

WASP-HS PhDs in Society Call for proposals 2021

Project Title:
*Algorithms in the Workplace –
The Adequacy of the Existing Legal Framework
for Occupational Health and Safety, Non-
discrimination, Data Protection and Worker’s
Voice Arrangements*

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<i>In case it is an employee of the external organisation</i>	
Name	
Email	
Current position in organisation	
Scientific discipline	

1.4 Title of project
Algorithms in the Workplace – The Adequacy of the Existing Legal Framework for Occupational Health and Safety, Non-discrimination, Data Protection and Worker’s Voice Arrangements
1.5 Keywords
Occupational Health and Safety, Artificial Intelligence, Algorithms, Co-Determination, Oversight at Workplaces
1.6 Main discipline
Law (labour law, legal informatics, public international law)
1.7 Other relevant disciplines
Ethics, political science
1.8 Planned start date
February 2022
1.9 Project duration
5 years, no parallel activities known at this time
2. Summary
2.1 Research Summary
<p>The economy and workplaces are constantly evolving as a result of technological innovation. Algorithms are in ever increasing extent being used in products and services, sometimes referred to in terms of “Artificial intelligence” (AI). Such applications are not only integrated in products and services, they may also be used to organise work. This raises questions regarding both occupational safety and health and worker privacy. This project addresses three areas of concern: First, when algorithms are used to manage and coordinate the work of employees; second, when algorithms are used for another purpose, but still has implications for occupational health and safety; and third, recruitment.</p> <p>The inquiry involves an understanding of how law, society and technology interact. Thus, in light of AI’s growing impact on society, including in the workplace, there is arguably a need for those who regulate, employ or are affected by AI based systems in the workplace to have an adequate understanding of the technology. The over-arching purpose is to examine the adequacy of the existing legal framework for occupational health and safety, non-discrimination, data protection and worker’s voice arrangements.</p> <p>The project concerns three bodies of law, that to various degrees are subject to regulation both at the national level and at the international level; including conventions of the ILO; EU law on occupational health and safety, concerning workers’ voice arrangements and the EU GDPR; national rules and their practical implementation.</p> <p>In order to achieve the purpose, the study relies on the traditional doctrinal method of identifying and interpreting the relevant norms as well as more progressive views on what law is, including the perception that computer code may regulate conduct in the same manner as law does.</p>
2.2 Layman Summary
<p>Companies increasingly use algorithms to distribute and organise work. Artificial intelligence applied in case management systems affect the workplace, the employer’s ability to monitor and control the employees. This project examines the adequacy of the existing legal framework for occupational health and safety, non-discrimination, data protection and worker’s voice arrangements.</p> <p>Företag använder i allt högre grad algoritmer för att fördela och organisera arbete. Artificiell intelligens som del av ärendehanteringssystem påverkar arbetsplatsen, arbetsgivarens möjlighet att övervaka och kontrollera de anställda. Detta projekt studerar tillräckligheten i existerande rättsliga regelverk vad avser arbetsmiljö, icke-diskriminering, dataskydd och medbestämmande på arbetsplatsen.</p>

3. Composition of the research group

PhD student, supervisors and other researchers (including co-supervisors)

<i>Name</i>	<i>Organisation</i>	<i>Role in project</i>	<i>(co-)Supervisor? (indicate % funded by project)</i>	<i>Discipline</i>
Mark Klamberg	Stockholm University	Main supervisor		<i>Public international law Legal informatics</i>
Samuel Engblom	TCO	Co-supervisor		Labour Law

Sections 4 and 5 together must take no more than 5 pages

4. Scientific description

4.1 Research contents / Introduction

1. Motivation and research problem

The economy and workplaces are constantly evolving as a result of technological innovation. Algorithms are in ever increasing extent being used in products and services, sometimes referred to in terms of “Artificial intelligence” (AI). Such applications are not only integrated in products and services, they may also be used to organise work. This is either done intentionally by design or it could be a result of the product or service offered to the customer. In recruitment, algorithms are used to screen candidates. In the so-called gig-economy companies such as Foodora (deliveries from restaurants, Hemköp (delivery of groceries) and Über (app-taxi and other services) use algorithms to distribute and organise work in a semi- or fully automated manner. In both the private and the public sector, AI applied in case management systems affect the pace and content of work as well as the employer’s ability to monitor and control the employees. This raises questions regarding both occupational safety and health and worker privacy.

The challenge is if presently existing rules and safeguards on the labour market are fit for purpose. The answer on who is responsible is arguably straightforward, however it is more difficult to understand and determine how responsibility may be enforced and potential violations are to be sanctioned.

The project thus addresses three areas of concern: First, when algorithms are used to manage and coordinate the work of employees; second, when algorithms are used for another purpose, but still has implications for occupational health and safety; and third, recruitment.

This inquiry involves an understanding of how law, society and technology interact. Thus, in light of AI’s growing impact on society, including in the workplace, there is arguably a need for those who regulate, employ or are affected by AI based systems in the workplace to have an adequate understanding of the technology.¹ The technology in AI applications arguably needs to comply with requirements on transparency in order to make occupational risk assessments possible, workers’ voice arrangements effective, and oversight at workplaces possible.

2. Purpose and research questions

The over-arching purpose is to examine the adequacy of the existing legal framework for occupational health and safety, non-discrimination, data protection and worker’s voice arrangements. At first we need to identify the applicability and content of existing law. The uses of AI technology in the workplace described above will be affected not just by labour law but by occupational health and safety regulation, anti-discrimination law, and data protection as well. In all these areas, there are rules on the global, regional and national level. Depending on the area of law, the strength and importance of the different levels vary, raising interesting questions about the international governance of workplace AI.

As in other fields, the application of AI in the workplace has raised questions regarding the allocation of responsibility. While most would agree that it would not be possible for an employer to blame the algorithm for managerial decisions, depending on the area of regulation, there are different concepts of managerial responsibility and different possibilities to delegate these within the organisation. AI applications may also be used in ways that may diminish the room for manoeuvre for managers at mid-level. This may in turn affect the legal possibilities to delegate responsibility for occupational health and safety. This may be compared with the “effective command/authority and control”-criteria for superiors in international criminal law.²

¹ Wischmeyer, Thomas, ‘Artificial Intelligence and Transparency: Opening the Black Box’ in Wischmeyer, Thomas and Rademacher, Timo (eds), *Regulating Artificial Intelligence* (Springer, 2020) 75-101, p. 76.

² Article 28 of the Rome Statute.

An important characteristic of labour regulation is the key role assigned to workplace level actors in the monitoring and prevention of violations, mainly through different kinds of workers' voice arrangements such as works councils or the information and consultation rights of trade unions.³ In the field of occupational safety and health, it is common to require that risk assessments are made before the introduction of more important changes in the workplace. In addition, through collective agreements, employers' and trade unions have the possibility to set legally binding standards for an industry or a sector. These institutions all rely on workers' representatives have sufficient information to be able to ask the right questions and make informed decisions. This creates a particular demand for transparency and accountability in relation to AI applications.

However, this study does not limit itself into examining applicable law, instead it attempts to be part of a proactive effort. If the objective is to capture the potential benefits to society and to the economy of AI while at the same time prevent discrimination, promote occupational health and safety, protect workers' privacy, and ensure effective workers' voice arrangement, how should AI in the workplace be regulated. Are there regulatory gaps in the current regulation? To what extent is there a need for global standards, e.g. through the ILO, and what can be done by regional institutions as the EU or on the national level? What role can social partners collective autonomy play?

3. State of the art and the relevance of the project

This project speaks to four bodies of research.

First, there is literature on AI and the organisation of work. In recent years, a rich literature has developed on the use of AI and algorithms in the organisation of work. The focus of much of this research has been the employment status of individuals performing work for so called platform companies, i.e., the question whether those individuals fall within the scope of labour law.⁴ The focus of this project would instead be the effects that the use of AI in the workplace has on the possibility of workers inside the scope of existing regulation to exercise rights granted to them and their organisations in labour law, occupational health and safety regulation, anti-discrimination law, and data privacy.⁵

Second, it concerns occupational health and safety where the focus will be of case management and other business systems that affect among other things the content of work, the degree of variation and monotony, and the employee's control of his or her work.

Third, the ability of AI to collect and analyse large amounts of data increases employers' possibilities to monitor and control their employees. This raises issues regarding workers' privacy and data protection, including the effectiveness of GDPR in employment relationships.

Fourth, the project will also draw on the developing literature on the importance of collective bargaining and workers' voice arrangements for the quality of work (OECD 2019).

Finally, the project relates to scholarship on transparency. Law-makers around the globe are currently starting to experiment with specific transparency requirements for automated decision-making systems (ADMs), including AI-based systems.⁶

Wischmeyer argues that designing AI transparency regulation is less difficult than oftentimes assumed. Moreover, even if value of transparency may be instrumental, it still an indispensable element of any accountability framework. It is not only a technical matter, it also involves policy and business and fiduciary interests. Some argue that debate on AI transparency should focus less on

³ OECD 2019

⁴ Examples are De Stefano, Valerio, 'Negotiating the Algorithm: Automation, Artificial Intelligence, and Labor Protection', 41(1) *Comparative Labor Law and Policy Journal* 2019, 15-46; Adams-Prassl, Jeremias, 'What if Your Boss is an Algorithm' Economic Incentives, Legal Challenges and the Rise of Artificial Intelligence', 41(1) *Comparative Labor Law and Policy Journal* 2019, 123-146.

⁵ Examples of existing research in this field are Aloisi, Antonio and Gramano, Elena, 'Artificial Intelligence is Watching You at Work: Digital Surveillance, Employee Monitoring, and Regulatory Issues in the EU Context', 41(1) *Comparative Labor Law and Policy Journal* 2019, 95-122.

⁶ Wischmeyer, 2020, p. 76.

access to information and rather consider how to increase the ‘intelligibility’, ‘comprehensibility’, ‘understandability’, ‘foreseeability’, or ‘explainability’ of AI-based systems.⁷

There has is substantial discussion on the existence of a “right to explanation” in the EU General Data Protection Regulation (GDPR), and its merits and disadvantages.⁸ However, Wachter, Mittelstadt and Russell argue that an explanation of automated decisions, both as envisioned by the GDPR and in general, does not necessarily hinge on the general public understanding of how algorithmic systems function. Even though such interpretability is of great importance and should be pursued, explanations can, in principle, be offered without opening the “black box.” Instead, they suggest an approach whereby affected individuals are provided with meaningful explanations to understand a given decision, grounds to contest it, and advice on how the data subject can change his or her behaviour or situation to possibly receive a desired decision.⁹

4. Applicable rules, principles and mechanisms for enforcements

The project concerns three bodies of law, that to various degrees are subject to regulation both at the national level and at the international level.

On the international level, several of the fundamental conventions of the ILO are of interest as they lay down rules on the freedom of association and collective bargaining¹⁰ as well as non-discrimination.¹¹ The ILO also has a number of conventions and recommendations concerning occupational health and safety.¹² In addition, there are ILO standards regarding the monitoring of labour regulation.¹³

Another international source of law is the European Union. EU law is particularly important in the field of non-discrimination¹⁴, but there is a substantial body of EU law in the area of occupational health and safety¹⁵ as well as concerning workers’ voice arrangements¹⁶. In the field of data protection, the EU GDPR has set a global standard not at least when it comes to transparency. Transparency is a general principle of data protection, it may for example be found in Article 5(1)(a) of the General Data Protection Directive (GDPR).

In order to identify the difficult questions, it will be necessary to investigate national rules and their practical implementation. In this case, Sweden, with relatively strong institutions for workers’ voice, including both co-determination in the case of management decisions¹⁷ and specific obligations to

⁷ Ibid, pp. 75, 77, 84 and 87.

⁸ See for example Wachter, Sandra, Mittelstadt, Brent and Floridi, Luciano, ‘Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation’, 7 *International Data Privacy Law* 2017, 76–99, pp. 79-90.

⁹ Wachter, Sandra, Mittelstadt, Brent and Russell, Chris, ‘Counterfactual Explanations Without Opening the Black Box: Automated Decisions and the GDPR’, 31(2) *Harvard Journal of Law & Technology* 2018, 841-887, p. 844. See similar argument by de Fine Licht, Karl and de Fine Licht, Jenny, ‘Artificial intelligence, transparency, and public decision-making: Why explanations are key when trying to produce perceived legitimacy’, 35 *AI & Society* 2020, 917–926, p. 924 and Bathaeea, Yavar, ‘The Artificial Intelligence Black Box and the Failure of Intent and Causation’, 31 *Harvard Journal of Law & Technology* 2018, pp. 905-906 who distinguishes between strong and weak black-box AI.

¹⁰ ILO Conventions no 87 and 98.

¹¹ ILO Conventions no 100 and no 111.

¹² ILO Conventions no 155, no 161, no 187.

¹³ ILO Convention no 81.

¹⁴ Council Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation.

¹⁵ Most notably the framework directive Council Directive 89/391 on the introduction of measures to encourage improvements in the safety and health of workers at work.

¹⁶ Directive 2009/38/EC of the European Parliament and of the Council of 6 May 2009 on the establishment of a European Works Council or a procedure in Community-scale undertakings and Community-scale groups of undertakings for the purposes of informing and consulting employees (Recast)

¹⁷ Lag (1976:508) om medbestämmande i arbetslivet.

make risk assessments of broadly defined occupational hazards,¹⁸ will provide a good testing ground to identify the challenges of AI in working life.

5. Methods

The study will apply the traditional doctrinal method of identifying and interpreting the relevant norms on the international, EU, and national level, with due account that sources of law and methods of interpretation may vary depending on the legal system.

The study will also include more progressive views on what law is, including the perception that computer code may regulate conduct in the same manner as law does,¹⁹ i.e. that technology may be a form of regulation and the idea that the design of technological systems may be used for the advancement of public policy: to govern “by design”.²⁰

The account will include “law on books”, the law in statutes as well as the “law in action”, how the law is applied and interpreted by relevant state agencies, employers, unions and other relevant actors. This will facilitate the identification of potential challenges that the use of AI in working life pose to these norms and as well as making the assessment of how well current regulation fulfil its purpose in situations involving AI.

The surveyed systems will be compared. The main basis for the comparison, *tertium comparationis*, between regulations at the global, EU and national levels are the three specific activities: occupational health and safety, workers’ voice arrangements and oversight. A specific activity is not defined on the basis of its formal designation, but rather on what real and potential situations it aims to solve.²¹

Alternative methods of regulation on the international and national level with a proactive approach, involving an “offensive” side that reveals and seizing upon opportunities and a “preventive” side avoiding problems.²²

4.2 Time plan and division of tasks

The planning and execution of the project is illustrated in the table below, divided as work-packages (WP): WP 1: PhD courses; WP 2a: theory-development; WP 2b: inventory of relevant AI-applications; WP 2c: seminar presenting the project; WP 3a: inventory of international rules, cases and material; WP 3b: inventory of EU rules, cases and material; WP 3c: inventory of domestic rules, cases and material; WP 3d: mid-term seminar; WP 4: comparing legal systems; WP 5: final drafting; WP 5: final seminar; WP 6: preparation and public defence.

¹⁸ Arbetsmiljöverkets föreskrifter om systematiskt arbetsmiljöarbete (AFS 2001:1).

¹⁹ Lessig, Lawrence, *Code and Other Laws of Cyberspace* (Basic Books, 1999).

²⁰ Mulligan, Deirdre K. and Bamberger, Kenneth A., ‘Saving Governance-by-Design’, 106 *California Law Review* 2018, 697-784

²¹ Zweigert, Konrad and Kötz, Hein, *Introduction to Comparative Law* (Second Edition, Oxford: Clarendon Press, 1987), pp. 5 and 30-36.

²² Schartum, Dag Wiese, ‘Introduction to a Government-based Perspective on Proactive Law’, 49 *Scandinavian Studies in Law* 2006, 35-51, p. 37; See also Magnusson Sjöberg, Cecilia, ‘Presentation of the Nordic School of Proactive Law’, 49 *Scandinavian Studies in Law* 2006, 13-20, p. 4.

6. Financial planning

6.1. Personnel positions

Describe the positions working in the projects (add rows if needed)

Position	Category (PhD, supervisor, co-supervisor)	FTE	Months	Month salary		Name (if known)
1. PhD student	PhD	0,8	60	SEK	27 000, 30 900 when 50 % completed 32 400 when 80 & completed	
2. PhD supervision	Supervisor	0,021	60	SEK	54 900	Mark Klamberg
3. PhD supervision	Supervisor	0,021	60	SEK	54 900	Samuel Engblom
Total salary costs				SEK	2 626 275,33	Including social contributions

6.2. Other project costs

Specification of other project costs, including materials and travel (add rows if needed)

Item	Amount		Explanation
1. WASP-HS graduate school	SEK	500 000	(do not remove this line) These costs are retained by WASP-HS to cover graduate school costs
2. Travel and material costs	SEK	100 000	
3. Premises costs	SEK	84 179	
3. Overhead	SEK	360 767	
Total other costs	SEK	1 044 945,75	

7. Contribution from external partner

The project partner will contribute by covering half of the salary of the PhD candidate, i.e. an amount of 1 202 556,082 SEK

8. Justification for extra support in case of non-profit organisation

If applicable, describe why you apply the further support. This request must be accompanied by a declaration from the organisation on their situation. Please note that this extra support does not apply to start-ups or SMEs, but is solely meant for non-profits.

9. Cost breakdown

Overview of project costs

Total project costs	SEK	3 671 221,08 SEK
Total contribution in cash	SEK	3 671 221,08 SEK
Total contribution in kind	SEK	
Requested from WASP-HS (maximum 2.5MSEK)	SEK	2 468 664,999 SEK
Extra support from WASP-HS (if applicable; see point 8)	SEK	

10. References

9.1 Selection of key publications of PIs.

Project PI **Jonas Tallberg**

Jonas Tallberg, Karin Bäckstrand, and Jan Aart Scholte. Eds. 2018. *Legitimacy in Global Governance: Sources, Processes, and Consequences*. Oxford: Oxford University Press.

Thomas Sommerer and Jonas Tallberg. 2019. *Diffusion across International Organizations: Connectivity and Convergence*. *International Organization* 73: 399-433.

Jonas Tallberg, Lisa Dellmuth, Hans Agné, and Thomas Sommerer. 2018. *NGO Influence in International Organizations: Information, Access and Exchange*. *British Journal of Political Science* 48: 213-238.

Jonas Tallberg, Thomas Sommerer, Theresa Squatrito, and Christer Jönsson. 2013. *The Opening Up of International Organizations*. Cambridge: Cambridge University Press.

Jonas Tallberg. 2006. *Leadership and Negotiation in the European Union*. Cambridge: Cambridge University Press.

Main Supervisor **Mark Klamberg**

Mark Klamberg, "Skydd enligt Europakonventionen om mänskliga rättigheter; Skydd enligt Europeiska Unionens stadga om de grundläggande rättigheterna" (Protection under the European Convention on Human Rights; Protection under the Charter of Fundamental Rights of the European Union); in Cecilia Magnusson Sjöberg (Ed.) *Rättsinformatik: juridiken i det digitala informationssamhället (Legal informatics: the law in the digital society)*, Studentlitteratur, Fourth Edition, 2021, 184-191

Ove Bring, Mark Klamberg, Said Mahmoudi and Pål Wrangé, "Sverige och folkrätten" (Sweden and public international law), *Norstedts Juridik*, Sixth Edition, 2020.

Mark Klamberg, "Power and Law in the International Society - International Relations as the Sociology of International Law", Routledge, 2015

Mark Klamberg, "International Law in the Age of Asymmetrical Warfare, Virtual Cockpits and Autonomous Robots", in Jonas Ebbesson, Marie Jacobsson, Mark Klamberg, David Langlet, Pål Wrangé (Eds.), *International Law and Changing Perceptions of Security: Liber Amicorum Said Mahmoudi*, Leiden, Boston: Martinus Nijhoff Publishers, 2014, 152-170

Mark Klamberg, "FRA and the European Convention on Human Rights - A Paradigm Shift in Swedish Electronic Surveillance Law", *Nordisk Årsbok i Rättsinformatik (Nordic Yearbook of Legal Informatics)* 2009, 96-134

Co-supervisor **Samuel Engblom**

Samuel Engblom, "Measuring the Relationship between Business-to-Business Self-employed and their Clients – A Statistical Survey of Labour Law Categories" *Comparative Labor Law and Policy Journal* (forthcoming).

Samuel Engblom, Magnus Lundberg, "New Trade Union Strategies for New Forms of Employment – Sweden", *European Labour Law Journal* Volume 10, Issue 3, September 2019.

Åsa Odin Ekman, Samuel Engblom, "Expanding the Movement of Natural Persons Through Free Trade Agreements? A review of CETA, TPP and ChAFTA", *International Journal of Comparative Labour Law and Industrial Relations* Volume 35/2 pp. 163-200, 2019.

Samuel Engblom, "Employment Protection, Collective Bargaining and Labour Market Adaptability – The Swedish Employment Security Councils in a Comparative Perspective" *Giornale di diritto del lavoro e di relazione industriali* n 160, 2018(4) pp. 887-903.

Samuel Engblom, "Atypical Work in the Digital Age – Trade Unions Strategies for the Gig-Economy" in Rönmar & Julén (eds) (2017) *Festskrift till Ann Numhauser-Henning*, Juristförlaget i Lund, Lund.

9.2 List of publications cited

Adams-Prassl, Jeremias, 'What if Your Boss is an Algorithm' *Economic Incentives, Legal Challenges and the Rise of Artificial Intelligence*, 41(1) *Comparative Labor Law and Policy Journal* 2019 123-146

Aloisi, Antonio and Gramano, Elena, 'Artificial Intelligence is Watching You at Work: Digital Surveillance, Employee Monitoring, and Regulatory Issues in the EU Context', 41(1) *Comparative Labor Law and Policy Journal* 2019 95-122

Bathaeaa, Yavar, 'The Artificial Intelligence Black Box and the Failure of Intent and Causation', 31 *Harvard Journal of Law & Technology* 2018

de Fine Licht, Karl and de Fine Licht, Jenny, 'Artificial intelligence, transparency, and public decision-making: Why explanations are key when trying to produce perceived legitimacy', 35 *AI & Society* 2020 917–926

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Should Regulation Be "Technology Neutral"? 2 February 2018, available at <https://hoofnagle.berkeley.edu/2018/02/02/should-regulation-be-technology-neutral/>

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Mulligan, Deirdre K. and Bamberger, Kenneth A., 'Saving Governance-by-Design', 106 *California Law Review* 2018 697-784

OECD, *Negotiating Our Way Up – Collective Bargaining in a Changing World of Work*, OECD, Paris 2019.

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Wachter, Sandra, Mittelstadt, Brent and Floridi, Luciano, 'Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation', 7 *International Data Privacy Law* 2017 76–99

Wachter, Sandra, Mittelstadt, Brent and Russell, Chris, 'Counterfactual Explanations Without Opening the Black Box: Automated Decisions and the GDPR', 31(2) *Harvard Journal of Law & Technology* 2018 841-887

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