD, we almost entirely refer to Reiner Keller, as he is the founder of this research program. In addition, Saša Bosančić has to be named as co-author of many of the further developments of SKAD.

discourse (Keller 2011c, 243). General, patterned frameworks are linked to their referential objects during this process. The rather abstract interpretive scheme is applied to a concrete topic (Keller 2009, 48-9). Keller's paradigmatic study on the discursive construction of waste (Keller 2009), which is paradigmatic for SKAD, compares discourses on waste disposal in Germany and France. In Germany, he identified a structurally conservative discourse in which a central interpretive scheme is the *economy's autonomy* (Keller 2009, 229-31). This interpretive scheme is then manifested in the discourse in terms such as "freedom of the markets," "threat to the economy," "economic growth," or "endangering Germany as a business location" (Keller 2009, 229), but also in pejorative terms, such as "planned economy" or "Eastern system" (Keller 2009, 230), that imply limitations placed on the economy. The interpretive scheme charges the discussed phenomenon – in this case, waste disposal – with meaning. Interpretive schemes are often used instrumentally to produce new interpretive schemes, reconfigure discourses, or create new ones (Keller 2011c, 243).

A discourse only takes place through the statement events of its carriers. However, discourse production does not take place arbitrarily; only the abovementioned *speaker positions* mark spaces of legitimate speaking, which can be assumed by different actors (Keller 2011c, 223). These positions are often attainable in certain discourses through specific fields (for example, in science), whereas, in public discourses, they rely on heterogeneous standing with regard to symbolic capital (Keller 2012, 99). Actors filling *speaker positions* represent "the interests of their organisations in and through interposition in courses of discourse, or, to the extent that such an organisation depends on a specific discourse, the 'interests of that discourse'" (Keller 2011c, 253). It is hardly surprising that in the present case, the board of the AMS – represented by board member Johannes Kopf – is involved in the discursive negotiation of the algorithm. The question of power as a condition of discourse participation and power-effects through discourse is closely related to speaker position. The aforementioned multitude of preconditions for filling the speaker positions already suggests that discourse participation does not seem possible without power. Thus, the empirically conspicuous organisational role of the AMS has shaped the analysis. However, the present case also holds a clue in terms of power-effects: The AMS, an organisation of social administration (Büchner 2022), can be seen as the "intersection of power discourse and subjectivity" (Freier 2016, 29), where the knowledge of the actors in the organisation is not only determined by discourse (subjectivity) but is also produced (power discourse) – and thus exercises power.

Our focus here is not on reconstructing content dimensions or a narrative structure. Instead, we examine legitimisation strategies and their resistances, considering particularly exposed, prominent actors. In this context, *discourse strategies* become relevant (Keller 2011c, 235). Discourse strategies are a part

of “knowledge politics” (Keller 2011a, 16), which is complementary to the term “power of definition.” While the power of definition describes a structure or an order as a result of knowledge politics, knowledge politics in particular allow the analysis of processual elements: “[...] the role of processes and actors with their interests and strategies that go through, stabilise, and change the structure” (Keller 2011a, 16). We focus on the strategic part of knowledge politics, exercised by social actors (Keller 2011a, 279), and therefore use the term “discourse strategies.” This refers to measures that ensure the enforcement of discourse; they can be argumentative, rhetorical, or shaped very practically (Keller 2011c, 235). Since discourse strategy is not narrowly defined, we apply a working definition for this paper: We understand discourse strategies as measures used by discourse actors to accrue advantage in terms of the power of definition regarding the phenomenon within the discourse. This includes the instrumental use of interpretive schemes, framing a topic with a particular meaning, and strategic decisions about the location of utterance, the medium, and how abstractly or concretely a topic is discussed.

Discourse fragments, i.e., those “propositional event[s] in which discourses are actualised,” form the data basis of SKAD (Keller 2011c, 234). For this purpose, we used media coverage taken from the online portals of daily newspapers in the period from August 2016 to November 2020. These include, for example, *Der Standard*, *Kleine Zeitung*, or *Der Kurier*, but also topic-specific online portals such as *futurezone*.⁵ All articles with an apparent reference to the AMS algorithm were selected: Thus, German-language articles from the (primarily Austrian) press were included if they treated the algorithm as a topic – for example, related to the implementation, accompanying phenomena, or criticism. Since the algorithm is an (AMS) specific and novel application, there were no issues in terms of mis-selection.

In addition, other sources were integrated into the data corpus if the newspaper articles referred to them. These include, for example, documentation on the algorithm’s method, position papers, or responses to public queries. In total, the data corpus includes 170 documents. Selected *discourse fragments* (Keller 2011c, 274-5) were analysed through sequential analysis. We formed clusters based on a thematic review during this process, which emerged around the terms discrimination, transparency, error rate, decision attribution, efficiency, and welfare state support. These conceptual schemes were then applied to all paragraphs in the collected documents. This way, a thematically structured sequence series was created in preparation for the

⁵ In addition to the public discourse, there is also a scientific discourse on social inequality through algorithms, transparency, accountability, and discrimination in which the algorithm plays a role (see, e.g., Lopez 2019). In this context, Wagner et al. show in a treatise of international standards that the AMS algorithm “is not without alternatives” (2020, 201). See, e.g., Keller (2011c, 228-31) on the distinction between public and special discourses.

sequential analysis. For the findings presented here, we identified the terms “efficiency” and “welfare state support” to conduct sequential analysis according to Oevermann et al. (1979) and supplemented them with excerpts from other strands.

4. Implementing the AMS Algorithm into the Austrian Public Employment Service

Public controversies surrounding the implementation of decision support systems constitute a new phenomenon. Thus, hardly any overarching problems have emerged yet, as was the case in the classic work by Keller (2009), *Waste – the Social Construction of the Valuable*. Instead, various problems are publicly addressed along with individual cases. One such case is implementing the algorithmic support system within the AMS.

Our empirical case covers the public discourse regarding the implementation. The algorithm was developed by Synthesis Forschung GmbH with the aim of forecasting labour market opportunities and classifying the unemployed. Using logistic regressions, the system produces a forecast of “region-specific chances for labour market integration” (Holl, Kernbeiß, and Wagner-Pinter 2018) for the unemployed in Austria. Personal data entries (e.g., gender, education), previous employment history (including previous AMS cases), and the current case (e.g., previous occupation, regional labour market events) are computationally included in the estimate. The forecast is based on data from cases from previous years. In the future, the algorithm will classify job seekers into three categories that open specific corridors of assistance: those with a high, medium, and low chance of integration. The forecast is displayed to AMS counsellors in the processing software.

The storyline (see Egbert 2018) of the public AMS discourse begins on October 10, 2018, with an interview published on the online site of the *Standard* – an Austrian daily newspaper with a left-liberal orientation – between journalist András Szigetvari and Johannes Kopf, one of the two AMS board members, about the planned implementation of the algorithm (Szigetvari, October 10, 2018b). Kopf is the undisputed spokesperson for the AMS organisation; he is discursively tied to “his” organisation, being framed as the head of the AMS. After the publication of this interview, an intensive public discourse about the AMS and the algorithmic decision support system developed in the following months. In the interview, Kopf described problems of resource scarcity and the fair allocation of welfare state support. The solution to the problem, he claimed, was to add the technical infrastructure of the algorithm to the AMS processes. Kopf argued that scarce resources and the lack of objective evaluations made it challenging to allocate resources effectively.

The AMS discourse that unfolds after October 10, 2018, gains particular utterance density at different points. First, utterances accumulate between the announcement of intent to implement (October 2018) and the start of the test phase (January 2019). They are focused on efficiently allocating resources as a win for the AMS (amongst others, Szigetvari, October 10, 2018b; Futurezone, January 18, 2019). Furthermore, comparable profiling systems and the advantages of artificial intelligence (Lauterbach, October 20, 2018) are highlighted (Szigetvari, October 12, 2018d). Kopf and Szigetvari appear as an actor group promoting the algorithm. For utterances, we analysed the online page of *Der Standard* as well as Kopf's private online blog.

On the other hand, many utterances critically refer to automated discrimination, especially against women (amongst others, Fanta, October 13, 2018; Wimmer, October 19, 2018c), doubts about the fairness of the classifications, its statistical foundations (Szigetvari, October 15, 2018d), the consequences of classification for the unemployed (Vienna Online, November 13, 2018), and questions regarding regulative control (Alena, November 13, 2018). The actor group of critics consists of various journalists (including technology journalist Barbara Wimmer) and various academics (including media researcher Nele Heise). Their contributions were published on the platforms *Futurezone* (belonging to the Kurier Group) – an Austrian online portal for news on computers, telecommunications, and net politics – *Netzpolitik.org* – a German online medium for digital freedoms – and occasionally also in *Der Standard*. The aforementioned topics remain a significant reference point for the following statements during AMS discourse.

After several months of the test phase, in which the AMS discourse was carried only actively through actors repeating topics, and with the decision on the future use of the algorithm in the AMS by the Board of Directors of the AMS on September 17, 2019 (amongst others, *Kleine Zeitung*, September 17, 2019b; Wimmer, September 17, 2019), criticism of the AMS once again experienced a boom. An actor group of scientists from Austria emerged with particular power, criticizing both the transparency of the algorithmic procedures for the public and the non-transparent options for employees to disagree with the algorithm's forecasts. The actor group of critics grew during this time: business informatics and society researcher Sarah Spiekermann and various scientists from the University of Vienna engaged in the public discourse. Sporadically, though little noticed in the further course, affected groups such as the unemployment association Amsel (Friedi, October 07, 2019) or associations for the disabled (*Kleine Zeitung*, October 08, 2019c) spoke out against the AMS's plans.

Shortly afterwards, in early October 2019, the potential for misperceptions by algorithms gained attention in the media (Szigetvari, December 10, 2019b). Due to this event, all stakeholder groups involved, those of critics, defenders,

and those affected, once again spoke out against the implementation of the algorithm.

In the summer of 2020, shortly after the NGO epicenter.works, together with other organisations, launched a campaign called “Stop the AMS Algorithm” (Bechtold, June 25, 2020), the Austrian data protection authority banned its usage (Staudacher, August 20, 2020). The AMS’s plan to introduce an algorithm and its test operation was halted for the time being. A legal review related to data protection law has been ongoing since the end of 2020 (as of the end of 2021). At this point, the discourse is focusing on the fundamental question of whether the algorithm may be used. This includes questions related to training data reliability after the beginning of the COVID-19 pandemic (Köver, December 22, 2020). In summary, the AMS discourse – to anticipate the findings – shows a strong polarity, consisting of the proponents and the critics of the algorithm’s deployment.

The AMS discourse is conducted by speakers with varying degrees of power. They shape the discourse, change it, and are heard as actors. Therefore, after this brief case description, we will add an overview of the speakers and their arrangement in the discourse.

The speakers have two particularities: The first concerns Kopf’s *speaker position* (see Keller 2011c, 209-23), who, as an “association spokesperson post” (Keller 2011c, 263), is empowered to participate in the discourse. This discourse position crystallises in the set of “more or less supportive *personnel of discourse production*” (Keller 2013, 38) as particularly influential. It stands out as supporting the discourse through its quantity of utterances and its advocative role for the algorithm. Such positions, strengthened by personnel and organisations, are at the same time considerably affected by the “celebrity status” (Keller 2011c, 263) of individual actors, in this case, Kopf. Thus, discourse-internal hierarchy formations emerge (Schwab-Trapp 2001, 272-4) which are perpetually reinforced: Kopf, who publishes in his own blog, gains freedom from editorial processing, which he can in turn use to exert influence.

The second peculiarity refers to positions formed in discourse in opposition to Kopf. Where he appears as a speaker, the counter-position is filled by various people, mostly journalists or academics. Sarah Spiekermann plays a unique role: A debate developed between her and Kopf in September 2019 with multiple interrelated statement events. Kopf also benefited from the changing occupation of his counter-position, which increasingly legitimises him in his role through being both, at the same time, association spokesperson and filling the speaker position.⁶

⁶ Of course, these explanations only represent an exemplary section of the entire discourse. A variety of different small discourse occasions appear and vanish, and many different topics are touched upon. What nevertheless allows us to make this selection is the recurring structure of Kopf and his counterparts in most of these topics, which qualifies it as exemplary.

5. Discourse Strategies Related to the AMS Discourse

Our research interest focuses on how algorithms and their implementation are discursively negotiated, including how organisations, such as the AMS, strategically shape and change implementation discourses as part of knowledge politics, such as the AMS discourse, as relevant actors in the discourse. The question of changing a discourse emerges from a two-level perspective. The first level is that of strategic change: that is, how do shifts in discourse power about the effect of discourse strategies play out among actors and groups of actors? The second level is necessarily that of processual and thus temporal change. In what time frames do the carriers of AMS discourse understand the algorithm and how, and at what points, does a visible change occur in this understanding?

In the following, we show the temporally distributed effect of three discourse strategies with which the AMS actively shapes the implementation discourse around its own algorithm. This also sheds light on counterstrategies. We identify the discourse strategies of placing the algorithm (I), the referential agility of the algorithm (II), and the incorporation of the algorithm into the organisation (III).

Our analysis covers the implementation period, from the controversial announcement through the high points of the controversy to the beginning of the legal proceedings that will decide whether or not the algorithm may be used. While at the beginning of the discourse, the algorithm and the AMS as an organisation were still discussed separately, successful discursive incorporation from the algorithm at the height of the controversy takes place. The algorithm becomes the “AMS algorithm” and is thus shifted into the organisation’s remit. The discursive incorporation into the organisation led to the paradoxical effect that although most critical utterances aim directly at the AMS as an organisation, they are neutralised by referring to the correct use of the algorithm ensured there. Toward the end of the period under analysis, the AMS discourse began to unravel, with individual aspects being discussed in greater depth and increasingly in isolation from one another.

5.1 Placing the Algorithm in the Discursive Field of AMS for Welfare State Support and Efficiency

Our analysis of the AMS discourse around the algorithm shows that interpretive schemes in arguments and critiques regarding different discourse positions follow previous discourses on the efficiency and justice of welfare state support (Heinze 2009; Sowa and Staples 2017). Many discourse carriers interweave the algorithm’s interpretation and its functionalisation with existing discourses on the efficiency and justice of social assistance. This is set in the

AMS discourse within the two weeks beginning on October 10, 2018. The following two dynamics characterise the setting in the AMS discursive field of welfare state support and efficiency to a high degree.

1) Welfare state support as a diffuse reference point for proponents and critics

The algorithm is intended to assist in the field of welfare state support. The characteristic of statement events around the category of welfare state support is that the question of who helps and how this help is designated remains diffuse and scattered. From assistance (see, e.g., Grill following Wimmer, October 17, 2018b) to support (e.g., Bachner, December 07, 2018) to need orientation (e.g., Pühringer following Szigetvari, October 10, 2018a), a broad spectrum of concepts and levels of welfare state support is used. Two distinctions can be made. On the one hand, there are internal organisational expectations of the algorithm and external organisational expectations of the counselling process. One organisational expectation addressed internally, repeatedly described by Kopf, is that the algorithm helps in counselling processes to make decisions about the classification of job seekers, and thus social welfare is allocated more efficiently (Szigetvari, October 10, 2018b). In this context, decision support is located within the organisation, i.e., related to the algorithm in the counselling process of the AMS, not to its clients directly. In contrast, critical discourse positions address concerns externally to the organisation and posit that counselling must improve the individual situation of jobseekers (Wimmer, October 12, 2018a). The division into classification and the allocation of social welfare based on this categorisation, according to the critics, does not take into account the individual situation of job seekers since counsellors hardly ever question the algorithmic classification, as is already known from other studies (Wimmer, October 12, 2018a). This distinction opens up a field that oscillates between standardised assistance and individualised assistance (Futurezone, January 18, 2019; Kleine Zeitung, January 18, 2019a; Vienna Online, January 18, 2019) and, at the same time, shows different areas of the application of the algorithm. The discourse strategy of the proponents to frame the algorithm as an *assistance system of helping to help*, and the counter strategy to assert the clients' claim to help also against the algorithm (not only against the organisation), shows the first discursively powerful placement of the algorithm in the discourse about welfare state support.

The critics fail to build their own interpretation of how the algorithm can explicitly help clients in this context. This becomes visible in negotiating indirect welfare state support expectations and direct welfare state support expectations in the discourse. The algorithm is framed as a decision assistance system that helps indirectly by assisting with decisions but does not *make* decisions (Szigetvari, October 10, 2018b; Wimmer, October 12, 2018a). Kopf has

noted, for example, “My colleagues in the field already make such assessments all the time, and now we are giving them an assistance system to go with it” (Szigetvari, October 10, 2018b). Heinz Rammel, head of the central works council, also emphasises, “The counsellings are very intensive and often complex. The new system could really be of help” (Szigetvari, October 10, 2018a). Only the scenario of welfare state support for clients whose needs would have been incorrectly classified and for whom the appropriate measures are made available without the algorithm being implemented is outlined as a counterargument. Claiming a direct expectation of welfare state support succeeds only at one point: Persistent doubt that counsellors will reject the algorithm’s proposals (amongst others, Spiekermann, September 23, 2019a; September 27, 2019b). It is assumed that the algorithm’s proposal for classification is not questioned in most cases so that the algorithm is discursively assigned a central, even decisive, role in the classification of job seekers and the allocation of social welfare. Here, the boundaries between the algorithm’s capacity to help and the organisation’s capacity to help become blurred. However, critics increasingly acknowledge the strategic framing of the proponents: The algorithm is recognised as an organisational “system to distribute assistance” (Wimmer, October 17, 2018b).

2) The efficiency of counselling situations and welfare state support allocation

The algorithm is placed into the AMS discourse with expectations of efficiency in the very first newspaper interview of our dataset; the headline was, “We want to make the AMS more efficient” (Szigetvari, October 10, 2018b). Efficiency is related to the allocation of social welfare: “According to Kopf, the goal of the undertaking is to use the resources of labour market policy more efficiently in the long term” (Szigetvari, October 10, 2018a) because “[t]he new system makes it possible to use the same money in a more targeted way” (Szigetvari, October 10, 2018a). AMS’s claim of efficiency is further conveyed during the discourse and combined with the planned output orientation of support instruments. The AMS hopes that support instruments, such as training measures, will target those for whom they have the most beneficial effect and that this will also increase the efficiency of resource deployment: “In addition, the AMS naturally acts with limited resources, and these should be used where they bring the most benefit” (Gulyas, October 20, 2018).

Also, the presence of limited resources and the associated lack of alternatives for efficient use – it is taxpayers’ money, after all – frames the algorithm as an instrument that can be used organisationally to increase output (Szigetvari, October 12, 2018c) without changing input. The fact that both efficiency and digitalisation are “the order of the day” (Braun and Brandstätter, October 20, 2018) legitimises the solution adopted here. The algorithm ensures a digital increase in efficiency. The organisational process of “counselling”

becomes more efficient and, thus, the entire AMS organisation is more effective (Kopf, November 14, 2018a). Here, too, the algorithm is placed in the discourse about efficiency and help in relation to the AMS.

While the AMS experiences strong criticism from academia and other critical discourse actors for its classification mechanism in the algorithm concerning issues of discrimination and transparency (Wimmer, October 17, 2018b; Heise, November 03, 2018; Kleine Zeitung, January 18, 2019a; Spiekermann, September 27, 2019b), the algorithm as an instrument of efficiency in counselling situations and welfare distribution was not doubted for a long time. Only in the very advanced phase of the AMS discourse did critics raise the objection that professionals do not have the time to question every algorithm decision (Spiekermann, September 23, 2019a; September 27, 2019b). The long-standing support for efficiency buttresses the myth of rationality of digital technologies (described for algorithms: Keiner 2020), an assumption which other discourse positions tend to accept rather than question.

The discourse strategy outlined above of placing the algorithm in the already existing and now expanded discourse field of efficiency and welfare state support shapes the discourse fundamentally because the resulting dynamics are carried forward in the discourse strategies outlined in chapters 5.2 and 5.3. The algorithm's interpretation as discriminatory and non-transparent will be of further concern. The placement of the algorithm in the pre-existing discursive field around the organisation algorithm shows the discursive power of this organisation and the board member Kopf.

5.2 Between Innovation and the Old Familiar – Referential Agility of the Algorithm

The analysis of the discourse's development shows that the "AMS algorithm," as the discourse carriers call the algorithm, undergoes several fundamental changes across different statement events. This reconfiguration shapes discursive ways of connecting and disconnecting critiques of the implementation of the algorithm. As a result, the AMS algorithm acquires referential agility as a concept. The indeterminate contouring of the algorithm allows it to be successfully insulated over long stretches against delegitimising discourse strategies on the part of critical discourse positions.

The algorithm is not constantly treated as a digital innovation; instead, the algorithm is framed in ways that adapt to criticism, especially by the group of proponents in the face of increasing criticism. This phenomenon occurs continuously in the AMS discourse in that Kopf, as a proponent, uses the discourse strategy of referential agility in his statements about what the algorithm is. He puts forward various arguments, some of them contradictory.

The early stages of the AMS discourse saw discussions of the algorithm as a complex tool. Kopf expresses, for example, that "with the help of highly

complex mathematical models, the computationally current labour market opportunities of each individual” (Kopf 2018b) are prognosticated each month. This representation as a specialised tool creates an image that introduces the algorithm into the discourse as a system that is difficult to understand. In the same discourse fragment, Kopf introduces the superiority of the computer as an underpinning argument: “Recognizing special patterns in so-called Big Data in order to make forecasts from them is a skill that the computer undoubtedly masters better than humans” (Kopf 2018b). From computer to mathematical model to Big Data, these diffuse descriptors make the algorithm a moving target in the discourse. The contours remain unclear due to inconsistent nomenclature. Each of the aforementioned terms would entail its own weak points. Each weak point, in turn, opened up different possibilities for critique. The remarkable span of strategically deployed argumentative images presents moments of uncertainty for critical discourse positions. Kopf has fuelled this uncertainty with ever-new images. At the same time, he invalidates the criticism presented based on certain representations of the algorithm by invoking the metaphorical force of another image, for example, that of the harmless mathematical model. In this way, the criticism becomes irrelevant, and the implementation of the algorithm becomes more easily defensible in the public AMS discourse – or so we can assume given ever-diminishing criticism.

“What we end up with is a complex data model that perhaps only the third-party service provider of AMS AI synthesis research understands, while the AMS and its staff are mere ‘intermediaries’ of machine decisions,” said researcher and critic Spiekermann (September 23, 2019a). She takes up the image of the complex model and interprets the algorithm as Artificial Intelligence, creating the new acronym, “AMS-AI.” Spiekermann referred to the problem between individual help and standardised distribution. She argued that to allocate individual welfare state support, there must be assurances in place that AMS counsellors understand and can question the system in order to oppose the system’s suggestions. She thus referenced a familiar argument about the incomprehensibility of artificial intelligence (see, e.g., Burrell 2016).

Kopf responded to the article and, instead of addressing the problem outlined, began with Spiekermann’s newly minted acronym “AMS-AI”:

Our system does not use neural networks, it is not trained and does not learn independently, it does not correct itself, the possible outcomes are given by us, and all updates come from humans. Our system is based on various algorithms, that is, the application of a logistic regression, that is, a classical, theory-driven, statistical model. (Kopf September 24, 2019)

Here, the algorithm is broken down from an abstract description into a well-known and straightforward system; yet Kopf does not address the actual

criticism. For critical positions such as Spiekermann's, expressing criticism of the algorithm is made more difficult by the shifting ground of the arguments.

If we specifically observe the connections in the discourse to the outlined exchange of words, two effects of this strategy become apparent. The first is evident in Spiekermann's response, in which she asks, "Why doesn't the AMS actually work with an AI?" (Spiekermann, September 27, 2019b), which sheds light on new questions. Whether the specific "AMS algorithm" is now doing a good job or is justifiable for a public organisation is left aside. Spiekermann's argumentative focus thus moves from the algorithm itself to the AMS's use of artificial intelligence. The second effect becomes visible when we look for content-related and fitting connections in the discourse to the described statement by Kopf. His description alone – "does not use neuronal networks, [...] does not correct itself" (Kopf, September 24, 2019) – is indeed dealt with. For example, Lopez argues,

It may be assumed that not being "datafied" enough in the past correlates to a high probability of being assigned to Group C. The algorithm is not a "datafied" algorithm. To fully assess this, more statistical data about the actual distribution of the job seekers via the classification is needed. (Lopez 2019, 297)

However, the system does not provide for such a (self-)correction. Discourse analysis reveals that this criticism of the algorithm, which is accurate in terms of content, is also discussed in the scientific community. An effect of staggered strategic discourse formation emerges. Strategies of content-related criticism fragment and unfold with little effect.

We observe the same at another point: The discourse is always accompanied by the topic of discrimination, in particular, discrimination based on gender (see, e.g., Lopez 2019; Cech et al., October 03, 2019). Thus, the "female" gender is negatively weighted and leads to women being discriminated against by the algorithm (Wimmer, October 17, 2018b). The AMS, once again represented by Kopf, reacts by emphasising, in addition to numerous personal statements and statements (Kopf 2018b) again and again: "As much as this circumstance is perceived as discrimination, it corresponds to reality" (Kopf 2018b). It is the labour market, not the algorithm, that engages in discrimination. Again, this shows that making the labour market the target of criticism takes the algorithm out of the line of fire. Kopf does not fully explain his counterargument that the labour market discriminates, and that the algorithm only shows opportunities (Wimmer, October 12, 2018a). The algorithm remains a tool that reflects reality but cannot change it or even improve it. The potential of the criticism cannot be unfolded because the labour market, with its multitude of actors, seems too complex to address.

The oscillation between designations of the algorithm is not without consequences for the AMS discourse. Assuming that one's own setting also

constructs the foreign and makes a valuation of it (Berger and Luckmann 1980), Kopf engages in diffuse contouring of the algorithm. This allows him to leave idiosyncrasies undescribed and variable, which renders attacks insubstantial. Although we cannot establish the AMS's intent in framing the algorithm, the strategy of referential agility nevertheless exhibits the strategic use of discourse power. If speaker positions take up an interpretation of the algorithm and criticise its implementation, the interpretation is deprived of its goal, its reference, by the powerful discourse position of Kopf. We should also note that about a year has passed since the discourse unfolded, yet within our brief period of analysis (2.5 weeks), the character of the AMS discourse underwent change due to the strategy of referential agility. As a result, a common understanding of the algorithm of the discourse finally breaks down. The AMS discourse then frays, incited by another of Kopf's discourse strategies, and the discourse coalitions can no longer agree among themselves on collective interpretive schemes; the discourse coalitions become insular and inward-looking.

5.3 From Means among Others to Organisational Technology – Incorporating the “AMS Algorithm”

Actors in the AMS discourse initially constructed the algorithm as “independent” from the AMS (amongst others, Kopf 2018b; Heise, November 03, 2018). Thus, there is a critical discussion about what the algorithm can and cannot represent, and how it can be used to segment the unemployed (amongst others, Szigetvari, October 10, 2018b; October 12, 2018c). With the controversy surrounding the algorithm growing early in the AMS discourse, there were indications that it was being discursively shifted into the organisation, first by different discourse positions and then by Kopf as a spokesperson for the AMS. Thus, in November 2018, discourse participants increasingly found themselves attributing responsibility for the algorithm in different ways (amongst others, Husted, November 03, 2018; Alena, November 13, 2018). The search for accountability for the algorithmic system was explicated on November 14, 2018, by Kopf in his blog post “How Sight Might Become Insight” for the first time. Kopf, emphasising the agency of the human counsellor working with the algorithm, wrote,

Please be assured: It is still the person, the AMS counsellor, who personally takes care of the concerns of the job seeker, but who can now help even better [...]. The AMS, in particular, was legally entrusted with the task of countering all discrimination on the labour market when it was founded, and we will continue to do so with great determination in the future. (Kopf 2018b)

The first aspect worth noting here is the “expanded speaker position” on Kopf's own blog. This is a discourse strategy with which he can create his own

audience on the one hand, while, on the other hand, being spared from contradictory interpretations due to representing both AMS and himself simultaneously. The blog post became a key event of the discourse as the AMS board began to frame the algorithm as an organisational technology. At the beginning of the post, Kopf called the algorithm, though still guardedly, the “so-called AMS algorithm” (Kopf 2018b). However, this rhetorical shift identified the algorithm as an organisational technology, as part of the organisation. This also placed the algorithm within the context of the AMS’s “legal mandate.” Terms such as “AMS case” (Heise, November 03, 2018) referred to the fact that the algorithm was also discursively stabilised as part of the organisation. This leads to the emergence of a solidified discourse-strategic concentration on the algorithm as an “organisational algorithm”; one cannot imagine the technology without the organisation. We also saw this strategy at an earlier point in the discourse as well.

We also observed a shift in the expectations of critical speaker positions. Criticism, along with expectations regarding objectivity, turned away from the algorithm and towards the AMS as an organisation. The effect of this dynamic was particularly evident in the late phase of the analysis (end of 2019). Individual strands of discourse took up isolated aspects without questioning the algorithm as part of the organisation. This incorporation effect changed the role of transparency in the dispute over legitimacy: critics’ transparency expectations relocated from the algorithm to the organisation. *Synthesis*, the software development company, met these expectations by publishing a functional design document of the algorithm at a very early stage (Holl, Kernbeiß, and Wagner-Pinter 2018). However, this did not influence transparency expectations at the beginning.

The expectation of transparency from the organisation that is repeatedly addressed in this context also accompanied the debate between Spiekermann and Kopf. Spiekermann asked, “If now the AMS algorithm makes a wrong assignment to a bad group for x persons, what happens to exactly these individual fates that mistakenly ended up in this group?” as well as “What information and degrees of freedom does the AMS counsellor have to disregard the machine’s decision – i.e., to make the judgment himself?” (Spiekermann, September 23, 2019a), thereby criticising Kopf’s argument that it is still the human who ultimately decides (Szigetvari, October 10, 2018b). Kopf again shifted the responsibility onto the organisation, saying that the results of the logistical regressions “are predetermined by [the AMS]” (Kopf September 24, 2019). The AMS thus becomes the addressee in a double sense, both in terms of programming and in applying the algorithm. The functionalities of the algorithm, on the other hand, remain unmentioned.

By the end of 2019, the discourse had dissolved into details: again, the algorithm as a specific issue was no longer discussed. Instead, the organisation came into focus, either being questioned with regards to organisational

processes, e.g., the secrecy surrounding how the algorithm would be displayed to counsellors (amongst others, Spiekermann, September 23, 2019a; September 27, 2019b) or being criticised for their deployment of the algorithm (Wimmer, October 17, 2018b). The algorithm hardly plays a role as a technical variable anymore, but the organisational processes, procedures, and decisions in which it is embedded were discussed; this was due to the successfully established proximity to the AMS as an organisation (Cech et al., October 03, 2019). A tendency that already emerged earlier became apparent: The algorithm has been increasingly immunised against criticism during discourse, which remains remarkable for an algorithm used by a public organisation.

Similar dynamics can be seen elsewhere. In an international comparison of European algorithmic assistance systems in public organisations, the Organisation for Economic Cooperation and Development (OECD) rated the algorithm of the AMS as “best in class” (among other things, in terms of accuracy of the classification and hit rate [Szigetvari, January 18, 2019a]). Kopf has repeatedly referred to the OECD’s favourable judgment in statement events to defend the algorithm (Kopf 2018b). The OECD was already quoted in early 2018 as saying, “The AMS is seen internationally as one of the most effective and best-managed labour market services” (Kurier, March 27, 2018). This context was taken up just before the start of the test phase and after the algorithm became the “AMS algorithm.” This added another interpretation scheme of the algorithm to the AMS discourse: as “best in class” among other algorithms in public organisations. The AMS invited Kristine Langenbacher from the OECD to present assessments from her study on algorithms in employment offices of different countries. Preliminary assessments from her study were discussed at a conference. In Szigetvari’s article on this topic, the contributions of the OECD representative were used to legitimise the use of the algorithm in the context of the organisation by comparing countries: “In addition, the OECD emphasises that the Austrian model allows for significantly more classifications than algorithms in most other countries” (Szigetvari, January 18, 2019a). In this quote, the quality of the algorithm was described by its coupling to organisational classification into three groups (Group A: More than 66% chance of short-term labour market integration, Group C: Less than 25% chance of long-term labour market integration, Group B: All others). The power of definition played out with the help of the reputation of another organisation, thus adding to a more successful contour of the algorithm.

The third strategy discussed in this chapter leads to the fact that even the critics in the AMS discourse abandoned their criticism of individual functions and programming of the algorithm. Kopf taking over responsibility for the algorithm occasioned a shift in criticism, which now referred very broadly to the AMS as an organisation and its processes. The algorithm as a target for

criticism faded into the background of the AMS discourse. To put it bluntly, the algorithm was stabilised as a part of the organisation, and there were no longer any attempts to delegitimise; instead, for example, references were made to the teaching processes of the counsellors in the AMS organisation.

6. Discussion: Strategic Immunisation of the AMS Algorithm

The algorithmic assistance system is discursively negotiated as the so-called “AMS algorithm,” connected to previous discourses on the efficiency and justice of welfare state assistance and is thus – keeping in mind the heuristics of this special issue – bound to macro-level conditions as an organisational meso-level. The AMS organisation actively and strategically shaped the discourse regarding the implementation of the algorithm. Of the three discourse strategies described above, the first is the positioning in the discourses of help and efficiency. Two other discourse strategies contribute to the immunisation of the algorithm during the discourse. In all three strategies, the AMS, represented by Kopf as a particularly prominent discourse participant, reveals its high potential for revising the discourse and frequent using its power to do so.

By discussing where, how, and whom the assistance system helps, indeterminate contouring in the understanding of what the algorithm actually is inscribes itself into the AMS discourse. The AMS board head uses this referential agility to avoid criticism of, for example, the distribution of welfare state assistance or demands for transparency, and even expands this uncertainty about the subject of the discourse. The third discourse strategy described is incorporating the algorithm by the AMS. This discourse strategy draws the line of the AMS organisation between the critical discourse speakers and those who wish to legitimise the use of the algorithm. The algorithm is thus protected from criticism; instead, the critique is framed within the context of the organisation and its processes. The discourse strategy of pulling the algorithm into the organisation’s referential space bears fruit, as attempts at delegitimation thus decrease over time. Previously hoisted into the public eye as a prestigious project, then hemmed back into the organisation, the algorithm becomes harder to address as an object of criticism.

Both the incorporation and the indeterminate contouring of the algorithm affect the impact of criticism on the algorithm. A kind of immunisation against criticism occurs in the process, which increasingly limits a possible discursive delegitimation of the algorithm. As a restriction, our results show that this only refers to criticism of the algorithm but not to criticism of the organisation of the AMS. This is because criticism is now directed at the AMS

as a primary address on the one hand, and on the other hand, this shift allows for a broad neutralisation of criticism of the implementation by the organisation. We have reconstructed a shift of the algorithm as a technology *for* a public organisation to an organisational technology *of* a public organisation during the discourse. The algorithm was successfully shifted into the organisation's sphere of responsibility in the process. The organisation succeeded in transforming the discourse in its interest. However, the described immunisation only applies to public criticism: the data protection decision regarding the algorithm, a legal concern, continues to endanger its deployment (ORF, August 20, 2020; Fanta, August 21, 2020).

The limitation on the part of the case law for the argument of immunisation shows that only inner-discursive protection covers the algorithm. Burrell has introduced the concept of *opacity* (2016), which attests to multi-level limits of understanding for algorithmic systems; we could extend this concept to encompass an "organisational opacity" that operates in what has been described as a boundary of understanding access to the algorithm. However, what remains clear is that this boundary must be discursively re-established again and again and is not inherent in the phenomenon of the algorithm. The discursively dominant interpretation thus succeeds in establishing a certain understanding of the algorithm, which stands in the way of a functional understanding and thus also of possible criticism, guided by epistemological interests.

The results show that both the contouring and incorporation of the algorithm significantly affect the discursive legitimacy of the system. During the development of the AMS discourse, powerful discourse positions emerge and abbreviate the discourse. This represents a peculiarity of the discourse, which shows that the public debate about algorithmic assistance systems needs strong counter-positions in the public sphere. This may be a specific feature of the analysed discourse; to gain more precision here, it would be necessary to analyse and compare other similar discourses (e.g., Bansak et al. 2018).

However, in terms of organisational sociology, a crucial result of discourse analysis is that a significant part of what is of interest as an object is systematically drawn into the organisation and withdrawn from the critique. It would be naive to believe that no negotiation of the algorithm at all would take place within the organisation. Pure decision theory does not prevail there either; nevertheless, the embedding of algorithms in organisational contexts remains largely undiscussed. Despite its importance, the use in the organisation's context remains in its invisible sphere of decision. For this reason, in particular, we encourage further scholarly efforts to gain insights into implementation processes around algorithms in (public) organisations. Especially ethnographically, organisation-sensitive research approaches (e.g., Houben and Prietl 2018, as others have already called for, e.g., Büchner 2018)

seem to be promising here. Showing the specifics of different embedding contexts and their de-neutralizing effect on technology can lead to a more concise use of, e.g., algorithms in organisational contexts.

At first glance, the case of the AMS is one of numerous models of algorithmic decision support systems – they are not new in social administration either, as examples from other countries show. Nevertheless, the handling of such a controversial form of digitalised assistance is remarkably counterintuitive; unlike in other examples (amongst others, Iwona 2020), actors outside the organisation did not “discover” the case and turn it into a scandal, or, as was the situation in a similar case in Germany, it is *not* discovered at all (Schwär, April 03, 2019). The case of the AMS makes itself a case; it is the responsible organisation that sheds light on the case out of the enclosures of special discourses (such as administration, academia, and social assistance), thus buying itself a share in the (dis)determination of the algorithm. The notion that digitalisation has washed over society in a homogenous wave, transforming society in identical ways, is a myth (Büchner 2018); organisations play unique and crucial roles in the (co-)constitution of digitalisation by enabling or preventing the manifestation of digital technology. In our case, the organisation acts through the bottleneck of its most visible speaker, Johannes Kopf. Büchner (2018), on the other hand, focuses on intra- and interorganisational phenomena. An increased engagement with and deconstruction of these intensely discussed empirical examples will also become the task of digitalisation and organisational transformation research. Since social administrations in the European area operate very differently, according to the first inspection, and cross-cultural perspectives are receiving increasing attention (see, for example, Wang and Perriam 2022, in this special issue), a follow-up investigation of comparative discourses in other countries would certainly be fruitful.

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